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ACADEMIC WOMEN AND ISSUES OF UNEQUAL TREATMENT

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ACADEMIC WOMEN AND ISSUES OF UNEQUAL TREATMENT

by

AUDREY S. BLUMBERG

A dissertation submitted to the Graduate Faculty
in Sociology in partial fulfillment of the
requirements for the degree of Doctor of Philosophy,
The City University of New York.

1981

This manuscript has been read and accepted for the Graduate Faculty in Sociology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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INTRODUCTION

STUDYING ACADEMIC WOMENISSUES IN STUDYING ACADEMIC WOMEN: BACKGROUND

The position of women in academia has provoked lively debate for almost two decades. Historically, women have been under-represented in all phases of higher education. Just what this under-representation reflects, however, has remained central to the controversy surrounding academic women. Are women deliberately excluded in their attempts to stand side by side with men in higher education? Or, are they, in fact, assuming a prominent position on college and university faculties as they are presented as an available resource. More pointedly, are our academic institutions guilty of blatant sexism, resulting in the small proportions of women who "make it." Or, are these institutions handicapped in their employment of women because of differing qualifications and orientations delineated by sex? If the answers to these questions prove difficult to ascertain, the questions are equally difficult to frame. Rarely do institutions exist in vacuums and the values and activities of these organizations are reflective of larger cultural norms, values and behavior. Separating the behavior of the institution from that of the larger society is an impossible feat. If little girls are not socialized to have the same professional aspirations as little boys, do academic institutions have responsibility to address this difference?

A study of academic women, then, must by definition be at the same

time broad and narrow in scope. We must attempt to separate behavior that is directly identifiable as "of the institution" from those circumstances that are beyond its realm. This is a task that requires our considering background social status, educational experiences and achievement, and any articulated career goals of participants in academe. It also requires our imposing some common sense and experiential knowledge of how such status, values and experiences come to exist. This effort requires broad consideration of social issues, and attempts at doing this are, at best, inferential, and, more often than not, inadequate in the strict sense of social science research. It is not enough, for example, to compare women in academe with their male colleagues. Women, who are not found in professional arenas should also be considered in light of women who manage to enter the heretofore male work world.

In the narrow sense, we can observe the extent to which the basic tenet of "universalism" prevails in institutions of higher education. Hiring and advancement criteria are assumed to be applied without regard to particularistic characteristics such as sex, race and religion. We need not look far back in history to demonstrate that this commitment to universalistic criteria has been rather frail. Religion was an important consideration for quite a while in both hiring and promotion practices. Race and sex continue to be challenged today as apparent reasons for hire, tenure, promotion and salary decisions. Testing the application of these universalistic criteria, while not without liabilities, is, to some extent, empirically possible and consequently a number of studies from the 1960's and the 1970's

claim to do this.¹ Most of these studies have suggested that American colleges and universities fall short in meeting their own standards of universalism.

Thus, in light of the need to somehow separate the activities of academic institutions from those of the larger social networks, we must ask two questions: First, who are these academic women? Second, do their positions on university and college faculties constitute an issue of institutional discrimination? In attempting to answer these two questions, a story unfolds. To start this story at the beginning is not possible. We come into the study of faculty women at the end; that is, at the present position of women in higher education. From there we work backwards in an effort to reconstruct the background characteristics that differentiate academic women from their male colleagues.

In 1970, women represented forty percent of undergraduates and thirteen percent of doctorates awarded. For some this would seem to constitute progress from the preceding decade or two. For others this

1. See, for example, Jessie Bernard, Academic Women, 1964; Rita James Simon and Evelyn Rosenthal, "Profile of the Woman PhD in Economics, History and Sociology" in Journal of the American Association of University Women, 1967, Vol. 60, No. 3; Alan Bayer and Helen Astin, "Sex Differences in Academic Rank and Salary Among Science Doctorates in Teaching," in Journal of Human Resources, 1968, Vol 3, No. 2; Alice Rossi, "Status of Women in Graduate Departments of Sociology, 1968-1969", The American Sociologist, 1970, Vol. 5, No. 1; Cynthia Epstein, "Encountering the Male Establishment: Sex-Status Limits on Women's Careers in the Professions," American Journal of Sociology, 1970; Alice Rossi, "Women in Science: Why So Few?" in Science, 1965, Vol. 148 No. 3674.

represents a backstep from 1920 when women comprised forty-seven percent of the undergraduates nationally and fifteen percent of the doctorates. At any rate, today women make up approximately twenty percent of faculty in institutions of higher education. These faculty women are distributed principally at four-year and two-year colleges and are found at the lower ranks. We are told that they tend to be concentrated in fields which are "sex-typed" as women's fields such as education, social work and nursing.²

Occupations can be described as "sex-typed," according to Merton, "when a very large majority of those in them are of one sex and when there is an associated normative expectation that this is as it should be." (Epstein, 1970) The effects of sex-typing may well be one-sided. For women, the consequences of sex-typing encroach upon professions even where men constitute a minority. In nursing and teaching, for example, men though under-represented, account for a large proportion of supervisory and administrative personnel. In the case of academics, the issue of sex-typing may be further complicated by the myriad of disciplines and idiosyncratic sex differentials within each one. Even in disciplines where women have had access, they may be channeled into specific sub-fields and away from others. The processes by which women are kept out of particular professions and sub-divisions may be sufficiently subtle so as to affect some tacit agreement by them.

2. See, for example, Patricia Abjerg Graham, "Women in Academe" in Science, Vol. 169, No. 3952, 1970; or Cynthia Epstein, Woman's Place: Options and Limits in Professional Careers, 1970.

These processes may relate to experiences that occur much earlier than at the point of entry into an academic career. Young girls learn from their mothers and significant others to assume roles with expressive functions. Boys learn, in contrast, instrumental, goal-directed behavior. One manifestation of differing socialization is found in features of social origins. Almquist and Angrist (1970) found that while career salience was not associated with the education level of either parent, career salient women were more likely to have had working mothers. It may be, then, that sex influenced "career orientation" is an important factor in the positioning of women in academia. Thus, childhood socialization with particular emphasis on role models may well be a key to understanding differences both between women who do and those who do not pursue careers, and, variations between men and women in the same careers.

Beyond differences in childhood socialization, early professional socialization can prove to be different for women and men. In a 1969 Carnegie Council on Higher Education study of graduate students, twenty-two percent of the male and fifty percent of the female Sociology students agreed that the "faculty does not take female graduate students seriously." (Feldman, 1974, p.71). Additionally, twenty-five percent of the male faculty and four percent of the female faculty indicated that "female graduate students are not as dedicated to the field as males." (Feldman, 1974, p. 71). Astin (1969) states that one-third of the women PhDs that she studied reported discrimination in such matters as getting fellowships and job offers.

Roby (1971) describes barriers to women in higher education in the following forms: Discrimination in admissions based on beliefs that women have higher attrition rates; preferential assignment of financial aid to male graduate students; married women have as a priority their husband's education even over their own; and, finally, college counselors advise women against pursuing "masculine interests." In this way, professional socialization, like childhood socialization may operate differently for women and men.

At the core of the issue of professional socialization are processes of career choice. If decisions are made about the dimensions of one's career in different ways for women and men, differing approaches to resources considered important in professional socialization may result. Ginzberg, et. al. (1951) have done pioneering work in the area of decision-making involved in career choice. In Occupational Choice: An Approach to General Theory, they suggest that the individual goes through a period of "fantasy" (when he cannot assess his capacities), a "tentative" period (when he weighs various satisfactions) and finally, a "realistic" period (when he makes compromises between his individual desires and the actual opportunities which exist for him). Ginzberg's basic thesis is that "occupational choice is a process" and that "the process is largely irreversible (that is, decisions once made cannot be 'unmade' and that they affect the subsequent career life) and that the process ends in compromise." Katz and Martin (1962) further emphasize Ginzberg's theory of occupational choice by conceiving these choices as courses of action which are combinations of adaptations by individuals to meet the exigencies of particular situations. In this way, clearly

the process of choosing a career may be quite different for women than for men.

One might consider "traditional" vs. "career" female orientations in reflecting upon occupational choice. The traditional female orientation encourages expression of acceptable female roles so that the intention to marry operates to modify "choices" in educational and occupational careers by emphasizing the acquisition of skills which enhance one's value on the marriage market. Also, if homemaking is seen as the primary career and is initiated earlier than a professional career, the outside work experience is often viewed as a short term, part-time position with little commitment. Generally, women who express a career orientation are assumed to either have abdicated traditional roles or neglected them.³

Several factors appear to operate in particular ways for women in terms of occupational choice. Psathas (1968) attempts to understand some of these factors, such as: The relationship between Sex Role and Occupational Role, Family Finance and Role Models in early childhood. The intention to marry, time in cycle of marriage, reason for marriage, husband's economic situation and husband's attitude toward wife working are presented by Psathas as determinants of occupational role. After marriage, for example, the probability of a wife entering an occupation which requires prolonged and costly training increases with increments

3. See Carolyn Cummings Perucci, "Minority Status and the Pursuit of Professional Careers of Women in Science and Engineering" in Social Forces, 1970; and Barbara Ivy Wood Cook, Role Aspirations as Evidenced in Senior Women, 1967.

in husband's earnings. In addition to resources available, a "future orientation" is necessary for entry into an occupation requiring a long training period. The presence of this orientation is more likely to lead to later rather than earlier marriage. The phase of marriage may also relate to occupational choice. If a woman has the responsibility of infants or small children, the question of child care may mitigate career choice.

Weil (1961) found that a woman would perform or plan to perform in both the traditional and career roles, or the companionship and career roles, when (a) her husband has a positive attitude toward her working, (b) her husband accepts a shared obligation for children and household tasks, (c) when children are of school age, (d) when she has continued to work after marriage, and (e) when she already has advanced education, specialized training or has reached a high level of competence in her job.

If a woman is able to overcome these barriers and opts for a career in higher education, she confronts role conflict rarely experienced by men. In fact, at one point marriage and career were considered incompatible by definition for women (although not so for men). In 1920 only twenty percent of the women holding PhDs were married. In contrast, eighty-five percent of the men were married. By 1975, where faculty men had remained virtually constant in marital status, women had jumped considerably to fifty-two percent reporting that they were married. Are we to take increase in marriage among faculty women as a sign that the role conflict once inextricably associated with

professional careers is vanishing? While, clearly, it is less unusual for women to actively engage in professional careers in the 1970's than it was in the 1920's, the price extracted is still rather high. Married women in academic positions are less likely to report career saliency than either single women or men and they are more likely to report conflict in their marriages.⁴ Additionally, those women who are married remain childless considerably more often than married men in the same careers.⁵

Traditionally, also, women have been restricted in career placement by anti-nepotism rules. Because women in academia are frequently married to men also in academic careers, but usually more advanced in age and career, they have been handicapped by such regulations. The available alternatives, in these situations, often exist in accepting local positions for which these women are overqualified. Exacerbating the dilemma of married women further is the fact that women do not exercise as much influence over geographical mobility as do men. For myriad social and practical reasons, women more commonly move as dictated by their husbands' jobs than vice versa. This imbalance rests not only in social mores but also in the fact that academic women are more likely, when married, to be married to husbands with professional careers than are academic men, and these professional husbands are characteristically rooted in their communities.

4. See Cynthia Epstein, Woman's Place, Op.Cit.; Carolyn Cummings Perucci, Op.Cit.; Barbara Ivy Wood Cook, Op.Cit.; Lalit Masih, "Career Saliency and Its Relation to Certain Needs, Interests and Job Values" in Personnel and Guidance Journal, 1967, Vol. 45, No. 7.

5. Ibid.

In sum, role conflict and dimensions of occupational choice are closely linked where they do not overlap completely.

Thus far, we have briefly discussed those social factors which define differences in career choice by sex. In particular, childhood socialization, early professional socialization in the graduate school experience and role conflict (specifically career vs. marriage and family) are believed to determine career orientation. But what of those women who do compete in the academic work place. Having overcome years of subtle disuassions from career development, are they then met with even more concrete obstacles set up by the institutions that employ them?

Institutional sex discrimination may take place at several junctures. First, there may be some differential hiring by sex and, this includes both failure to hire quialified women and hiring women at lower ranks and lower salaries than comparable men. Second, men and women may have to meet different criteria in attaining tenure, promotion and associated salary increments. Third, severances may be sex based.

There are other ways in which a college or university may thwart women in attempts to achieve parity. Women may be discouraged from meeting the necessary criteria for advancements such as returning to school for a higher degree, applying for research funds, publishing and accepting administrative responsibilities. This can occur directly, or indirectly: For example if more time is occupied by teaching overloads, etc.. While the impact of such actions must be considered, it cannot

be measured directly in any simple way and we cannot proceed with the assumption that institutions of higher education hire and retain women only to prevent their increasing in professional value, as a matter of standard policy. Thus, we will limit our discussion of institutional discrimination to mean that women, on the average, are blocked in attempts to move up the occupational ladder, in this case a system of rank, tenure and concomitant salary levels, and this is accomplished by requiring more of women in attaining these rewards than of men.

STUDYING DISCRIMINATION

The most striking observation of studies of sex discrimination in the assignment of academic rewards is the overwhelming finding that it exists. With few exceptions (the most prominent and recent being Jonathan Cole's Fair Science), studies of women in academic institutions have recounted a dismal story. Let us look at some of the more notable of these.

In 1965, Alice Rossi published an article in Science titled "Women in Science: Why So Few?". She found that women earned less money at each level of education. Even so, she found that female scientists and engineers were less likely to have advanced degrees, more likely to withdraw from careers, and more likely to be unmarried than men in these fields. She suggested that the lack of integration of women into the scientific labor force was a result of larger social disadvantages that are continued at the level of employment. Her data consisted of simple distributions of men and women in the labor force as scientists,

engineers and physicians, as well as comparative distributions of men and women by degree held.

In 1970, Rossi published a study of the "Status of Women in Graduate Departments of Sociology 1968-1969" in the American Sociologist. This survey of women students, faculty and research personnel in one hundred and eighty-eight graduate departments of sociology asserted that the more prestigious the department, the lower the representation of women at the higher ranks. Rossi suggests that since women graduate students often have better academic records than men, low career achievement is not attributable to lack of ability but rather to the absence of female role models or colleagues to provide support for women embarking on such careers. Again, the analysis consisted of simple distributions of men and women in these graduate departments along such variables as Rank.

Rita James Simon and Evelyn Rosenthal found that women doctorates in Economics, History and Sociology earned about seven hundred dollars less annually than men with doctorates.⁶ Women were also found to be "over-represented" in the lowest ranks, and when women PhDs were considered by marital status, fifteen percent of the married women reported being discriminated against because of nepotism rules (although these women had published more than the men in the sample and the other women.) This study was based on a nation-wide mail survey

6. See Rita James Simon and Evelyn Rosenthal, "Profile of the Woman PhD in Economics, History and Sociology" in the Journal of the American Association of University Women, 1967, Vol. 60, No. 3.

sent to 5,370 women and 1,787 men with a sixty percent response rate (for both women and men.) Here, too, the analysis consisted of distributions of men and women on one or two variables at a time.

In "Sex Differences in Academic Rank and Salary Among Science Doctorates in Teaching" published in the Journal of Human Resources in 1968, Alan Bayer and Helen Astin report that while entry ranks of academic scientists are unrelated to sex, salary differentials by sex exist from the onset of academic careers and continue throughout the promotional system.

Helen Astin collected data from a survey of women doctorates returned by 1,653 women (representing a response rate of eighty-six percent). Her findings, published as The Woman Doctorate in America (1969), indicate that over one third of women who had received their doctorates in 1957 and 1958 reported that various discriminatory practices had hindered their professional progress. She also found that of this cohort of women, at the time of the study, (1965), ninety-one percent were in the labor force, and eighty-one percent were working full-time. Women who interrupted their careers did so because of child-bearing and child-rearing and the median length of such interruptions was fourteen months. Those women who felt they had been discriminated against were more productive, more active professionally and the highest earners among the respondents. The problem with applying these findings to our general notion of institutional discrimination is that we have a profile of women in academe and not a comparison of women and men.

Common to these five studies, aside from the suggestion that women meet discriminatory practices in higher education, is their limited consideration of important variables. Looking at simple distributions of men and women along academic rewards such as Tenure, Rank and Salary, when we control for only one or two independent predictors such as degree held, prestige of department, publications and marital status create certain substantive problems. A number of factors are subject to evaluation in academic career advancement and they are presumably thought of in some collective manner. Thus, more than highest degree held (although this is clearly an important yardstick in academia) and prestige of a department need be known to explore notions of institutional discrimination. Put another way, if we find that among women and men doctorates at high prestige departments, women are found in lower ranks at substantially higher rates, are we to accept that we have uncovered some institutional bias? Is it not possible that women have been in the academic system for a shorter period of time? Or, perhaps, they have not published as much as their male counterparts, or are not actively engaged in research when compared to men in these same departments.

Of course, in the event we find women falling short of necessary criteria for advancement, we must ask ourselves why, and question, where possible, whether our colleges and universities are not somehow discouraging women from attaining the necessary credentials for promotion, and related rewards. Nonetheless, we are charged immediately with attempting to uncover any directly observable sex bias in the distribution of such rewards and it is believed that the way to do this

is to determine if men and women of equivalent qualifications are treated equally. In order to do this, it is important to ferret out those features of academic work that facilitate the achievement of rewards to determine how they are distributed by sex, and, finally to control for as many of them as possible in considering the assignment of these rewards. Distributions and crosstabulations are important, then, in helping us determine key independent variables, as well as detailing where sex differences exist. Regression analysis is then available to enable the control of several such variables at a time in uncovering evidence of institutional discrimination. These previous studies have failed to control for several of the independent variables at a time.⁷

The extent to which these studies have failed to address the issue of discrimination by institutions of higher education will be discussed at the conclusion of this monograph.

7. It should be noted that other similar studies, now prominent in the literature and with the same limitations, find little evidence of institutional bias in actually assigning rewards. For example, Jessie Bernard's Academic Women (1964) suggests that while academic women do not achieve the same status and prestige as academic men, there is little support or evidence that it is the result of discrimination. She posits instead that their lower status is due to the lowered supply of qualified academic women as she turns to social pressures against career commitment.

Rita James Simon, Shirley Merritt Clark and Kathleen Galway in a comparison of women and men who received their doctorates in four major divisions between 1958 and 1963, found that insofar "as objective measures of equality are concerned, the woman PhD appears to be an accepted professional Colleague" and that differences in rank and salary are small where they exist. ("The Woman PhD: A Recent Profile" in Social Problems, 1967, Vol. 15)

THE STUDY

The study reported in the following pages attempts to do three things. First, we identify faculty women and men in both their professional and social characteristics. Second, we attempt to define variables that explain variation in academic rewards and to determine if the distribution of these rewards constitutes unequal treatment by academic institutions. Finally, we examine changes in the composition and placement of academic women over time.

An outcome of working toward these ends is of methodological interest. In describing who faculty women are vis a vis men and how they are distributed in terms of professional and social characteristics, we are replicating the direction that most of the studies in the sociological literature take in assessing the existence of sex discrimination. In going further by employing regression analysis we can gauge both the individual and the group contribution of a number of variables considered important in explaining differential achievement of professional status and rewards. We can, in this way, attempt to test our contention that controlling for only one or two independent variables at a time and assigning any residual differences the label of "discrimination" is inadequate in considering the problem of unequal treatment by American colleges and universities.

THE DATA

The data used in our study are based on questionnaire surveys of

college and university faculty at two different time periods. Both data collections were conducted by the Carnegie Commission Survey of Faculty and Student Opinion; one in 1969, and the second in 1975. These studies were done in cooperation with the Office of Research of the America Council on Education.

The 1969 Survey

Of the 2300 American colleges and universities in existence in 1969, 371 institutions were selected by random stratified sampling (in a two stage sample of institutions and individuals) to participate in the research. Of the 371 institutions, 307 agreed to take part (representing eighty-five percent of the four-year and sixty percent of the two-year schools). Lists were obtained of names and addresses for all of the faculty members with regular appointments at these institutions. The total number of questionnaires mailed out was 100,290. The total number of returned questionnaires was 60,028, comprising a response rate of sixty percent. Disproportionate sampling and the failure of some institutions to respond to the request for lists required that cooperating institutions be differentially weighted. Additionally, an extensive non-respondent follow-up study was conducted, revealing no real difference between the achieved and the criterion samples with one exception: the distribution of highest degree held. The achieved sample had a slightly higher representation of faculty members with PhDs.⁸

8. The difference in the variable is not great. Forty-one percent of the achieved sample report holding PhDs in comparison to thirty-seven percent of the criterion sample.

The 1975 Survey

The 1975 survey was conducted by the same research team under the auspices of the Carnegie Council on Higher Education. Once again, the survey was based on a national sample of all institutions of higher education in the United States. The 1975 survey resembled the earlier survey. However, while many of the same institutions were included, some others were either added or excluded. In some cases institutions had merged with other institutions, closed or dropped out of the research program. Thus, it was decided that sampling should attempt to reflect large systemic changes in American Higher Education, as well as providing comparability within types of institutions between the two time periods. After repeating a two stage sample design, 52,876 questionnaires were sent out. Excluding undeliverables, the total number of the sample was deemed to be 49,029, of which 25,262 usable questionnaires were returned, constituting a fifty-two percent response rate.

Again, an extensive follow-up study was done to determine response bias. This undertaking revealed no notable differences between the achieved and the criterion sample, suggesting a strong similarity between respondents and non-respondents.

For purposes of economy, we have drawn a twenty percent random sample of both the 1969 and the 1975 surveys. Comparisons were made between the total sample and the twenty percent sample, revealing no differences in the distribution of responses.

Problems with the Data

Despite careful planning, extensive resources and sampling, problems exist in the data sets which cannot be overlooked. The first problem is that the 1969 study over-sampled high quality universities and high quality colleges. In 1969, we also find two-year colleges under-represented in the original sampling.

A more consequential problem in terms of both the 1969 and 1975 surveys rests in the coding of responses to key items. The data are available in pre-coded form and, as will be revealed later in this investigation, specific problems, both methodological and theoretical, surface accordingly. For example, Year of Highest Degree and Salary variables are collapsed into categories of unequal intervals. Where possible, these categories are recoded, to limited satisfaction, for our purposes.

A third problem exists in some lack of continuity in important items between 1969 and 1975. Since part of our task is to determine if the 1970's have brought any changes in the situation of faculty women, we regret that some questions were included in the earlier study but not repeated in 1975 (e.g. Quality of Graduate Degree Institution). Further, some items of particular interest (e.g. role conflict items) were added in 1975 and while this does not allow for comparative analysis, these are often welcome additions.

Finally, as in all major undertakings, areas of important consideration are not available for study. In particular, we would

have liked to consider differentials in hiring and severance but for lack of available data.

THE STORY OF ACADEMIC WOMEN

The study of faculty women, again, begins somewhere toward the end of the story line. That is, we start out by placing women on college and university faculties in 1975. We then consider the social origins of these women and men, their educational backgrounds and some of the dimensions of their professional work. We further consider how men and women are rewarded in academe and whether this process constitutes unequal treatment on the part of these educational institutions. Finally, we look at the marital and family characteristics that may define role conflict for women.

Where possible, and this is in most cases, we compare findings from the 1969 survey with those in 1975 with the belief that indications of any social and insitutional changes are revealed.

In sum, we are recounting the story of women in academics at present: Who they are; What they do; and, How they fare.

CHAPTER ONE

WHO ARE ACADEMIC WOMEN: INTRODUCTORY DATA

In 1970, women comprised thirty-nine percent of what the United States Census calls "professional and technical workers."⁹ This proportion represents a decline from the forty-five percent of women in this category recorded in 1940. Yet, even this thirty-nine percent is a misleading figure. The category of "professional and technical worker" is very wide: some seventy percent of all women in this category are nurses or non-college teachers. These are low prestige and usually low paying professions. In the high paying and high prestige occupations the picture has been different. In 1969, women represented three percent of all lawyers, six percent of all clergy, seven percent of medical doctors, one percent of engineers, two percent of dentists, two percent of all business executives and one-half of one percent of all architects.¹⁰ In virtually all of these professions, the percentage of women has actually declined since 1950.¹¹

In the academic world the proportion of women is greater, although not markedly. The percentage of women on all college and university faculty fell from thirty-two percent in 1930 to a little more than twenty percent in 1975. The explanation for this decline probably

9. Source: U.S. Department of Labor, Manpower Report of the President, Washington, D.C., Government Printing Office, 1972.

10. U.S. Department of Labor, Women's Bureau, 1969 Handbook on Women Workers, Washington, D.C., G.P.O., 1969.

11. Ibid.

starts with the depression and accompanying preferential hiring of men who were seen as the mainstay for whole families unlike their female counterparts. However, the decline in proportion of faculty women continued even in periods of expanding higher education, and this trend appears to reflect more than economic considerations. Bernard (1964, p.67) suggests that academic women started to find "alternative investments of time and emotion more rewarding" when "academic professions - because of changing role demands, changing faculty-student relationships, and changing faculty-administration relationships - seem relatively less attractive than in the past." Just how difficult the demands academic careers place on women are will be explored later in this monograph.

We will first locate women on university and college faculties as they existed in 1975. Later, we will turn our attention to changes over time that have marked the place of these women as well as whether or not the location of academic women constitutes an issue of institutional discrimination. This chapter, then, introduces us to faculty women as they are distributed in institutions of higher learning. In particular we are concerned with noting the differences that exist between men and women in placement in academia and determining if these differences suggest evidence of unequal treatment.

Our data show that in 1975 twenty-two percent of college and university faculty were women.¹² Table 1.1 demonstrates how these women

12. The total sample size of the 1975 survey was 25,262. However, for reasons of economy, we have employed a random sample of 20%, or 5,055, of this total for purposes of secondary analysis.

are concentrated in academic disciplines, comparable to faculty men.

TABLE 1.1: ACADEMIC DISCIPLINE BY SEX (1975)

	<u>% WOMEN</u>	<u>% MEN</u>
NEW AND SEMI-PROFESSIONS ¹³	28	12
EDUCATION	15	10
HUMANITIES	21	17
FINE ARTS	8	7
PSYCHOLOGY AND SOCIAL SCIENCES	11	14
NATURAL SCIENCES	6	9
MATH AND STATISTICS	4	14
BUSINESS-COMMERCE-MANAGEMENT	3	5
MEDICINE AND LAW	3	6
ENGINEERING	1	7
	(1012)	(3707)

Not surprisingly, women are concentrated in fields that have been notably more accessible to them. The category "New and Semi-Professions," which contains such traditionally female fields as Nursing, Social Work and Library Science, contributes twenty-eight percent of the female faculty. In fact, the New and Semi-Professions combined with the field of Education account for forty-three percent of the women in academia. In contrast, twenty-two percent of the male faculty held appointments in these disciplines. Additionally, areas in the Humanities and Fine Arts have been more in line with conventional

13. e.g., Design, Health Sciences other than Medicine, Home Economics, Journalism, Library Science, Nursing, Social Work and Social Welfare.

expectations of what subjects are best suited for study by women. In this way, fields of Education, Fine Arts and Humanities, coupled with the New and Semi-Professions account for seventy-two percent of academic women as compared to forty-six percent of the men.

Not only do women appear to be concentrated in the low status fields in academia, but such affiliations suggest location in schools (such as Nursing, Social Work and Education) that are peripheral, at best, to the university center.

While type of institution, alone, is not a measure of professional success, it is of special concern in considering academic careers. Faculty membership at a major university holds more prestige than membership at four-year colleges (even at high status colleges). At the same time, many professional schools of relatively low prestige (such as nursing schools, social work schools and schools of education) are located in these same universities. Thus, low status professions may be found at high status universities. Nonetheless, opportunities for research and publication associated with professional advancement are most often located in universities. Table 1.2 discloses that thirty-eight percent of faculty women, as compared to fifty percent of the men, are located at universities.

TABLE 1.2: LOCATION OF FACULTY WOMEN AND MEN IN INSTITUTIONS OF HIGHER EDUCATION (1975)

	<u>% WOMEN</u>	<u>% MEN</u>
UNIVERSITIES	38	50
FOUR-YEAR COLLEGES	46	39
TWO-YEAR COLLEGES	16	11
	(1093)	(3894)

In addition to the smaller proportion of women at universities, we see that women are slightly more apt to be at four and two-year colleges than are men. This may relate to our earlier finding that women are more often in low status disciplines. Or, it may be that degree requirements and other qualifications which will be explored later in Chapters Three and Four, account for the differences in institutional placement. At any rate, such areas as the New and Semi-Professions and Nursing may well find prominent places in the junior colleges.

Notions of the relationship between academic discipline and institutional affiliation are explored in Table 1.3.

TABLE 1.3: INSTITUTIONAL AFFILIATION BY ACADEMIC DISCIPLINE AND SEX (1975)

	<u>UNIVERSITIES</u>	<u>4 YEAR COLLEGES</u>	<u>2 YEAR COLLEGES</u>	
<u>BUSINESS-COMMERCE-MANAGEMENT</u>				
% WOMEN	19	34	47	(32)
% MEN	47	32	21	(186)
<u>NATURAL SCIENCES</u>				
% WOMEN	49	41	10	(63)
% MEN	67	25	8	(319)
<u>EDUCATION</u>				
% WOMEN	32	59	9	(148)
% MEN	37	55	8	(361)
<u>ENGINEERING</u>				
% WOMEN	*	*	0	(7)*
% MEN	66	22	12	(272)
<u>FINE ARTS</u>				
% WOMEN	27	62	11	(84)
% MEN	42	51	7	(268)
<u>MEDICINE AND LAW</u>				
% WOMEN	94	6	0	(34)
% MEN	84	16	0	(217)
<u>HUMANITIES</u>				
% WOMEN	26	56	18	(207)
% MEN	40	49	11	(629)
<u>MATH AND STATISTICS</u>				
% WOMEN	27	58	16	(45)
% MEN	42	46	12	(511)
<u>PSYCHOLOGY AND SOCIAL SCIENCES</u>				
% WOMEN	33	57	10	(106)
% MEN	42	50	8	(472)
<u>NEW AND SEMI-PROFESSIONS</u>				
% WOMEN	50	30	20	(278)
% MEN	69	19	12	(450)

Manifested in Table 1.3 is the association between academic discipline and type of institution. Clearly, some academic departments are more likely to be located in universities. For example, departments of medicine, law and social work are normally found in universities (although some do exist as independent institutions.) Thus, we find the majority of faculty members in such departments are situated at universities. Fully, ninety-four percent of the women and eighty-four percent of the men in Medicine and Law; sixty-six percent of the men in Engineering departments (the N for the female engineers is too small to generalize from); and one-half of the women in New and Semi-Professions, as well as sixty-nine percent of the men are located in universities.

Not surprisingly, women faculty in the high-prestige disciplines seem likely to be placed in universities. In fact, a higher percentage of women than men in the so called "old professions" - Medicine and Law - are found in universities. Additionally, forty-nine percent of the women in departments of Natural Sciences held university appointments as compared to the thirty-two and twenty-six percent of women in Education and Humanities, respectively, fields which have traditionally afforded career opportunities to women.

At the other end of the spectrum, almost one-half (forty-seven percent) of the women on faculties of Business, Commerce or Management are located in junior colleges, as contrasted to only twenty-one percent of the men. It may be that the business curriculum in junior colleges is idiosyncratic in that it differs radically from the departments of

business administration in the larger universities, and the faculty recruitment process varies accordingly. The questions that emerge from this table go to the core of the issue of studying academic women. Are women and men evaluated with the same yardstick by academic institutions? Or, do women who "make it" in academia represent "over-achievers" - women who work harder and produce more than their male associates - or, do they represent some compensatory bias intrinsic to the disciplines and institutions of which they are a part.

We have seen that women differ from men in terms of academic discipline and institutional affiliation. What about academic rank, the mark of privilege and status in the academic world? Are women as likely as men to be the top of the status ladder, that is, be full professors? Table 1.4 shows that they are not.¹⁴

TABLE 1.4: ACADEMIC RANK BY SEX (1975)

<u>ACADEMIC RANK</u>	<u>% WOMEN</u>	<u>% MEN</u>
PROFESSOR	13	33
ASSOCIATE PROFESSOR	18	27
ASSISTANT PROFESSOR	35	26
INSTRUCTOR-LECTURER	29	11
OTHER OR NON-DESIGNATED RANK	5	4
	(1074)	(3836)

14. This points out the problem of simply considering the distribution of faculty by sex when the larger labor pool differs in terms of representation. Large differences may in fact be small differences or no differences, when we consider how they reflect the actual distributions in the population.

In 1975, then, less than one third of the faculty women were at the level of professor or associate professor, while sixty percent of the men had reached such ranks. At the lowest ranks of instructor and assistant professor we find sixty-four percent of the women contrasted with thirty-seven percent of the men.

The fact that women and men do not exist in the same proportions at the highest ranks is actually commensurate with the way credentials are distributed among academic faculty. If, for example, highest degree held is an important correlate of rank, we cannot expect to find women in higher ranks at proportions much greater than their proportions in the cohorts of doctorates produced who have been in the system long enough to have reached these higher ranks. (See Appendix 3).

Issues associated with rank are many. Are women routinely prevented from reaching the highest rungs of the career ladder? Or, do the corollaries of integrating women into academic positions - length of service in the profession, publications, professional honors, career commitment, etc. - serve to explain existing differentials? These kinds of questions will be addressed in detail in the following chapters. In the meantime, we turn attention to academic rank by discipline and note that men occupy the top level positions more often than women in every discipline.

TABLE 1.5: ACADEMIC RANK BY DISCIPLINE AND SEX (1975)

DISCIPLINE	RANK					
	PROFESSOR	ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR	INSTRUCTOR-LECTURER	OTHER	
BUSINESS-COMMERCE-MNGMT						
% WOMEN	9	19	16	50	6	(32)
% MEN	21	23	32	21	3	(182)
NATURAL SCIENCES						
% WOMEN	14	25	41	14	5	(63)
% MEN	38	30	23	6	3	(316)
EDUCATION						
% WOMEN	14	18	32	32	5	(146)
% MEN	30	29	26	13	3	(356)
ENGINEERING						
% WOMEN	0	0	*	0	*	(7)
% MEN	42	27	18	11	2	(271)
FINE ARTS						
% WOMEN	13	14	23	41	10	(84)
% MEN	31	24	26	15	5	(267)
MEDICINE & LAW						
% WOMEN	21	12	44	21	3	(34)
% MEN	36	29	27	7	1	(214)
HUMANITIES						
% WOMEN	14	17	37	27	4	(206)
% MEN	31	29	26	10	5	(625)
MATH & STATISTICS						
% WOMEN	11	24	31	24	9	(45)
% MEN	35	28	27	7	4	(507)
PSYCHOLOGY & SOCIAL SCIENCES						
% WOMEN	12	19	45	17	7	(106)
% MEN	33	26	28	10	3	(469)
NEW & SEMI-PROFESSIONS						
% WOMEN	10	20	34	32	4	(276)
% MEN	29	23	27	16	4	(444)

Women appear to reach higher ranks in larger proportion in fields that have been "sex-typed" as male fields. Thus, twenty-one percent of the women in Medicine and Law, fields that are traditionally male dominated, held the academic rank of Professor. Also, thirty-nine percent of the women on faculties in the Natural Sciences (where sixteen percent of the total faculty appointments are made to women) are found at the rank of associate or full professor. Even in those areas where women have more readily found openings (such as the already noted New and Semi-Professions, Education, Humanities and Fine Arts) we find less than thirty-nine percent at the top strata. This would suggest that where women do manage to break the barriers in gaining admission to higher prestige disciplines, they fare better than those in lower status fields.

We have noted that notions of sex-typing in academic disciplines are salient in literature on women and the professions.¹⁵ It may be that channelling of women into one field or another is systematically achieved by our universities and colleges.¹⁶ Or, it may be that the results of earlier childhood and professional socialization, subtle or overt, are active in the mechanisms of career choice that result in "sex-typing" of academic disciplines. This second dimension in the

15. See, for example, Jessie Bernard, Academic Women, The Pennsylvania State University Press, University Park, Pennsylvania, 1964; William J. Goode, "The Protection of the Inept" in American Sociological Review, Vol. 32, 1967; Cynthia Fuchs Epstein, Woman's Place, University of California Press, Berkeley, California, 1970.

16. See Cynthia Fuchs Epstein, "Encountering the Male Establishment: Sex-Status Limits on Women's Careers in the Professions" in the American Journal of Sociology, Vol. 75, No. 6, May 1970.

issue of sex-typing may exist in the concept of self-selection. Who are the women who succeed in male dominated fields and how do they differ from the men in such fields? How, too, do they differ from women in fields that have been traditionally responsive to female participation? In an effort to address this issue an index of sex domination of academic disciplines has been constructed. Three categories of disciplines were established: disciplines made up of faculties with ninety percent or more males; disciplines that had faculties with between fifty-one percent and eighty-nine percent men; and disciplines with faculties comprised of at least fifty percent females. The first category (90% + males) contains such disciplines as Agriculture, Architecture, Biochemistry, Zoology, Engineering, Theology, Industrial Arts, Journalism, Law, Chemistry, Physics, and Earth Sciences. The second classification consists of Bacteriology, Biology, Physiology, Business, Secondary Education, Educational Psychology and Counselling, Drama and Speech, Music, Geography, Dentistry, Medicine, Other Health Professions, English, most Languages, History, Philosophy, Mathematics, Psychology, Anthropology, Economics, Political Science, and Sociology. Finally, disciplines with at least 50% female faculty are General Education, Fine Arts, Nursing, French, Library Science, Health Education and Social Work.

Twenty-five percent of faculty members are located in fields that are predominately male (90% or more). Almost two-thirds (sixty-four percent) of the respondents are in fields that are between fifty-one and eighty-nine percent male and, finally, only eleven percent of all respondents are located in disciplines that have a notable representation of female faculty.

TABLE 1.6: SEX DOMINATION OF ACADEMIC DISCIPLINE (1975)

	<u>% WOMEN</u>	<u>% MEN</u>
98% + MALE	7	30
51% - 89% MALE	64	64
50% + FEMALE	29	6
	(955)	(3611)

Not surprisingly, only seven percent of the women in our sample are located in disciplines with a male predominance (90% + Male). In contrast, thirty percent of the men are located in such disciplines. Conversely, twenty-nine percent are found in disciplines with at least fifty percent female faculties, as opposed to only six percent of the men located in disciplines traditionally open to females. Sixty-four percent of both males and females are part of disciplines that are from fifty-one percent to eighty-nine percent male.

If some notion of self-selection applies, we might anticipate that women who exist in fields that have been male dominated (to a lesser or greater extent) have professional or personal qualifications that distinguish them from women who have pursued academic careers in fields traditionally open to women. This will be explored in Chapters 3 and 4. At present, however, it is helpful to look at how women are distributed when considering rank and sex domination of discipline.

TABLE 1.7: RANK BY SEX DOMINATION OF ACADEMIC DISCIPLINE AND SEX (1975)

	PROFESSOR	ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR	INSTRUCTOR	TOTAL
<u>90% + MALE</u>					
% WOMEN	14	17	33	36	(64)
% MEN	41	28	20	11	(1072)
<u>51% - 89% MALE</u>					
% WOMEN	13	20	35	32	(607)
% MEN	32	26	28	14	(2307)
<u>50% + FEMALE</u>					
% WOMEN	12	22	31	35	(277)
% MEN	29	20	32	19	(213)

The noteworthy finding in Table 1.7 is that it appears to make little difference for women what the sex composition is of their discipline. Approximately one-third of the women in each type of discipline are located at the upper ranks of associate and full professor (thirty-one percent, thirty-three percent and thirty-four percent respectively). Men in female dominant fields are less likely to be at higher ranks than are men in male dominant fields. Only forty-nine percent of the men in disciplines comprised of over fifty percent women are found to be professors or associate professors as compared to fifty-eight percent who are in fields with between fifty-one and eighty-nine percent men, and sixty-nine percent who are at the top ranks in academic disciplines with ninety percent or more men. This latter finding may be a result of men newly entering such fields as Library Science, Nursing, Health Education and Social Work and the fact that they have not been there long enough to have reached the higher ranks.

A full investigation into differences between men and women in academic rank will be undertaken in a subsequent chapter. Nonetheless,

it is necessary to introduce one further variable in this preliminary introduction to the academic women of 1975: Age. If women are recent arrivals to academia, then we might expect a sex differential reflected in academic rank. If, on the other hand, the age factor does not appear to mitigate the lower position of women in institutions of higher learning, we must go further in attempting to explain such a fact. Table 1.8 compares men and women on age.

TABLE 1.8: SEX DISTRIBUTION BY AGE (1975)

AGE	<u>% FACULTY WOMEN</u>	<u>% FACULTY MEN</u>
less than 30 years	12	6
30 - 39 years	31	37
40 - 49 years	28	28
50 - 59 years	20	20
60 years and older	9	9
	(1074)	(3836)

At the lowest age levels (younger than 30 years old) there is a difference between men and women. Perhaps the shrinking demand for faculty due to declining expansion of colleges and universities during the nineteen seventies accounts for the rather small numbers of faculty men in the youngest age group. If this is so, it is possible that an attempt to address the historic under-representation of women at faculty level is mirrored in the larger proportion of faculty women under 30 years old. In the other age categories, there are no differences between men and women.

If qualifications were evenly distributed among men and women and if there was no suspicion of institutional discrimination, we would expect faculty members of similar age to be at similar ranks. Table 1.9 suggests this not to be so. Faculty men and women in the same age groups show considerable differences in rank assignment.

TABLE 1.9: ACADEMIC RANK BY AGE AND SEX (1975)

<u>AGE</u>	<u>ACADEMIC RANK</u>					<u>TOTAL</u>
	<u>PROFESSOR</u>	<u>ASSOCIATE PROFESSOR</u>	<u>ASSISTANT PROFESSOR</u>	<u>INSTRUCTOR</u>	<u>OTHER</u>	
<u>LESS THAN 30 YEARS</u>						
% WOMEN	*	0	30	63	7	(132)
% MEN	*	2	43	47	8	(219)
<u>30 - 39 YEARS</u>						
% WOMEN	*	14	49	32	5	(334)
% MEN	7	29	47	13	4	(1440)
<u>40 - 49 YEARS</u>						
% WOMEN	9	21	37	27	7	(294)
% MEN	41	37	13	6	3	(1085)
<u>50 - 59 YEARS</u>						
% WOMEN	31	28	18	18	5	(215)
% MEN	63	21	7	6	3	(757)
<u>60 YEARS OR OLDER</u>						
% WOMEN	39	26	18	14	3	(98)
% MEN	71	10	7	7	5	(333)

At all age levels men are more likely to found at higher ranks than are women. Of the men who are sixty years or older, almost three quarters (seventy-one percent) are full professors as compared to thirty-nine percent of the women in this age group. Fourteen percent of the women thirty through thirty-nine years old are at the level of associate or full professor in contrast to thirty-six percent of the men in this age. Thirty percent of the women who are between forty and fifty are

at the top two ranks compared to seventy-eight of the men. And so on. The questions that must be addressed here are basic: Are women, in reality less qualified than men and therefore less likely to be promoted? If so, do such lesser qualifications reflect variations in ability or motivation or rather differences in available professional opportunities? If women are not less qualified than men professionally, are we to assume overt and active prejudice by educational institutions in employment practices? In sum, we need to explain the validated differences between men and women in terms of academic rank.

What, then, do we know about the academic women under consideration? Virtually half of the faculty women (forty-eight percent) are between forty and fifty-nine years old. They are primarily located in low status disciplines which have been designated in some way as female oriented subjects. Sixty-two percent of them are located at four and two-year colleges. Almost two-thirds of them hold the appointments at the lowest academic ranks - Assistant Professor and Instructor/Lecturer. Our findings, thus far, closely correspond to those of prominent studies in the literature. Whether or not the differences we have uncovered persist with more extensive analysis remains to be seen.

CHAPTER TWO

SOCIAL ORIGINS OF FACULTY WOMEN AND MEN

This chapter will focus on a comparison of the social origins of academic women and men. We shall turn attention, first, to the racial and religious composition of college and university faculties. Later, we consider the socio-economic status of origin (as reflected in parental occupation and education) of the faculty population. A description of such social origins addresses the question of who these academic men and women are. How are their backgrounds similar? How do they differ? And, do any differences between men and women in terms of social origins account for the direction of their careers.

Sociological approaches to the study of career development emphasize those factors which shape the options open to individuals such as social class, family size, sex, race, etc.. Most notably, Blau and Duncan explore the relationship between social class and occupation. They assert: "In the absence of hereditary castes or feudal estates, class differences come to rest primarily on occupational positions and the economic advantages and powers associated with them." (1967:vii) They continue by suggesting that there is a high rate of "occupational inheritance" and thus, intergenerational mobility becomes an important concern in their analysis of occupational structure.

Part of the larger complex of social origins are statuses one holds by ascription. In addition to sex, religion and race have generally been considered important indicators of career placement and mobility.

When Epstein (1973) observed that a greater percentage of black women enter "masculine" occupations than do white women, Fichter (1973) suggested that there is more acceptance by black males than white males of wife's employment. The extent to which such statuses are major correlates of success in academia is the major thrust of this discussion.

In 1964, Milton M. Gordon hypothesized that "intellectuals in the United States interact in such patterned ways as to form at least the elementary structure of a subsociety of their own, and that this subsociety is the only one in American life in which people of different ethnic backgrounds interact in primary group relations with considerable frequency and with relative comfort and ease."¹⁷ Directly related to the idea of an intellectual subsociety free from racial and religious biases, are the actual representation of minority member professionals in our academic institutions. If members of minority races and religions exist in higher education in such inconsequential numbers that they do not constitute any threat to the dominant membership group, the issue of Gordon's American subsociety is not interesting. If, on the other hand, minority representation is rapidly rising, the extent to which participants (distinguished by race, ethnicity, religion and sex) are integrated into, or on the periphery of, the academic community is of critical importance.

17. Milton M. Gordon, "The Intellectual Sub-Society" (p.219). Empirical tests of this notion, while not absent altogether are limited by small sample size and insufficient controls.

RACE

Table 2.1 suggests that strides have been made toward increasing black participation in academia. In the six year period under study, the representation of black faculty members has doubled. Notable, both years show three times as many black women as black men on university and college faculties. This appears to lend support to Epstein's conceptualization of the "double negative": that occupying two negatively valued statuses ("black" and "female") causes one status to cancel out the negative affect of the other.

TABLE 2.1: RACE BY SEX

	<u>1969</u>		<u>1975</u>	
	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>
WHITE	95%	97%	91%	94%
BLACK	3	1	6	2
ORIENTAL	2	2	2	2
OTHER ¹⁸	-	-	1	1
	(1854)	(9776)	(1050)	(3847)

Simply, our colleges and universities are "white" institutions. While blacks constitute eleven percent of the total U.S. population, it would be unrealistic to expect them to be present in equivalent proportion on college and university faculties. In 1972, nine percent of entering first year college students were black (this, a considerable gain over the reported 4.5% six years earlier in 1966) and the number of those graduating college is obviously smaller.

18. The "other" category is comprised of Native American-Indians; Mexican Americans; Puerto-Ricans; Other Asians; and others, not specified.

Beyond attempts to bring participation in academic careers up to the proportion of blacks in the available labor pool, are issues of placement and rank within such careers. The fact that blacks may be moving toward equal representation in institutions of higher learning may not reflect equality in meeting the measures of successful academic careers. The most critical such measure is, of course, rank. Because this is not a study of race in higher education, a complete investigation into career placement will not be undertaken. However, a further look at the notion of the "double negative" proposed by Epstein is of interest: Do black women achieve more than black men within our academic institutions?

In fact, Table 2.2 demonstrates that black men do considerably better than do black women and better, also, than white women.

TABLE 2.2: FACULTY RANK BY RACE AND SEX (1975)

	<u>WHITE</u>		<u>BLACK</u>		<u>ORIENTAL</u>		<u>OTHER</u>	
	<u>%FEMALE</u>	<u>%MALE</u>	<u>%FEMALE</u>	<u>%MALE</u>	<u>%FEMALE</u>	<u>%MALE</u>	<u>%FEMALE</u>	<u>%MALE</u>
PROFESSOR	13	33	10	13	12	28	13	15
ASSOC. PROFESSOR	18	27	15	26	21	35	0	20
ASST. PROFESSOR	34	25	34	29	38	25	47	37
INSTRUCTOR- LECTURER	29	11	41	29	21	11	40	23
OTHER	6	4	0	3	8	0	0	6
	(967)	(3589)	(59)	(76)	(24)	(71)	(15)	(71)

In comparison to sixty percent of the white men who rank at either professor or associate professor level, thirty-one percent of the white women and twenty-five percent of the black women rank this high. Thirty-nine percent of black male faculty members exist at levels of professor or associate professor. Interestingly, the people who rank the highest are the Oriental males, sixty-three percent of whom are represented at the higher ranks. We saw in Table 2.1 that Orientals comprised 2 percent of the faculty at American Institutions of Higher Learning. This is quite significant in that they are only one-half of one percent of the total American population. Still, Oriental women do not appear to fare as well as their male counterparts. Any advantages due to identification as a "double negative" (that is membership in two minority groups) do not appear to pertain to the issue of rank on academic faculties.

In sum, the difficulties in gaining balance in racial distributions are many. It is not enough to address structural problems within universities and colleges. In addition, larger social issues and inequities, such as groups existing in differing proportions in the available labor pool, are not within the institutions' control.

RELIGION

Differences in access to higher education and professional careers due to religious affiliation have long been of concern to sociologists. The focus of this concern has been two fold: First, are members of particular religious groups systematically excluded from academic faculties? Second, is there some basic incompatibility between religiosity and academia?

Table 2.3 gives the breakdown of United States population by religion, reported in 1957 and in 1975.

TABLE 2.3: RELIGION REPORTED, UNITED STATES

	<u>1957</u> ¹⁹	<u>1975</u> ²⁰
PROTESTANT	66%	61%
ROMAN CATHOLIC	26%	27%
JEWISH	3%	2%
OTHER RELIGION	3%	4%
NO RELIGION	3%	6%

If we look at the breakdown of male and female faculty by religion we find striking similarities between academic people and the population at large.

TABLE 2.4: RELIGION RAISED

	<u>1969</u>		<u>1975</u>	
	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>
PROTESTANT	65%	65%	63%	62%
CATHOLIC	22	15	20	18
JEWISH	6	11	9	10
OTHER	3	4	3	4
NONE	4	4	5	5
	(1837)	(9690)	(1054)	(3786)

19. Source: Current Population Reports, Series, P-20, No. 70, (February 1958). Based on a National sample survey.

20. Source: Gallup Opinion Index, 1976: 34-37. Based on a National sample survey.

There appears to be a slight under-representation of Catholics in American Academic Faculty and an over-representation of Jews. Curiously, the proportion of academic women who are Catholic (twenty-two percent in 1969 and twenty percent in 1975) is more representative than the proportion of academic men (fifteen percent in 1969 and eighteen percent in 1975). While a higher percentage of men were raised Jewish than were women in 1969, the gap is narrowed considerably by 1975 (when nine percent of the female faculty report being raised Jewish and ten percent of the male faculty are Jewish.) Considering that in 1975 Jews were only two percent of the total U.S. population, the common notion that Jews assume a prominent place in the field of higher education appears to be validated.

Table 2.5 when compared to Table 2.4 suggests a significant amount of religious apostasy among faculty members of both sexes.

TABLE 2.5: PRESENT RELIGION

	<u>1969</u>		<u>1975</u>	
	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>
PROTESTANT	49%	47%	44%	42%
CATHOLIC	19%	12%	17%	12%
JEWISH	5%	7%	7%	7%
OTHER	6%	7%	6%	7%
NONE	21%	27%	27%	31%
	(1796)	(9469)	(1012)	(3646)

The incompatibility between religion and intellectualism has been prominent in sociological literature. Caplovitz points out that "committed to universalism - achievement values, intellectuals no doubt place less emphasis than do others on ties based on particularism and ascription." (1977:73). Stark (1963), in his study of graduate students, also argues for the fundamental divergence between religion and science. In continuing our investigation into differences between men and women, it seems important to explore differences in themes of religiosity and apostasy by sex.

One popular notion is that women tend to be more religious than are men. However, this may well be due to a general lack of integration into the social, economic and political arenas. If this is so, as more women assume active occupational and social positions, they will come closer to their male counterparts in reporting religiosity.

Table 2.6 shows expected differences between male and female faculty in reported commitment to religion.

TABLE 2.6: HOW RELIGIOUS DO YOU CONSIDER YOURSELF?

	<u>1969</u>		<u>1975</u>	
	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>
DEEPLY RELIGIOUS	18%	13%	18%	13%
MODERATELY RELIGIOUS	50%	43%	48%	44%
INDIFFERENT TO RELIGION	26%	34%	30%	36%
OPPOSED TO RELIGION	6%	10%	4%	7%
	(1848)	(9725)	(1053)	(3800)

Women are more likely than men to report being deeply or moderately religious in both 1969 and 1975. In 1969 the difference in these combined categories by sex amounted to twelve percentage points. In 1975 there was a nine percentage point difference between women and men who considered themselves religious. The fact that there is virtually no difference between the 1969 and 1975 data in reported religious commitment may lend support to the notion that the professional woman is not necessarily representative of women in general, and never has been. A comparison of professional women with those who do not go into professional careers might help clarify such suspicions.

If we assume that religiosity is an important component in religious identification, we expect that religious apostasy will be, at least, slightly less prevalent among female faculty than it will be for males. Table 2.7 explores this possibility.

TABLE 2.7: RELIGIOUS APOSTASY

1969										
<u>RELIGION RAISED</u>										
<u>PRESENT RELIGION</u>	<u>PROTESTANT</u>		<u>CATHOLIC</u>		<u>JEWISH</u>		<u>OTHER</u>		<u>NONE</u>	
	%W	%M	%W	%M	%W	%M	%W	%M	%W	%M
PROTESTANT	72	69	4	5	0	2	5	5	8	10
CATHOLIC	2	2	80	66	0	1	5	1	8	4
JEWISH	1	*	1	*	80	67	0	0	5	1
OTHER	5	5	2	3	0	2	70	72	5	8
NONE	20	24	13	26	20	29	19	21	74	77
	(1180)	(6189)	(383)	(1451)	(103)	(1014)	(57)	(357)	(62)	(409)

1975										
<u>RELIGION RAISED</u>										
<u>PRESENT RELIGION</u>	<u>PROTESTANT</u>		<u>CATHOLIC</u>		<u>JEWISH</u>		<u>OTHER</u>		<u>NONE</u>	
	%W	%M	%W	%M	%W	%M	%W	%M	%W	%M
PROTESTANT	68	65	4	5	0	1	3	3	2	7
CATHOLIC	2	1	76	62	0	0	7	2	6	2
JEWISH	1	*	1	*	71	68	0	0	2	3
OTHER	5	5	2	3	2	1	63	79	0	4
NONE	24	29	18	30	27	30	26	15	90	83
	(638)	(2272)	(199)	(656)	(89)	(359)	(30)	(151)	(50)	(186)

In fact, in all of the major religions (Protestant, Catholic and Jewish) women are more apt to retain their original religious identification than are men. An interesting case study emerges in the population of Jewish faculty. Whereas in 1969 there was a thirteen percentage point difference between women and men (eighty percent of those women raised Jewish still identify themselves as Jews, as

compared to sixty-seven percent of the Jewish born men), in 1975 this difference was only three percentage points (seventy-one percent and sixty-eight percent respectively).

In all of the major religions there is an increase in apostasy, albeit small, from 1969 to 1975.

Of those people (both men and women) who start out in life with no religious affiliation, there are notable differences between 1969 and 1975. In 1969 twenty-six percent of the females in this category and twenty-three percent of the males identified themselves as gaining some religious identification. In contrast, only ten percent of the females who had no religious affiliation originally and seventeen percent of the males later identified with some religion. The implication here is that being brought up with no religious affiliation makes it increasingly more difficult to later affiliate with some religious groups. Perhaps one explanation for this is that there is less pressure to affiliate through marriage with a particular religion than there has been in the past.

One further point of interest in Table 2.7 is found in the fact that twice the proportion of Catholic men as Catholic women become religious apostates. Somehow, then, being a Catholic faculty woman makes it markedly more difficult to void religious identification than does being a Catholic faculty man.

We have seen that differences between men and women in academic

faculties by race and religion most certainly exist. A further question, beyond our capabilities, is implicit in the exploration of how much faculty women resemble women, in general, as well as women in other professional groups. In other words, to what extent are the women who select themselves out (or are selected) for academic careers a reflection of the larger population of women and to what extent are they more like the men they call their colleagues?

SOCIAL CLASS BACKGROUND

The rudimentary question in exploring social class origins is whether the women who enter what is clearly a "man's world" come from more priveleged backgrounds. In this section we attempt to address this issue. Perhaps the best single indicator of social class origin is father's occupation. Table 2.3 is most notable for the lack of variation between males and females in terms of fathers' occupations. Additionally, there appears to be little difference in trends from 1969 to 1975. Not surprisingly, in both 1969 and 1975, the majority of both men and women had fathers who were in professional or white collar occupations. (Eighty-two percent of the women in 1969 and seventy-six percent in 1975 fell into this category. Seventy-eight percent of the men in 1969 and seventy-three percent in 1975 had fathers in professional or white collar positions.)

TABLE 2.8: FATHER'S OCCUPATION²¹

	<u>1969</u>		<u>1975</u>	
	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>
PROFESSIONAL	26%	24%	24%	22%
WHITE COLLAR	56%	54%	52%	51%
BLUE COLLAR	17%	22%	23%	26%
ARMED FORCES	1%	1%	1%	1%
	(1847)	(9767)	(1008)	(3696)

As one might expect, there is an increase over time in respondents whose fathers fell into the category of blue collar worker. As higher education has become more accessible to members of all socio-economic groups, we anticipate an increased participation of lower class members in both graduate and professional schools and, subsequently, in professional careers. What we have here is, in a sense, the democratization of the elite.

In reflecting on concepts of "role models" in childhood socialization, one could posit that, for a woman, having a mother who worked might be a more important factor in developing a career orientation than social class, in general. Unfortunately, data relating to mother's occupation is not available for the 1969 survey. However,

21. The category of "professional" is comprised of college and university teachers, researchers and administrators; secondary and elementary school teachers and administrators; and other professionals. The category of "white collar" workers is comprised of owners of businesses; executives and managers in industry; semi-professionals; and other white collar positions. The "blue collar" category is made up of skilled wage workers, unskilled wage workers, and farm workers.

the 1975 survey does include a question about mother's occupation. If a greater number of the women than men who exist in academic careers report mothers in occupational roles to begin with, and in professional and white collar careers in particular, we might postulate that, all other things being equal, early association with significant women in careers fosters career orientation later in life.

Table 2.9 suggests that having mothers who work in general and having mothers in professional or white collar occupations, in particular, account for small differences between male and female faculty. These differences are not as marked as one might anticipate. In fact, there is only a seven percentage point difference between male and female faculty in reporting mothers in professional or white collar occupations. The shallow differences here may point to the narrowing gap between men and women in academia. If, in fact, the opportunity structures are increasingly similar for women and men in academia, we would expect some mirroring of this in comparing 1969 and 1975 statistics. Since these statistics are not available for 1969 we cannot consider trends over time.

TABLE 2.9: MOTHER'S OCCUPATION (1975)

2.9A: DID MOTHER WORK OUTSIDE THE HOME?

	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>
<u>MOTHER WORKED</u>	41%	32%
<u>MOTHER HOMEMAKER</u>	59%	68%
	(1010)	(3691)

2.9B: BREAKDOWN OF WORKING MOTHERS:

<u>MOTHER'S OCCUPATION</u>	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>
PROFESSIONAL	47%	39%
WHITE COLLAR WORKER	38%	39%
BLUE COLLAR WORKER	15%	22%
	(411)	(1189)

Most prominent in Table 2.9A is that an overwhelming majority of all faculty members had homemaker mothers. Nonetheless, faculty women were somewhat more likely to have working mothers than were faculty men (forty-one percent of the women as compared to thirty-two percent of the men reported so.)

Concentrating on those respondents indicating working mothers, almost one half (47%) of the female faculty had professional mothers. In contrast, thirty-nine percent of the faculty men reported that they had professional mothers. A marked majority of faculty members with working mothers cited being offspring of professional or white collar mothers. Here, too, faculty women with working mothers appear to have an edge on their male counterparts. Eighty-five percent of the women

with working mothers had mothers in professional or white collar positions, while only 78% of the faculty men with working mothers so reported. It appears, then, that female faculty are somewhat more apt to have mothers who work, in general and those who work at professional or white collar positions in particular.

Turning our attention briefly to parents' education, we expect findings similar to those of parental occupation. Certainly, education and occupation are opposite sides of the same coin and we expect no surprising turns here. Female faculty are expected to report more education for mothers than their male counterparts. Differences between men and women are expected to be relatively small in terms of father's education. Table 2.10 supports these notions.

TABLE 2.10 PARENTS' EDUCATION

		<u>1969</u>	<u>1975</u>		
		<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>	<u>FEMALE FACULTY</u>	<u>MALE FACULTY</u>
<u>FATHER'S EDUCATION</u>					
LESS THAN HIGH SCHOOL	36%	41%	32%	41%	
HIGH SCHOOL GRADUATE	17	17	20	19	
SOME COLLEGE	13	13	15	13	
COLLEGE GRADUATE	11	11	11	10	
POST GRADUATE	22	19	22	17	
	(1795)	(9647)	(1040)	(3792)	
<u>MOTHER'S EDUCATION</u>					
LESS THAN HIGH SCHOOL	33%	36%	29%	34%	
HIGH SCHOOL GRADUATE	26	30	26	32	
SOME COLLEGE	18	16	21	15	
COLLEGE GRADUATE	13	12	13	12	
POST GRADUATE	10	6	12	7	
	(1797)	(9639)	(1042)	(3804)	

There appears to be very little change from 1969 to 1975 in representation of faculty (of both sexes) with parents having had at least some higher education. Nonetheless, the slight movement (two percentage points for female faculty and three percentage points for male faculty) hints at an interesting paradox. While women were slightly more likely to report mothers with some higher education in 1975 than in 1969, men were slightly less likely to do so. Additionally, while men show no change over time in indicating mothers with higher education, women increase by five percentage points in specifying mothers with at least some higher education. These findings are surprising in that we might expect there to be an increase in parents with higher education in both sex groups due to notions of social change and swelling number of college-educated people. However, in the time period we have considered, this has not been the case.

Despite the rather small differences between male and female faculty in education achievement of both parents, we see that in all cases (both in 1969 and 1975, and in the cases of father's and mother's education) women are slightly more likely to report parents with higher education than are men. Some forty-six percent of the women in 1969 and forty-eight percent of those in 1975 indicate their fathers had at least some college, as compared to forty-three percent of the men in 1969 and forty percent in 1975. Forty-one percent of the female faculty in 1969 and forty-six percent of those in 1975 had mothers with at least some college contrasted to thirty-four percent of the male faculty both in 1969 and in 1975. The critical point here is that academic women have better educated mothers than do academic men. This

may well punctuate the issue of mothers as role models for professional women.

Well over 40% of all respondents (regardless of sex) in both years report fathers with some higher education and at least one-third of the respondents specified that their mothers had at least some college. The cycle associated with education and occupation is apparent: the more education one has, the more likely one is to hold a professional or white collar position.

To contemplate the impact of SES (or more precisely, parental occupation) on career, it is necessary to consider the effect of SES on placement within careers. Does socialization into professional roles stem, in part, from childhood experiences? is there some relationship between SES of family of origin and success in academic careers? While these issues are complex, to say the least, they are to some extent measurable. If we use current rank to denote rewards in academic careers we can review the notion that original social class has some effect on career achievement.

TABLE 2.11 ACADEMIC RANK BY FATHER'S OCCUPATION AND SEX

ACADEMIC RANK		1969 FATHER'S OCCUPATION					
		PROFESSIONAL		WHITE COLLAR		BLUE COLLAR	
		%F	%M	%F	%M	%F	%M
PROFESSOR		14	32	11	32	9	26
ASSOCIATE PROFESSOR		16	24	18	24	17	24
ASSISTANT PROFESSOR		27	29	31	28	30	30
INSTRUCTOR- LECTURER		38	12	32	13	37	16
OTHER		5	3	7	4	8	5
		(485)	(2299)	(1026)	(5208)	(303)	(2141)

ACADEMIC RANK		1975 FATHER'S OCCUPATION					
		PROFESSIONAL		WHITE COLLAR		BLUE COLLAR	
		%F	%M	%F	%M	%F	%M
PROFESSOR		16	37	12	33	13	30
ASSOCIATE PROFESSOR		18	24	17	27	19	29
ASSISTANT PROFESSOR		36	27	35	26	31	24
INSTRUCTOR- LECTURER		25	9	31	11	32	12
OTHER		5	3	6	4	5	5
		(238)	(795)	(517)	(964)	(232)	(47)

Abundantly clear from Tables 2.11A and 2.11B is the fact that regardless of father's occupation, men are notably higher in the academic ranking network than are women. In fact, by 1975, over half of the males in all offspring categories occupied professor or associate

professor positions, compared to about one-third of the women. An inverse relationship exists between sex and academic rank. Men increase their proportions as rank rises and women tend to be decreasingly represented as rank increases. This relationship holds true for offspring of fathers in all occupational strata.

Nonetheless, both tables 2.11A and 2.11B indicate an advantage for offspring of higher status occupation fathers. These advantages are reflected for both male and female faculty. In 1969, female offspring of blue collar fathers were more likely to be found at the lowest rank of instructor-lecturer than at the highest rank of professor in a ratio of four to one (thirty-seven percent at instructor level compared to nine percent at rank of professor.) Female offspring of professional fathers were more likely to occupy positions at the instructor level than the professor level at a ratio of a little over two and one-half to one. Correspondingly, male offspring of professional fathers in 1969 were more likely to be found at the level of professor than instructor at a ratio of two and two-thirds to one, compared to sons of blue collar fathers who existed at the highest rank rather than the lowest rank in a ratio of only slightly more than one and one-half to one.

By, 1975, female faculty (regardless of fathers' occupations) were slightly less likely to appear at the lowest ranks than at the highest ranks, than they were in 1969. (Where in 1969 the ratio of female offspring of professional fathers at lower ranks to those at higher ranks was over two and one-half to one, in 1975 it was only slightly

over one and one-half to one. The ratio of daughters of white collar and blue collar fathers at the lowest rank compared to those at the highest rank was three to one and four to one, respectively, in 1969 and went down to two and one-half to one in both strata in 1975.)

Interestingly, the ratio of faculty men at rank of professor to those at instructor level also increased favorably across all categories of father's occupation. (Where in 1969 sons of professional fathers were two and two-thirds as likely to be professors as instructors, in 1975 they were four times as likely to be at professor status. In 1975 male offspring of white collar fathers were three times as likely to be professors than instructors as compared to 1969 when the ratio was two and one-half to one. Finally, in 1975 sons of blue collar workers were two and one-half times more likely to be at the highest rank than they were at the lowest rank as compared to 1969 when this proportion was a little more than one and one-half to one.)

Father's occupation, held to be an indicator of original social class, appears to have some relationship, albeit a limited one, to academic rank within American colleges and universities. Even so, original social class contributes little to our explanation of sex differentials in Rank.

Turning our attention to institutional location considering father's occupation, we encounter anticipated relationships. If we envision institutional type in some hierarchical fashion, and consider that higher SES children have more access to the necessary requisites

for successful career experiences, we expect that children from higher socio-economic backgrounds will more likely appear in universities than children from lower SES origins. Table 2.12 supports this expectation.

TABLE 2.12 TYPE OF APPOINTMENT INSTITUTION BY FATHER'S OCCUPATION AND RESPONDENT'S SEX

<u>1969</u>						
FATHER'S OCCUPATION						
<u>TYPE OF INSTITUTION</u>	<u>PROFESSIONAL</u>		<u>WHITE COLLAR</u>		<u>BLUE COLLAR</u>	
	<u>%F</u>	<u>%M</u>	<u>%F</u>	<u>%M</u>	<u>%F</u>	<u>%M</u>
UNIVERSITY	65	78	62	77	57	69
4 YEAR COLLEGE	32	20	31	20	35	26
2 YEAR COLLEGE	3	2	6	3	8	5
	(486)	(2307)	(1031)	(5220)	(304)	(2150)
<u>1975</u>						
FATHER'S OCCUPATION						
<u>TYPE OF INSTITUTION</u>	<u>PROFESSIONAL</u>		<u>WHITE COLLAR</u>		<u>BLUE COLLAR</u>	
	<u>%F</u>	<u>%M</u>	<u>%F</u>	<u>%M</u>	<u>%F</u>	<u>%M</u>
UNIVERSITY	42	58	39	53	32	40
4 YEAR COLLEGE	50	35	46	38	43	45
2 YEAR COLLEGE	8	7	15	9	25	16
	(339)	(803)	(520)	(1864)	(233)	(972)

The marked changes between 1969 and 1975 in terms of institutional distribution are quickly explained by sampling differences. The 1969 sample does not accurately reflect the universe of institutions of

higher education.²² The universities were substantially over-represented. Thus, a comparison of the 1969 and 1975 data would be misleading. Nonetheless, an examination of the tables, internally, for both years demonstrates that having a father in a professional or white collar position increases the likelihood of being at a university.

In 1975, forty-two percent of the daughters of professional fathers were located at universities, as opposed to thirty-two percent of the female offspring of blue collar fathers. Even more marked differences exist between male offspring in these categories. (Fifty-eight percent of sons of professional fathers as compared to forty percent of sons of blue collar fathers are at universities.) Over twice as many sons of blue collar fathers than sons of professional fathers are at two-year colleges in 1975. Over three times as many female offspring of blue collar workers are placed in two-year colleges as compared to daughters of professional fathers. In fact, daughters of professional fathers are over five times as likely to be at universities than at two-year colleges, whereas daughters of blue collar fathers are only one and one-third as likely to be at universities. Likewise, sons of professional fathers are over eight times as likely to be at universities than at two-year schools, and male offspring of blue collar fathers are only two and one-half times as apt to be at universities.

22. See pages 321-323 of the Technical Report: 1969 Carnegie Council National Surveys of Higher Education, Center for Studies in Higher Education, University of California, Berkeley.

Having a father with high status occupation appears to have some association with institutional location. The nature of such a relationship is speculative, at best. Once again, this kind of finding may feed conceptions of childhood socialization and its effect on subsequent orientation toward professionalism (particularly if we are to take institutional location as a reward in academia). Or, issues of socio-economic status and opportunity structures may be critical denominators. Further, geographic location may serve to pattern a relationship between SES of origin and subsequent career location. It will suffice, at present, however to acknowledge that a relationship exists between institutional location and father's occupation, albeit not a substantial one.

It has already been asserted that testing any notions of role models in early childhood socialization requires consideration of those women who do not pursue professional careers as well as those who do. Nevertheless, we suspect that daughters of professional women may fare better in climbing the career ladder than those who are the offspring of non-working or non-professional mothers. If no such trends exist, we can only guess at the implications: First, it is possible that notions of role models in socialization and feminist literature²³ may

23. e.g. Sandra Bem and Daryl J. Bem, "Training the Woman to Know Her Place: the Power of Non-Conscious Ideology:", and Jo Freeman, "The Social Construction of the Second Sex," both in Garskof, ed.; E. Alonquist and S. Angrist, "Role Model Influences on College Women's Career Aspirations," in Merrill-Palmer Quarterly, 17 (1971); E. Berir and L. Ratzberg, "The Parental Identification of Male and Female College Students" in Journal of Abnormal and Social Psychology, Vol. 48, 1953; Paul H. Mussen, "Early Sex Role Development" in Nancy Reeves, ed. Womankind, Beyond the Stereotypes, Aldine Atherton, Chicago, 1971.

be limited, or invalid altogether. Second, it may be that structural limitations on the placement within academic institutions exist which serve to mitigate differences in some background characteristics of participants. Exploration of both of these possibilities are beyond the intent of this discussion. The question of role models in childhood cannot be satisfactorily reviewed given the available data. The question of institutional discrimination will be undertaken in a later chapter. It is our hope to scan the issue of the effect of mother's occupation in an effort to generate questions rather than to answer them.

In Table 2.13 we encounter an interesting reversal. While it is true that women with mothers in professional occupations are at higher ranks than those with mothers in white collar positions, who in turn rank higher than blue collar offspring, women whose mothers are non-employed homemakers do as well as those whose mothers are professionals. One-third of the female faculty with mothers who were homemakers are either professors or associate professors. About the same proportion of female offspring of professional mothers, thirty-two percent, are at these ranks.

TABLE 2.13: ACADEMIC RANK BY MOTHER'S OCCUPATION AND SEX (1975)

ACADEMIC RANK	MOTHER'S OCCUPATION							
	<u>PROFESSIONAL</u>		<u>WHITE COLLAR</u>		<u>BLUE COLLAR</u>		<u>HOMEMAKER</u>	
	<u>%F</u>	<u>%M</u>	<u>%F</u>	<u>%M</u>	<u>%F</u>	<u>%M</u>	<u>%F</u>	<u>%M</u>
PROFESSOR	12	27	7	21	5	25	14	36
ASSOCIATE PROFESSOR	20	25	15	26	14	27	19	28
ASSISTANT PROFESSOR	36	32	32	33	35	27	34	23
INSTRUCTOR- LECTURER	28	12	38	15	41	17	28	10
OTHER	4	4	9	5	5	4	5	3
	(190)	(436)	(155)	(458)	(63)	(264)	(596)	(2475)

Notably, two thirds of the men who report homemaker mothers rank at professor or associate professor level, as opposed to one-half (52%) of the offspring of professional and blue collar mothers. Even less of the male offspring of white collar mothers (47%) occupy professor or associate professor status. In fact, no real effect on male faculty of mothers' occupations is gleamed from these findings.

Implicit in Table 2.13 is that having had a working mother is not a substantial correlate of faculty rank for women. In fact, having a non-employed, homemaker mother may be a decided advantage for both men and women. Explication of this phenomenon may rest in one of many directions: First, one might propose some notion of "nurturing" to explain the increased participation of children of homemaker mothers at higher ranks. Second, age may be a contaminating factor in the observed relationship between mother's occupation and academic rank.

It would make sense that the older respondents in our sample would be most likely to have homemaker mothers since the place of women in work arenas has been historically defined. Commensurately, the older one is, the longer one is likely to have been in academic institutions and, thus, the more apt to have moved up in the ranks. Finally, it may be that the homemaker mothers in our sample make up some "deviant" group. "Deviant", that is, in the sense that common conceptions of "homemaker" negate educational achievement and social characteristics that help define professionalization. However, it may well be that this conception is inaccurate to begin with. In reality, these homemakers may not participate in the work force because they can afford not to and are defined by higher social class.

Due to limitations of our data, already mentioned, theories of nurturing cannot be tested here. However, issues of who the homemaker mothers are can be penetrated.

When we controlled for age of respondent, we found that homemaker mothers were evenly distributed across categories. When we considered mother's education and occupation of father (assumed to be mother's spouse in most cases), we found that while seventy-two percent of the homemaker mothers were paired with either professional or white collar fathers, eighty-eight percent of the professional mothers and eighty-four percent of the white collar mothers were so paired. Only four percent of the blue collar mothers were matched to professional or white collar fathers. One interesting finding existed in the fact that twenty-eight percent of the homemaker mothers had at least some

college, compared to only one percent of the blue collar mothers and ten percent of the white collar mothers. Ninety-two percent of the professional mothers had at least some college education. Thus, while the homemaker mothers did not come close to professional mothers in terms of education or, in fact, in terms of spouse's occupation, they did represent a relatively well-educated group, almost three-quarters of whom were paired with professional or white collar fathers.

Summary

An investigation of the social origins of college and university faculty reveals a few distinctions between men and women. Academic women and men appear in near, if not comparable, proportions when religion and socio-economic background (as measured by parents' occupations and education) is considered. However, turning attention to race, we find that black women exist in higher proportions than black men on academic faculties. Even so, black men are more apt to be positioned at higher ranks than black women. Both faculty women and men appear to reflect notable religious apostasy. Even so, women do report slightly more commitment to religion than do men. Women are more apt to report parents (both fathers and mothers) with higher education than men. However, the differences are very small. Female faculty do report mothers who work, in general, and mothers in professional and white collar positions, specifically, at higher rates than faculty men. Though, once again, these differences are not substantial.

Regardless of father's occupation, men do better than women in terms of rank and institutional placement. Beyond this broad finding, both men and women with fathers in high status occupations fare better than those with fathers in lower status occupations. That is, they are more likely to be found at higher ranks and at universities. Interestingly, and contrary to expectations of role models for women, having had a non-employed homemaker mother may serve as an advantage for both men and women in later professional advancement.

Overall, the findings suggest that variations in background characteristics (where they exist at all) do not serve to explicate the differential position of women in academic insitutions.

CHAPTER THREE

EDUCATION AND GRADUATE SCHOOL EXPERIENCE OF ACADEMIC FACULTY

Once the "choice" is made to enter an academic career, a number of factors may lead to differential professional socialization by sex.²⁴

The impact of limited female role models on the professional socialization of academic women cannot be measured. Nonetheless, in distinguishing the faculty as "socializer" and student as "socializee", we must assume that, where no women exist as socializers or they exist in a few fields traditionally more accessible to women, that the road to professionalization will be different for women than it is for men.

In addition, attitudes toward female students may be a source of difficulty in socialization into a professional role. If, as has been suggested earlier, women are not readily accepted as potential professionals, even in the most liberal atmosphere, subtle differences in the graduate school experience may exist. In 1967, Pease explored "Faculty Influence and Professional Participation of Doctoral Students." Pease hypothesized that the more contact a student had with the faculty, and the more he was encouraged by the faculty toward professional activity, the more he participated professionally. Findings showed faculty encouragement to be one of the most consequential variables for student participation in professional activities. Among students reporting such encouragement, eighty-eight

24. The past 25 years have produced a number of sociological studies of socialization of students in American graduate and professional schools: e.g. Becker and Carpenter (1956), Becker, et.al. (1961), Davis, et.al. (1962), Merton, et.al. (1957).

percent participated in professional activities. Only twenty-five percent of the students reporting no encouragement to participate in professional activity. A marked difference in publication rates among students also reflected differences in faculty encouragement.

For women, the line between dropping out and staying on in academics is a thin and often illusory one. Categorical judgements that administrators make about the probability of women completing a graduate program may well be based on verifiable experience. In this way, resources considered important, if not essential, for a successful graduate school experience may be less readily available to women than to men. Fellowships, teaching and research traineeships and close faculty mentoring are examples of such opportunities. Thus, it may be difficult to distinguish between women who are "cooled out" of the academic world and those who "cool" themselves out.

Highest Degree Held

For whatever reason, we do know that of the people who hold academic appointments, a considerably lower proportion of women have doctorates than do men. Table 3.1 shows the large gaps between men and women considering the highest degree held as well as the lack of remarkable change in the situation in the six year period under consideration.

TABLE 3.1: HIGHEST DEGREE HELD (AT DESIGNATED YEAR)

	<u>1969</u>		<u>1975</u>	
	<u>% Women</u>	<u>% Men</u>	<u>% Women</u>	<u>% Men</u>
Doctorate	38	73	42	73
Masters	54	24	51	24
Bachelors	8	4	7	3
	(1741)	(9363)	(1014)	(3775)

As can be seen, almost twice the proportion of men as women have doctorates or equivalent (73% men as opposed to 38% women in 1969 and 42% in 1975). There appears to be very little difference in the distribution of faculty by highest degree between the two periods. The female faculty shows a very slow movement (four percentage point difference) in the direction of attaining doctoral degrees.

There are a variety of ways in which academic placement and graduate degrees interact. The most common situation occurs where an individual already has his or her highest degree and is then positioned on a university, four-year college or junior college faculty. A second situation arises when persons are in the process of completing degrees and are hired into academic lines in anticipation of impending completion of such a degree. Yet another situation occurs when people who are hired into an academic position based on the degree held at hire time, are motivated to return to graduate school to get a higher degree while they are functioning in these faculty positions.

Once in an academic system, advancement may be thwarted without

appropriate credentials and avenues for career movement may become unblocked with the acquisition of a still higher degree. Table 3.2 looks at those people who are in academic locations and are working on higher degrees than those held at the point of entry into academic careers.

TABLE 3.2 HIGHEST DEGREE NOW WORKING ON BY SEX

	<u>1969</u>		<u>1975</u>	
	<u>% Women</u>	<u>% Men</u>	<u>% Women</u>	<u>% Men</u>
Doctorate	78	86	72	78
Masters	21	13	25	18
Bachelors	1	2	4	5
	(379)	(1361)	(221)	(409)

Of the people currently working toward a degree, there is not a marked difference between men and women. While there is a slightly higher percentage of male faculty working on doctorates than there are female faculty, the differences are a matter of eight percentage points in 1969 and six percentage points in 1975. As expected, a great majority of both men and women working toward a degree are preparing for doctorate degrees. We can summarize the important differences between female and male faculty from Tables 3.1 and 3.2 by constructing an index that relates to doctorate degrees. We consider people who (1) held the doctorate at the time of the particular survey, (2) did not hold a PhD or equivalent but who were working toward such degrees, or (3) did not hold a doctorate and were not working toward one. Table 3.3 presents these summary data.

TABLE 3.3: DOCTORAL DEGREES BY SEX

	<u>1969</u>		<u>1975</u>	
	<u>% Women</u>	<u>% Men</u>	<u>% Women</u>	<u>% Men</u>
Have Doctorate	38	73	42	73
No Doctorate but Working toward one	16	11	14	7
No Doctorate & Not Working toward one	47	17	45	20
	(1757)	(9418)	(1024)	(3786)

Again, the marked finding here is that only seventeen percent of the men in the 1969 faculty did not hold doctorates and were not working toward one as compared with forty-seven percent of the women. In 1975, eighty percent of the male faculty either had a doctorate or were working toward one, while forty-five percent of the female faculty did not hold doctorates and were not working toward one. The immediate questions that emerge move in two directions. First, is there a difference in where male and female faculty are placed that in some way reflects differences in qualifications and, second, are men and women with the same degree qualifications similarly rewarded.

We noted in Chapter 1 that women were more likely to appear in four or two-year colleges than universities. Historically, junior college faculty have not had the same degree requirements placed on them. It could follow, then, that one of the key reasons women are more likely to be found at two-year institutions is that they are more apt to have less than doctorate degrees. Table 3.4 examines this assumption.

TABLE 3.4: HIGHEST DEGREE HELD BY TYPE OF APPOINTMENT INSTITUTION AND SEX

	1969				1975			
	Universities & Four-Year Colleges		Two-Year Colleges		Universities & Four-Year Colleges		Two-Year Colleges	
	%W	%M	%W	%M	%W	%M	%W	%M
Doctorate	40	74	6	15	48	79	12	19
Masters	53	22	82	71	47	19	70	71
Bachelors	7	4	12	14	5	2	19	11
	(1642)	(9091)	(99)	(272)	(833)	(3419)	(181)	(356)

The percentage of both men and women with doctorates at two-year colleges is quite small. Although, twice the proportion of women at these institutions in 1975 held doctorates as did in 1969, this still did not amount to more than twelve percent. A slightly larger percentage of men held doctorates at these two-year colleges; fifteen percent in 1969 and nineteen percent in 1975. By and large, then, faculty at two-year schools are most likely to have masters degrees, with a few holding doctorate degrees and a few only having Bachelors degrees.

At the university and four-year college the situation is more complicated. Here, while the largest proportion of men hold doctorates, less than half of the women do so. In 1975, the proportion of both men and women holding doctorates increased slightly, but the overall picture remained the same. If we separate out the faculties at universities and those at four-year colleges we might explain some of the variation

by sex. If, for example, universities, as a rule require more of faculty than do smaller four-year colleges, it may be that people (both men and women) without doctorates are more apt to be located at these less prestigious institutions. In Table 3.5 we separate the faculty at universities and four-year colleges.

TABLE 3.5: MEN AND WOMEN AT UNIVERSITIES AND FOUR-YEAR COLLEGES BY HIGHEST DEGREE HELD

	1969				1975			
	Universities		Four-Year Colleges		Universities		Four-Year Colleges	
	%W	%M	%W	%M	%W	%M	%W	%M
Doctorate	41	78	38	59	53	86	44	71
Masters	52	18	55	36	44	13	50	26
Bachelors	7	3	7	4	3	1	6	3
	(1092)	(7074)	(550)	(2017)	(384)	(1939)	(449)	(1480)

While Table 3.5 points out some interesting things, it fails to demonstrate major differences in trends in the placement of faculty men and women by degree held. Interestingly, while men are more likely to hold doctorates across the board, we detect substantial differences between men at universities and four-year colleges in both years and, in particular, in 1969. Where fifty-nine percent of the men held doctorates at four-year schools in 1969, over three-quarters (seventy-eight percent) held doctorates at universities. In contrast, while considerably less than half of the women held doctorates at both levels of institutions in 1969, (forty-one percent and thirty-eight percent) there was only a three percentage point difference between those at universities and those at four-year colleges.

In 1975, more women and men held doctorates at both kinds of institutions than the earlier study revealed, and the difference between men at four-year colleges and those at universities who held doctorates was not marked. The differences among women doctorates were slightly greater in the later survey. This may be a result of changing labor market conditions. As the seventies saw a decline of college and university enrollment and yet a flood of PhDs and other doctorates in the available labor pool, it may well be that the four-year colleges were able to require doctorates more often of their faculty, both male and female. In fact, even the junior colleges showed a greater proportion of faculty with doctorates in 1975 than in 1969.

The demonstrable fact remains constant: a smaller percentage of women than men hold doctorates, regardless of type of institution. This may be explained in one of two ways: women are more often underqualified for positions than are their male counterparts, or, they may be placed in different types of academic fields, to do different kinds of academic work than are men. The extent to which implicit job definitions differ is rather difficult to access. Nonetheless, some effort to determine how job tasks differ by sex will be undertaken shortly in Chapter 4. Presently, we turn attention to the way in which holding a doctorate or not may relate to the academic field of appointment.

TABLE 3.6A: HIGHEST DEGREE HELD BY APPOINTMENT DISCIPLINE (BROAD CATEGORY)
AND TYPE OF INSTITUTION (1969)

	UNIVERSITY & FOUR-YEAR COLLEGE				JUNIOR COLLEGE			
	DOCTORATE	MASTERS	BACHELORS		DOCTORATE	MASTERS	BACHELORS	
<u>ENGINEERING</u>								
% WOMEN	*	*	*	(4)	0	0	0	(0)
% MEN	70	28	3	(820)	0	46	55	(22)
<u>FINE ARTS</u>								
% WOMEN	21	71	8	(139)	0	*	0	(1)
% MEN	43	53	4	(567)	22	72	6	(18)
<u>MATH & PHYSICS</u>								
% WOMEN	51	39	10	(94)	0	*	*	(8)
% MEN	83	14	3	(1348)	14	75	12	(51)
<u>HUMANITIES</u>								
% WOMEN	43	50	7	(399)	12	85	4	(26)
% MEN	74	24	2	(1540)	13	80	7	(46)
<u>MEDICINE & LAW</u>								
% WOMEN	83	15	2	(41)	0	0	0	(0)
% MEN	98	2	1	(647)	0	0	0	(0)
<u>PSYCHOLOGY & SOCIAL SCIENCES</u>								
% WOMEN	70	28	2	(141)	*	*	*	(7)
% MEN	81	16	3	(1153)	22	78	0	(36)
<u>NEW & SEMI PROFESSIONS</u>								
% WOMEN	20	71	9	(398)	4	71	25	(24)
% MEN	62	28	10	(1032)	14	52	33	(21)
<u>BIOLOGICAL SCIENCES</u>								
% WOMEN	65	28	7	(96)	*	*	0	(5)
% MEN	94	6	1	(737)	7	86	7	(14)
<u>BUSINESS-COMMERCE</u>								
% WOMEN	32	58	11	(38)	0	100	0	(14)
% MEN	69	28	4	(435)	12	76	12	(33)
<u>EDUCATION</u>								
% WOMEN	55	40	5	(152)	0	*	*	(6)
% MEN	71	26	3	(560)	31	63	6	(16)

TABLE 3.6B: HIGHEST DEGREE HELD BY APPOINTMENT DISCIPLINE (BROAD CATEGORY)
AND TYPE OF INSTITUTION (1975)

	UNIVERSITY & FOUR-YEAR COLLEGE				JUNIOR COLLEGE			
	DOCTORATE	MASTERS	BACHELORS		DOCTORATE	MASTERS	BACHELORS	
<u>ENGINEERING</u>								
% WOMEN	*	*	0	(5)	0	0	0	(0)
% MEN	78	20	2	(275)	0	61	39	(23)
<u>FINE ARTS</u>								
% WOMEN	28	66	6	(50)	8	62	31	(13)
% MEN	51	44	5	(233)	17	78	4	(23)
<u>MATH & PHYSICS</u>								
% WOMEN	59	33	8	(39)	8	8	8	(7)
% MEN	89	10	1	(500)	15	84	2	(62)
<u>HUMANITIES</u>								
% WOMEN	66	31	3	(167)	15	81	4	(26)
% MEN	85	14	1	(466)	23	74	4	(57)
<u>MEDICINE & LAW</u>								
% WOMEN	69	31	0	(39)	0	0	0	(0)
% MEN	96	3	1	(199)	0	0	0	(0)
<u>PSYCHOLOGY & SOCIAL SCIENCES</u>								
% WOMEN	68	29	3	(75)	8	92	0	(13)
% MEN	84	14	2	(471)	36	55	10	(31)
<u>NEW & SEMI PROFESSIONS</u>								
% WOMEN	26	65	9	(193)	11	65	25	(65)
% MEN	64	32	5	(402)	17	58	25	(52)
<u>BIOLOGICAL SCIENCES</u>								
% WOMEN	67	29	4	(52)	9	82	9	(11)
% MEN	94	6	0	(256)	24	76	0	(29)
<u>BUSINESS-COMMERCE</u>								
% WOMEN	43	57	0	(21)	0	78	22	(18)
% MEN	64	34	2	(154)	11	81	8	(37)
<u>EDUCATION</u>								
% WOMEN	44	51	5	(145)	0	77	23	(13)
% MEN	77	21	2	(322)	22	72	6	(18)

Tables 3.6A and 3.6B disclose marked differences by sex in holding doctorate degrees regardless of the academic department. In fact, there is not one academic department where the proportion of women holding doctorates is equal to or approaches the proportion of men with these degrees. At universities and four-year colleges, with the exception of the fields in Fine Arts, a majority of men in each discipline hold doctorates. (The Fine Arts have traditionally treated the Masters of Fine Arts, MFA, as the degree required for academic advancement.) In 1969, with the already noted exception, male faculty ranged from sixty-two percent having doctorates in the New and Semi Professions to ninety-eight percent in Medicine and Law (the old, established professions). On the other hand, women faculty ranged from twenty percent in the New and Semi-Professions to eighty-three percent in Medicine and Law. In 1975, the trend appears to be similar, if the actual percentage values vary somewhat. In 1975, the highest percentage of women with doctorates was in the field of Medicine and Law, although in 1969 where eighty-three percent of the women held doctorates, in 1975 considerably fewer, only sixty-nine percent had these degrees.

Psychology and the Social Sciences appear to have narrower gaps in degrees held by men and women. Looking at those holding doctorates, there is an eleven percentage point difference in 1969 and a sixteen percentage point difference in 1975.

Corresponding to the lower proportions of women with doctorates is the higher proportion of female faculty holding masters and bachelors degrees in all fields. Again, the majority of women, regardless of

appointment field appear to hold masters degrees, while the majority of men hold doctorates.

While the Ns in fields considered at two-year colleges are very small, here also, male faculty are more apt to hold doctorates than are female faculty.

The question that emerges now is whether or not the requirements for placement in a field somehow differ for women and men, and, again, whether or not men and women hired in a discipline are hired for the same type of job functions. At a later point we will consider some of the differences in job commitment that men and women express. At this time, however, it may be that the interplay between sex and academic discipline is of importance. We saw, in Chapter One, that some fields were clearly male dominated (e.g. engineering, law, physics) and others had a large representation (fifty percent or more) of women (e.g. the New and Semi Professions, Education). We must ask if women who enter these male fields have to have higher qualifications more often than women who enter other fields. In Table 3.7 we look at the degree held by the sex-domination of the field of academic appointment.

TABLE 3.7: HIGHEST DEGREE HELD BY FIELD DOMINATION AND TYPE OF INSTITUTION

1969

	UNIVERSITY & FOUR-YEAR COLLEGE											
	90% + MALE		51-89% MALE		50% + FEMALE		90% + MALE		51-89% MALE		50% + FEMALE	
	<u>% W</u>	<u>% M</u>	<u>% W</u>	<u>% M</u>	<u>% W</u>	<u>% M</u>	<u>% W</u>	<u>% M</u>	<u>% W</u>	<u>% M</u>	<u>% W</u>	<u>% M</u>
DOCTORATE	58	78	41	71	19	39	4	11	9	19	5	*
MASTERS	35	19	52	27	73	53	82	68	89	77	71	*
BACHELORS	7	4	7	3	8	8	14	21	2	4	24	0
	(317)	(5340)	(999)	(3609)	(302)	(49)	(28)	(141)	(46)	(119)	(21)	(3)

1975

DOCTORATE	58	82	56	81	29	65	8	15	9	21	11	12
MASTERS	32	16	40	18	64	33	69	64	80	74	59	77
BACHELORS	10	2	3	2	7	2	23	21	11	5	30	12
	(50)	(960)	(502)	(2050)	(217)	(190)	(13)	(85)	(98)	(222)	(53)	(17)

Holding a doctorate appears to have a direct relationship with the sex domination of the academic field. Both men and women are considerably more likely to hold a doctorate if they are located in fields which are made up of larger proportions of men. In 1969, where fifty-eight percent of the women in fields that had ninety percent or more men held doctorates, only nineteen percent of the women in fields with fifty percent or more women held doctorates. The same marked difference appears to exist for men in these categories. Seventy-eight percent of men in male fields had doctorates as compared with thirty-nine percent of men in female dominated fields.

In 1975, the differences are smaller, though the direction of these differences remains unchanged. Nonetheless, we find virtually no difference now between women in fields with ninety percent or more men and those with between fifty-one and eighty-nine percent men (respectively fifty-eight and fifty-six percent women holding doctorates). Similar trends in findings exist for men. Thus, the critical detail here appears to be whether one is located in a male dominated field (regardless of the extent of domination) or not.

The sex-domination of the fields do not appear to make much difference at the junior college level. No consistent trend emerges in examining that data. Of course, these two-year institutions do not require that a significant part of their faculty hold doctorates in any of the sex domination situations considered as of 1975.

In both the case of the two-year institutions and that of

universities and four-year colleges the data suggests that doctorates are required more often than they have been in the past. In all of the fields (regardless of sex-domination) a higher proportion of faculty held doctorates in 1975 than in 1969.

If it were simply more difficult for women to be placed in a traditionally male dominated field and those who were so placed had to be somehow more qualified than their male counterparts, we might expect that a larger proportion of women in these fields would hold higher degrees than men. This is not the case. Thus, unless these women are overqualified in other ways (e.g. publications, job-related experience) we cannot conclude that higher credentials are required for women than for men in the same fields. Clearly those fields which require higher degrees more often of their members are likely to have a higher proportion of men than women since in Table 3.1 we noted that men more often held higher degrees. However, our expectation is that the proportion of women and men with doctorates within these fields should be the same. If the proportion of women with such degrees was higher than that of men, we might consider that more was required of them. However, the proportion of women with doctorates is lower than that of men within academic disciplines. Are we to assume, then, that more is required of men? Perhaps, the answer returns us to the issue of how career expectations may differ for men and women and for what type of positions women and men are hired. This latter point will be addressed in Chapter Four. The former point may somehow be articulated in the way in which professional socialization differs for women and men at the level of graduate education.

Thus far, we have been concerned with the academic degree held. Whether or not attaining the same credentials really represents the same achievement for women as for men is yet another story. Cole (1979) suggest that for academic men, the doctorate is a sort of "union card", while for women it may be an entirely different thing; an "end to an odyssey." Part of the logic of this argument emanates from the suggestion that the road through higher education is different for women and men. It may take longer for women to earn higher degrees, it may be more difficult for women to get funding and other forms of faculty and administrative support. We would like to examine these notions, although in this instance, much of the pertinent data is contained in the 1969 faculty survey and was not repeated in 1975. Therefore most of the following analysis will be restricted to data collected in 1969.

In his study of women in graduate and professional schools in 1969, Feldman (1974) found significant differences between men and women in choosing academic careers. Whether or not they expected to obtain a doctorate, women were more likely to plan to enter junior college teaching than were men. Even more interesting, Feldman found that among men who never expected to earn a doctorate, seventy-two percent planned to enter university or college teaching, compared to fifty-three percent of the women. Thus, degree aspirations, themselves, are not sufficient determinants of academic career choice. Nonetheless, much of the process in defining career aspirations appears to take place prior to moving in to the first position. It may be, then, that the graduate school experience may differ for people with

different career plans, as well as directly cause the articulation of career plans. While we don't know the extent to which graduate school experiences and career aspirations interact, it is certainly safe to assume that they do.

For purposes of some degree of refinement, we will separate those faculty who are in junior colleges from those with appointments at four-year colleges and universities during the remaining analysis in this chapter. We will also eliminate those people who do not hold any degree beyond the baccalaureate degree for the obvious reason that they have not had a graduate school experience.

One common notion held by students of the sociology of education is that women take longer to get their graduate degrees. Presumably because of family pressures or resulting interruptions, women take time off before completing a graduate program or cannot devote as much time and effort toward completing a program as can male students. The crude measure of this is the number of years elapsed between the baccalaureate and the doctorate degrees. This variable, of course, does not account for time actually committed to working toward a degree and so there is no way to clearly separate those people who take years off, away from academic studies, from those people who take a long time to complete a program. In other words, we cannot distinguish between someone who completes a doctoral program in five years but had not enrolled in a program until six years after being awarded an undergraduate degree and someone who spends eleven years actively participating in a doctoral program. Table 3.8 shows that for whatever reason, more years elapse

between the bachelors degree and the doctorate degree for women than for men.

TABLE 3.8: YEARS ELAPSED BETWEEN BACHELORS AND HIGHEST DEGREE HELD BY SEX AND TYPE OF INSTITUTION (1969)

YEARS ELAPSED	1969				1975			
	UNIVERSITY & FOUR-YEAR COLLEGE				JUNIOR COLLEGE			
	DOCTORATE		MASTERS		*DOCTORATE		MASTERS	
	%W	%M	%W	%M	%W	%M	%W	%M
1 - 4 YEAR	12	26	54	54	-	-	55	54
5 - 10 YEARS	47	54	27	31	-	-	24	36
MORE THAN 10 YEARS	42	21	20	14	-	-	21	11
	(626)	(6565)	(611)	(1088)			(62)	(152)

* At the level of Junior Colleges, the available Ns are too small to compute percentages that would be meaningful. The N for women with doctorates at junior colleges in this table is 4 and the N for men is 38.

Forty-two percent of the women at universities and four-year colleges had more than ten years elapse between undergraduate and doctoral degrees, while only twenty-one percent of the men had more than ten years elapse. Also, where twenty-six percent of the men had their doctoral degrees within four years of completing their undergraduate education, only twelve percent of the women completed their doctorates within this time. Because in our sample the total number of faculty who are at two-year insitutions and who held doctorates was too small (particulartly the women faculty), we cannot validate differences or similarities in the time-elapsed variable by

type of institution of academic appointment.

When we consider those people whose highest degree is a Masters degree, we note very small differences in elapsed time between faculty at four-year institutions and those at two-year schools. Further, the sex differential apparent for those with doctorates no longer appears to operate. There is a less than six percentage point difference between men and women who have more than ten years elapse from bachelors to masters degree. Twenty percent of the women and fourteen percent of the men have ten years or more elapse. Virtually the same proportion of women as men get their masters degree within four years of completion of the undergraduate degree.

The Graduate School Experience

The sex differential in time elapsed between degrees appears to apply only in the case of faculty at four-year institutions holding doctorate degrees. Since the preferred locations for academic careers are at universities and four-year colleges, and since the preferred degree for advancement at these institutions is the doctorate, the longer hiatus between undergraduate and doctoral degrees may be pivotal for women in academia. Again, it may be that women more often than men return to school after several years. Or, it may be that it takes women, on the average, longer to finish graduate school because of outside family and social pressures. Or, it may be that women have less support in completing a graduate program than do men. In any case, it is plausible that some of the features of the graduate school experience are not as readily available to women as to men. These

include research and teaching assistantships, scholarships and faculty sponsorship.

Respondents were asked if, as graduate students, they ever held teaching assistantships, if they held any research assistantships, and, if they ever received a scholarship in the amount of \$1000 or more. These items were combined and an index of SUPPORT was created.²⁵ Table 3.9 presents these findings.

TABLE 3.9: SUPPORT WHILE IN GRADUATE SCHOOL BY TYPE OF INSTITUTION AND SEX (1969)

	<u>UNIVERSITY & FOUR-YEAR COLLEGE</u>		<u>JUNIOR COLLEGE</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>% WOMEN</u>	<u>% MEN</u>
HAD SUPPORT	37	59	16	23
LITTLE OR NO SUPPORT	63	41	84	77
	(1697)	(9319)	(101)	(297)

First, both men and women who are located at two-year institutions are not likely to have had support in graduate school. Well over three-quarters of junior college faculty report having had little or no support while graduate students. Men who have appointments at two-year schools report having had support slightly more often than women at these institutions. In contrast, there is a notable difference between men and women who have appointments at four-year

25. Respondents were asked to respond "yes" (1) or "no" (0), to whether they had ever received a Research Assistantship, a Teaching Assistantship and/or a \$1000 or more scholarship as graduate students. The responses to these questions were then added, falling into range of 0 to 3. A score of 0 or 1 was coded "little or no support". A score of 2 or 3 was coded "had support".

institutions. While fifty-nine percent of the male faculty has support in the form of teaching or research assistantships or scholarships of one thousand dollars or more, thirty-seven percent of the women report such support. How important this support is for successful academic futures is, of course, speculative. However, we do know that the rewards and professional activities available to graduate students are more apt to be presented to males than to females who continue in academic careers.

It is possible that women, on the average, are less likely to get support because they are less likely than men to hold a doctorate degree. It may be that assistantships and scholarships are most available to doctoral students rather than people studying for masters degrees. We can introduce the highest degree held and determine whether, controlling for degree, women and men still unequally share the resources in graduate programs. In Table 3.10 we find that while the sex differential that existed in Table 3.9 is not quite as pronounced, it remains.

TABLE 3.10: SUPPORT WHILE IN GRADUATE SCHOOL BY TYPE OF INSTITUTION, HIGHEST DEGREE HELD AND SEX (1969)

	UNIVERSITY & FOUR-YEAR COLLEGE				JUNIOR COLLEGE			
	DOCTORATE		MASTERS		*DOCTORATE		MASTERS	
	%W	%M	%W	%M	%W	%M	%W	%M
HAD SUPPORT	54	66	27	40	*	48	14	22
LITTLE OR NO SUPPORT	46	35	73	60	*	53	86	78
	(648)	(6696)	(856)	(1993)	(5)	(40)	(78)	(193)

Not surprisingly, regardless of insitutional location, faculty holding doctorate degrees report having had support in graduate school

more often than those holding masters degrees. Even so, men consistently indicate having had support more frequently than women.

We cannot assess how such "support" is awarded and, therefore, do not know if some routinized exclusion of women exists at institutions of higher education. We can state, however, that the fundamental supports and rewards valued in academia are differentially assigned as early as graduate school.

Despite the differences in resources, when asked to rate their own graduate education, respondents did not seem to differ much by sex. Table 3.11 demonstrates that, in fact, women are slightly more likely than men to report having had an "excellent" or "good" graduate education, regardless of degree held or type of appointment institution.

TABLE 3.11: RATE OWN GRADUATE EDUCATION BY SEX, HIGHEST DEGREE HELD AND TYPE OF APPOINTMENT INSTITUTION (1969)

	UNIVERSITIES & 4-YEAR COLLEGES				JUNIOR COLLEGES			
	DOCTORATE		MASTERS		DOCTORATE		MASTERS	
	%W	%M	%W	%M	%W	%M	%W	%M
<u>RATE EDUCATION</u>								
EXCELLENT	38	34	22	18	-	34	20	19
GOOD	49	51	56	55	-	56	69	58
FAIR	11	14	20	24	-	10	11	20
POOR	1	2	2	2	-	0	0	3
	(651)	(6703)	(859)	(2006)	(6)	(41)	(180)	(191)

In Table 3.10 we saw that women did not share equally in resources at graduate school. Plausible explanations for this are many and range

from the possibility that because of personal circumstances they require less financial assistance to the expectation that administrators have that men are more practical commodities in whom to invest. Unfortunately, the available data are inadequate for purposes of further explication of this finding. However, the differential assignment of these resources does not appear to have impressive impact on evaluations by respondents of their graduate education. Again, we cannot hope to explain this and possible explanations vary from some degree of false consciousness on the part of female respondents to some notion that the financial aid and training more available to men than to women has little or no overall effect on graduate education.

While the majority of respondents rate their graduate education as "good" or "excellent", under all conditions, one further note concerning graduate education exists in the difference, although not substantial, between the evaluations of respondents who hold masters degrees and those with doctorates. At the four-year institutions, people with doctorates, regardless of sex, are more apt to rate their educations as "excellent" or "good" than those with lower degrees. Women with doctorates, then, appear proportionately to share in more of the rewards of graduate school than do academic women without these advanced degrees. They also appear to be more satisfied.

In 1969, the Faculty survey included an item²⁶ which assigned a quality rating²⁷ to the institution of the highest degree. The

26. Unfortunately, this variable was not repeated in the 1975 study.

quality of the graduate institution may have some bearing on the initial placement in academia. If men and women are enrolled in graduate programs in different quality insitutions, their job positions may be responsive to these differences. Because masters degrees and doctorate degrees may represent different career orientations and aspirations, we control for the highest degree earned as well as type of institution in assessing sex differentials in quality of graduate school attended. The results are presented in Table 3.12.

TABLE 3.12: QUALITY OF RESPONDENTS' HIGHEST DEGREE INSTITUTION BY TYPE OF APPOINTMENT INSTITUTION, HIGHEST DEGREE HELD, AND SEX (1969)

	UNIVERSITIES & 4-YEAR COLLEGE				JUNIOR COLLEGE			
	DOCTORATE		MASTERS		DOCTORATE		MASTERS	
	%W	%M	%W	%M	%W	%M	%W	%M
HIGH QUALITY UNIVERSITY	52	55	32	34	*	42	33	17
MEDIUM QUALITY UNIVERSITY	25	25	29	25	0	18	22	18
LOW QUALITY UNIVERSITY	2	2	2	2	0	0	0	1
OTHER UNIVERSITY	14	13	25	26	*	29	26	27
FOUR-YEAR COLLEGE	1	1	11	12	*	11	18	37
FOREIGN INSTITUTION	5	5	2	2	0	0	0	0
	(625)	(6534)	(824)	(1907)	(5)	(38)	(76)	(180)

27. This quality rating is contained in the Technical Report of the Carnegie Council Study of Higher Education.

Examination of the quality of graduate institution variable reveals no real difference between men and women appointed at four-year institutions, controlling for highest degree earned. At these universities and senior colleges, over fifty-percent of the people with doctorates came from high quality universities. Only approximately one-third of those faculty members with masters degrees came from high quality universities, regardless of sex.

Faculty at junior colleges present another picture. Among people holding masters as their highest degree, women are notably more likely to have come from high quality universities than are men. One third of these women came from such graduate institutions in contrast to only seventeen percent of the men. We do not know how the women and men holding doctorate degrees on junior college faculties compare because our sample of women doctorates here is too small.

Among faculty at universities and four-year colleges, women and men came from essentially the same quality graduate institutions. The junior college faculty do appear to have differences by sex, but we cannot speak to these differences because of sample limitations.

Additional Differences between Faculty Women and Men

Our data show that women have increased their participation in academia over the course of the past few years. While only sixteen percent of the faculty respondents in 1969 were women, in 1975, twenty-two percent were women. In fact, women constitute a steadily increasing proportion of the available pool of qualified applicants for

faculty positions.²⁸ In 1960, women made up ten percent of those people earning doctorates in the United States, and thirty-two percent of those people awarded masters degrees. By 1978, women comprised twenty-six percent of the doctorates and forty-eight percent of the masters degrees awarded nationally. In 1975, women comprised twenty-one percent of the doctorates and forty-seven percent of the masters degrees produced nationally.

Conceivably, academic institutions have not caught up to the increasing numbers of women who both choose to and earn the right to participate on college and university faculties. Or, women may constitute a population within the universities and colleges who, as of yet, do not hold the same qualifications as their male colleagues. In any event, women are newer to the academic marketplace and particularly so in light of earning the higher degrees that facilitate placement and advancement in faculty careers. This is particularly the case in the four-year institutions. At these universities and colleges, while the mean²⁹ number of years men have had their doctorates is twelve years, the average number of years women have held doctorates is nine years. Even in the case of those people holding masters degrees, women, on the average, have held their degrees one year less than men. (The mean number of years men reported since earning their masters' degrees is

28. See Appendix 3 for a table of the national production of doctorates and masters degrees in the past two decades.

29. The means for number of years with degree are given only for 1975. The data for 1969 was collapsed and pre-coded into uneven categories making it impossible to compute a reliable mean for that sample.

twelve years, and the mean number of years for women is eleven at both the four and two-year institutions.)

Interestingly, at the two-year schools, the trend is reversed and women who hold doctorates have had them, on the average, eleven years, while the mean number of years for men is only nine. This seems to support our contention that women have traditionally been more accepted in, or more accepting of, the two-year schools than in the universities and four-year colleges.

The four-year schools, in contrast, appear to house a population of women who are "younger" in their academic careers than are men. "Younger" in this sense refers to the length of time they have had their degrees and not to chronological age, for we have seen that degree year, in the case of those with doctorates, cannot be a surrogate for age; clearly, more time elapses between the bachelors degree and the doctorate degree for women than for men.

Summary

Women are considerably less likely to hold doctorate degrees, regardless of academic discipline or type of institution in which they are employed. On the average, more years elapse between the baccalaureate degree and the doctorate degree for women, and they have held these degrees fewer years. Women are less likely to report having support in the form of teaching and research assistantships, and scholarships of one thousand dollars or more, although they are just as

apt as men to rate their graduate education as "excellent" or "good". Finally, women and men at the four-year institutions appear to be equivalent in terms of the quality of their graduate schools. At the junior colleges, women holding masters degrees as their highest degree come from high quality universities in considerably higher proportions than their male colleagues.

For the most part, then, graduate degrees appear to represent somewhat different avenues for men and women in academia. In Chapter Five we shall attempt to determine how these differences affect the attainment of professional rewards for faculty men and women.

CHAPTER FOUR

JOB DIMENSIONS AND PROFESSIONAL ACTIVITIES OF FACULTY MEN AND WOMEN

Once placed in an academic position, a variety of variables determine the direction such careers take. Generally, some measure of productivity in the form of publications or professional honors facilitates advancement up the career ladder. The extent to which productivity provides means to career advancement may, in reality, be confused with the extent to which higher status provides avenues to publications and professional honors. In order to unravel the time-order issues in possible discrimination, it would be ideal to follow a cohort of men and women who enter the academic labor market at the same time. This is beyond this analysis given the limitations of available data. Nonetheless, we intend to document any differences that exist between men and women in terms of job function and professional productivity.

Traditionally in academia, faculty function in one of two different ways. They may be hired in strictly teaching lines or they may be hired into situations where publication and research are a critical part of job expectations. Additionally, the prestige and location of the particular department may determine the dimensions of the job position. We know, for example, that placement at the two-year college level has meant a concentration on teaching and little or no emphasis on research and publications. Certain departments (e.g. Business, Nursing, Foreign Languages) have demanded less in the vein of publications and professionally recognized activities than have

others. Thus, measures of productivity are not necessarily predictors of career advancement in all cases. Even so, the model of academia is that the recognition accompanying publications, research support and other professional activities is articulated in the form of advancement in rank and in salary.

The questions to be addressed in this chapter relate to the characteristics that are generally associated with career movement: To what extent do men and women differ in job function; e.g. teaching activities, research activities. Are there any sex differentials in terms of productivity, measured by the quantity of publications? And, finally, is there a relationship between job function and productivity? Again, where possible 1969 and 1975 data will be compared to ascertain any change over time.

Teaching Responsibilities

In universities and four-year colleges with masters programs, one mark of prestige among faculty is the extent to which teaching responsibilities encompass graduate or undergraduate courses. Of course, in the case of two-year college faculty this is a moot point, since there are no graduate students. Faculty in universities and four-year colleges were asked to indicate whether their teaching responsibilities were all undergraduate, all graduate or a combination of the two. Table 4.1 details the disparity between women and men in terms of teaching assignments.

TABLE 4.1: PRESENT TEACHING RESPONSIBILITIES (FACULTY AT UNIVERSITIES AND FOUR-YEAR COLLEGES ONLY)

<u>TEACHING RESPONSIBILITIES</u>	<u>1969</u>		<u>1975</u>	
	<u>% Women</u>	<u>% Men</u>	<u>% Women</u>	<u>% Men</u>
NOT TEACHING				
AT PRESENT	5	5	5	4
ALL UNDERGRADUATE	57	32	55	36
ALL GRADUATE	10	17	10	14
BOTH UNDERGRADUATE AND GRADUATE	28	46	30	46
	(1728)	(9417)	(840)	(3456)

In the six year period under consideration, the distribution of men and women in terms of teaching assignments has remained virtually constant. While the majority of women taught undergraduate courses exclusively, only approximately one-third of the men did so. At least sixty percent of the male faculty taught graduate classes compared to forty percent or less of the faculty women.

One might argue that the plum of teaching graduate students is saved for faculty at the highest ranks and since women have increased their representation in academic insitutions in the last few years, they are more likely not to have had time to move up. In Table 4.2 we control for academic rank and still find a notable difference between men and women.

TABLE 4.2: PRESENT REACHING RESPONSIBILITIES BY RANK (UNIVERSITIES AND FOUR-YEAR COLLEGES ONLY)

	1969							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR	
	%W	%M	%W	%M	%W	%M	%W	%M
	7	6	4	3	4	3	5	4
NOT TEACHING NOW								
ALL UNDERGRADUATE	33	22	41	25	54	35	75	62
ALL GRADUATE	15	21	14	18	10	15	6	14
BOTH GRADUATE & UNDERGRADUATE	45	52	41	53	31	47	14	21
	(210)	(2932)	(301)	(2278)	(531)	(2755)	(584)	(1178)

	1975							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR	
	%W	%M	%W	%M	%W	%M	%W	%M
	4	4	6	4	3	2	7	3
NOT TEACHING NOW								
ALL UNDERGRADUATE	44	25	47	34	52	45	71	61
ALL GRADUATE	15	17	12	12	11	12	4	13
BOTH GRADUATE AND UNDERGRADUATE	37	54	36	50	34	42	18	23
	(105)	(1254)	(180)	(920)	(304)	(920)	(219)	(302)

Apparently, there is an inverse relationship between teaching undergraduates and rank. The lower the rank the greater the likelihood one is teaching undergraduates exclusively. One peculiarity in Table 4.2 lies in the increase in faculty teaching undergraduate courses in 1975 from 1969.

Among people teaching graduate courses exclusively, there is very little difference between men and women across rank. When we consider those people who are teaching both undergraduate and graduate courses a

rather erratic pattern unfolds. Men teach a combination of undergraduate and graduate courses more often than women. In 1969 the difference between male and female full professors who taught both kinds of classes was slight (only seven percentage points) and represented the smallest sex differential by rank. In 1975, this difference reflects seventeen percentage points and represents the largest sex differential in all four ranks. Academic rank, then, does not appear to explain what differentials exist when we consider the type of classes faculty teach. This contradicts the general expectation that the most productive and/or senior members of a faculty will be given the graduate, or higher status classes to teach. If this were so, there would not be a difference between women and men when we introduce rank as a variable.

Does this suggest one of the ways in which faculty women are discriminated against? It may well represent this. Or, it may reflect some intrinsic difference in job definition that cannot be measured quantitatively with these data. If men and women are hired into positions that differ in terms of task, we might assume that women and men are assigned to rank using different criteria. This possibility will be considered to some extent in the next chapter. However, the appropriate way to test for whether or not women and men are treated equitably or whether they have different professional characteristics might be to use a matched sample of men and women who start academic careers at the same point and are appointed to approximately the same positions. The difficulties in conducting such an analysis are apparent although a few attempts to match faculty men and women have

been made.³⁰

Often coinciding with type of teaching responsibility is the amount of time spent in classroom instruction. Unfortunately, the data present a problem here. In the 1969 survey, respondents were asked how much time was spent on classroom instruction in general. In 1975, respondents were asked about the number of hours in classroom instruction of undergraduate and graduate students separately and these responses were collapsed and pre-coded so for our purposes the two questions could not be combined and therefore a measure of overall classroom time is unavailable. This problem makes an accurate comparison of the two periods impossible, however, some indication of how women and men compare is retrievable. Tables 4.3A, 4.3B and 4.3C present these data.

30. See Jonathon Cole's study of a cohort of doctorates who are followed up in their careers in Fair Science. Also, see Audrey Blumberg, Edgar F. Borgatta, Robert Foss and John Van Hoewyk, "Mistaking Changing Labor Market Effects for Unequal Treatment in Regression Analysis" for a possible model employing statistical matching.

TABLE 4.3A: HOURS PER WEEK IN CLASSROOM INSTRUCTION (1969)

<u># HOURS</u>	<u>UNIVERSITIES & FOUR-YEAR COLLEGES</u>		<u>TWO-YEAR COLLEGES</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>% WOMEN</u>	<u>% MEN</u>
NONE	10	10	2	3
1 - 6 HOURS	30	42	18	12
7 - 12 HOURS	40	37	17	16
MORE THAN 12 HOURS	21	11	63	70
	(1725)	(9428)	(109)	(309)

TABLE 4.3B: HOURS PER WEEK IN CLASSROOM INSTRUCTION OF UNDERGRADUATES
(1975)

<u># HOURS</u>	<u>UNIVERSITIES & FOUR-YEAR COLLEGES</u>		<u>TWO-YEAR COLLEGES</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>% WOMEN</u>	<u>% MEN</u>
NONE	12	14	3	2
1 - 6 HOURS	30	36	23	11
7 - 12 HOURS	39	35	22	24
MORE THAN 12 HOURS	19	14	52	63
	(756)	(3040)	(189)	(382)

TABLE 4.3C: HOURS PER WEEK IN CLASSROOM INSTRUCTION OF GRADUATES -
UNIVERSITY AND FOUR-YEAR COLLEGE FACULTY ONLY (1975)

<u># HOURS</u>	<u>UNIVERSITIES & FOUR-YEAR COLLEGES</u>	
	<u>% WOMEN</u>	<u>% MEN</u>
1 - 6 HOURS	73	78
7-12 HOURS	21	18
MORE THAN 12 HOURS	6	4
	(262)	(1619)

One unanticipated finding in Tables 4.3A and 4.3B is that men at the two-year college level are more apt to spend more hours per week in the classroom than women. This is true in both 1969 and in 1975. In 1969 eighty-six percent of the male faculty at junior colleges spent at least seven hours per week in classroom instruction as compared to eighty percent of the female faculty. In 1975, this rather small difference gets larger with seventy-four percent of the women and eighty-seven percent of the men in classroom instruction at least seven hours per week. The reason for this difference is unclear. It may relate to the particular disciplines at the community college level and the amount of hours assigned to a class. For example, the physical sciences, mathematics and accounting which have a heavy representation of male faculty, often have lab time which may result in longer time requirements of faculty. Without knowing how the curriculum differs in the two-year schools from the four-year insitutions, we can only guess at the explanation for this finding.

At the four-year institutions, the opposite situation occurs. Here, women report spending more time in undergraduate instruction than do men, although the differences are not large ones. In 1969, sixty-one percent of the women spent at least seven hours in the classroom and only forty-eight percent of the men did so. In 1975, fifty-eight percent of the women and forty-nine percent of the men reported being involved in undergraduate classroom instruction for at least seven hours per week. Women, on the average, spend more time in classroom instructions of undergraduates than do men.

Ignoring the fact that women are more likely to be excluded from teaching at the graduate level, Table 4.3C considers only those people in 1975 who indicated that they were teaching at least some graduate classes. There is only a five percentage point difference between men and women in comparing the amount of time spent teaching graduate students. This suggests that the time demands placed on men and women teaching higher status classes are more similar than among those teaching undergraduates. Exactly what this suggests is equivocal given the already stated limitations of the 1975 data. It would be helpful to know how many hours composite (undergraduate and graduate) faculty men and women spend in classroom instruction in order to determine how much of a differential really exists between men and women.

In general, we are finding that women spend somewhat more time in classroom instruction than do men. Again, there are a number of possible intervening variables in this relationship. Positions and locations which by design require more teaching time may be filled more often by women than by men. Release time from classroom instruction in favor of other professional activities may be requested or granted less frequently. People situated lower in the rank status hierarchy may be called upon to spend more time in the classroom than those at the top. Of course, the longer hours women are required to spend in the classroom may work against their producing articles and papers required for advancement and may somehow be an instrument of the institution in sex discrimination, conscious or unconscious.

While we cannot measure the impact of some of these variables, we

can determine if rank is sufficient in explaining the longer classroom hours required of women. Tables 4.4A, 4.4B and 4.4C show that when we consider rank, women still report spending more time in classroom instruction than do men. These differences are not very large, for the most part, and no clear pattern surfaces. The relationships observed in Tables 4.3A, 4.3B, and 4.3C persist: Among junior college faculty, men appear to spend more time in classroom instruction, while the opposite occurs on university and four-year college faculties.

TABLE 4.4A: HOURS PER WEEK SPENT IN CLASSROOM INSTRUCTION
(UNDERGRADUATE OR GRADUATE) BY RANK (1969)

	UNIVERSITY & FOUR-YEAR COLLEGE							
	ASSOCIATE				ASSISTANT			
	PROFESSOR		PROFESSOR		PROFESSOR		INSTRUCTOR	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
NONE	10	11	7	7	8	8	11	10
1 - 6 HOURS	43	50	36	43	25	38	25	32
7 - 12 HOURS	35	32	39	38	45	42	40	40
MORE THAN 12 HOURS	13	7	19	12	22	12	24	17
	(209)	(2940)	(301)	(2280)	(526)	(2755)	(588)	(1180)

	JUNIOR COLLEGE							
	ASSOCIATE				ASSISTANT			
	PROFESSOR		PROFESSOR		PROFESSOR		INSTRUCTOR	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
NONE	-	9	0	0	0	0	4	1
1 - 6 HOURS	-	18	21	5	29	2	13	14
7 - 12 HOURS	-	14	14	36	7	27	17	11
MORE THAN 12 HOURS	-	59	64	59	64	71	66	75
	(3)	(22)	(14)	(22)	(14)	(41)	(53)	(118)

TABLE 4.4B: HOURS PER WEEK SPENT IN CLASSROOM INSTRUCTION OF UNDERGRADUATES, BY RANK (1975)

	UNIVERSITY & FOUR-YEAR COLLEGE							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
NONE	9	17	13	13	9	12	13	14
1 - 6 HOURS	31	43	33	34	28	32	29	32
7 - 12 HOURS	19	10	16	15	20	17	23	17
MORE THAN 12 HOURS	19	10	16	15	20	17	23	17
	(89)	(1046)	(160)	(825)	(277)	(840)	(89)	(267)

	JUNIOR COLLEGE							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
NONE	0	0	5	0	10	1	0	1
1 - 6 HOURS	27	10	25	12	10	1	27	18
7 - 12 HOURS	14	33	35	35	23	32	20	14
MORE THAN 12 HOURS	59	56	35	53	57	65	53	67
	(22)	(48)	(20)	(60)	(39)	(81)	(83)	(107)

TABLE 4.4C: HOURS PER WEEK SPENT IN CLASSROOM INSTRUCTION OF
GRADUATES, BY RANK (1975)

	UNIVERSITY & FOUR-YEAR COLLEGE							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
1 - 6 HOURS	67	80	74	74	76	80	72	75
7 - 12 HOURS	26	17	22	20	19	15	18	23
MORE THAN 12 HOURS	7	3	4	6	5	5	10	2
	(46)	(688)	(72)	(439)	(98)	(379)	(39)	(92)

Among full professors at four-year institutions, women are more likely to spend seven hours or more in classroom instruction, undergraduate or graduate. Curiously, in 1975 associate professors do not show any sex differential in terms of number of teaching hours. The assistant professors and instructors show small differences by sex and these differences get even smaller in 1975 when compared to 1969. Actually, rank does not appear to have a strong association with the number of hours spent on classroom instruction, with the exception of the full professors. For example, instructors do not necessarily spend more time in the classroom than assistant professors. In this way, we cannot explain the longer classroom time reported by women by turning to their position in the academic hierarchy alone.

Research

It is commonly assumed that research activities are basic to publication and consequently career advancement. Both the 1969 and 1975 Faculty surveys ask a series of questions concerning research support. These items ask if in the past year respondents have received research funds from any of the following: home institution, federal agencies, state or local government, private foundation, or any other source. A composite variable was calculated which simply indicates if respondents received any research funding in the past year or did not receive such funds. This variable is called RESEARCH SUPPORT and Table 4.5 presents the distribution of cases.

TABLE 4.5: RESEARCH SUPPORT RECEIVED IN THE PAST YEAR

<u>1969</u>				
	<u>UNIVERSITIES & FOUR-YEAR COLLEGES</u>		<u>TWO-YEAR COLLEGES</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>% WOMEN</u>	<u>% MEN</u>
RESEARCH SUPPORT Received	46	70	18	29
No RESEARCH SUPPORT Received	54	30	82	71
	(821)	(7275)	(17)	(76)

<u>1975</u>				
	<u>UNIVERSITIES & FOUR-YEAR COLLEGES</u>		<u>TWO-YEAR COLLEGES</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>% WOMEN</u>	<u>% MEN</u>
RESEARCH SUPPORT Received	53	70	41	40
No RESEARCH SUPPORT Received	47	30	59	60
	(479)	(264)	(32)	(99)

Immediately apparent in Table 4.5 is that women are much less likely to have received research support than are men. However, in comparing the two periods, we see that, in fact, more women report the receipt of research funds in 1975 than had in 1969, while the proportion of male recipients is constant. Also striking is the extent to which research support increased among junior college faculty in 1975 for both women and men. In 1969, twenty-nine percent of the men and eighteen percent of the women at two-year institutions reported receiving research funds. Clearly, then, men had some advantage at this point in time. By 1975, there was no difference between men and women, and forty percent of the community college faculty reported doing funded research.

There are those who might argue that women are not encouraged to participate in research or are categorically denied access to available funds. We are able to consider these arguments by looking at how respondents rated (1) their interest in doing research and (2) the availability of research funds, at least at their appointment institution.

Respondents were asked to indicate the extent of their interest in teaching and research. Table 4.6 presents these data.

TABLE 4.6: REPORTED INTEREST IN RESEARCH AND TEACHING (PROFESSIONAL ORIENTATION)

PROFESSIONAL INTERESTS	1969			
	UNIVERSITIES & FOUR-YEAR COLLEGES		JUNIOR COLLEGES	
	% WOMEN	% MEN	% WOMEN	% MEN
HEAVILY RESEARCH	3	6	0	*
BOTH RESEARCH AND TEACHING BUT LEAN TOWARD RESEARCH	12	31	2	5
BOTH TEACHING AND RESEARCH BUT LEAN TOWARD TEACHING	34	38	19	16
HEAVILY TEACHING	51	25	79	79
	(1707)	(9344)	(107)	(305)
PROFESSIONAL INTERESTS	1975			
	UNIVERSITIES & FOUR-YEAR COLLEGES		JUNIOR COLLEGES	
	% WOMEN	% MEN	% WOMEN	% MEN
HEAVILY RESEARCH	2	6	0	1
BOTH RESEARCH AND TEACHING BUT LEAN TOWARD RESEARCH	18	32	4	7
BOTH TEACHING AND RESEARCH BUT LEAN TOWARD TEACHING	41	36	24	23
HEAVILY TEACHING	39	26	73	70
	(842)	(3460)	(191)	(387)

The majority of faculty men and women were more interested in teaching than doing research. At the two-year schools, the vast majority of people are heavily interested in teaching with no essential sex differential. The data at four-year institutions disclose a different story. In 1969, twice the proportion of women as men reported being heavily interested in teaching; one-half of the women as contrasted with one-quarter of the men. In 1975, this difference narrows but persists, with thirty-nine percent of the women reporting heavy teaching interests and still one-fourth of the men so indicating. Women, then, appear to be gaining interest in research over time, although they still report less of an interest in conducting research than men do. Apparently, the need to be competitive in order to advance in the academic arena, or some change in definition of the professional role has sparked a change in interest in research which has affected both women in four-year institutions and male and female faculty in two-year colleges.

Of further interest is the extent to which faculty members perceive that research support is available within their institutions. Respondents were asked to rate the availability of research funds at their institutions. Unfortunately, this item was included in 1969 and then not repeated in 1975, so not only is any comparison impossible, but we have no indication of the perceived availability of funds at a time when women were taking more of an interest in conducting research.

TABLE 4.7: RATED AVAILABILITY OF RESEARCH FUNDS AT APPOINTMENT INSTITUTION (1969)

<u>RATED AVAILABILITY</u>	<u>UNIVERSITIES & FOUR-YEAR COLLEGES</u>		<u>JUNIOR COLLEGES</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>% WOMEN</u>	<u>% MEN</u>
EXCELLENT	7	8	0	1
GOOD	29	33	13	9
FAIR	39	39	37	34
POOR	25	20	50	55
	(1656)	(9286)	(102)	(286)

As can be seen in Table 4.7, there does not appear to be a difference by sex in perception of the availability of research funds at the home institution. A more pointed question such as rating of availability of research funds to the respondent might have shed more light on the issue of whether women see themselves excluded from conducting funded research because of lack of access. On the surface, however, men and women appear to have the same reaction concerning the availability of research support. Most people rate research funds as only fair or poor in accessibility. Sixty-four percent of the women and fifty-nine percent of the faculty men at four-year schools rated funds as either fair or poor in availability. At junior colleges these proportions are notably larger, with eighty-seven percent of the women and eighty-nine percent of the men rating resources as only fair or poor. Echoing a common cry in academia, very few people rated the funding opportunities at their institutions as "excellent." What, then, can we say about research involvement on faculties? Women are less often involved in funded research than men, although they do not differ from men in their perceptions of the availability of funds, at

least at their home institutions. Their research activities have, though, increased over the period from 1969 to 1975, as has their interest in doing research at all. Even so, men are still more apt to report professional orientation and interests in research over teaching, in contrast to women.

Publications

Important to career advancement in academe is some publication history. Teaching skills have largely been subordinated to research and professional writings, particularly in the more prestigious departments and institutions. The faculty studies ask about (1) the number of articles published in professional or academic journals and about (2) the number of books written or edited (alone or in collaboration) which have been published. Once again, we get this data in precoded format, collapsed and in categories, making any accurate calculations such as measures of central tendency impossible. However, for present purposes the variables have been coded into usable categories and publication records of women and men will be compared. Unfortunately, only indications of the quantity of articles and books published exist. No measure of the quality of such publications is available.

Table 4.8 presents the distribution of articles published by the 1969 and 1975 faculty samples by sex and type of appointment institution.

TABLE 4.8: NUMBER OF ARTICLES PUBLISHED IN PROFESSIONAL OR ACADEMIC JOURNALS

<u>1969</u>				
<u># ARTICLES</u>	<u>UNIVERSITY & FOUR-YEAR COLLEGE</u>		<u>JUNIOR COLLEGE</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>WOMEN</u>	<u>% MEN</u>
NONE	51	24	77	74
1 - 2	22	19	17	15
3 - 4	10	12	4	6
5 - 10	9	15	2	3
MORE THAN 10	8	30	1	2
	(1700)	(9286)	(108)	(300)

<u>1975</u>				
<u># ARTICLES</u>	<u>UNIVERSITY & FOUR-YEAR COLLEGE</u>		<u>JUNIOR COLLEGE</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>WOMEN</u>	<u>% MEN</u>
NONE	42	19	77	62
1 - 2	26	18	15	25
3 - 4	13	14	5	8
5 - 10	11	16	2	4
MORE THAN 10	8	33	0	1
	(841)	(3466)	(190)	(388)

In 1969, three-quarters of the men at universities and four-year colleges had published something, while one-half of the women had published. Forty-five percent of the men at these schools had published five or more articles, in contrast to seventeen percent of the women. Among people who had published a few articles (one or two, and three or four) there appears to be no real lag by women. There look to be no real differences between men and women at junior colleges, although the

vast majority of people (seventy-seven percent of the women and seventy-four percent of the men) have not published at all.

In 1975, the picture at the four-year institutions is not much different. Despite the fact that more people are publishing something at this juncture, there is still a twenty-three percentage point difference between women and men who publish. Furthermore, about one-half of the men (forty-nine percent) have published five or more articles, in comparison to nineteen percent of women at four-year institutions who publish this much.

At the junior colleges in 1975, where there had previously been no sex differential, there now exists one. Seventy-seven percent of the women have still not published any articles, but now more men seem to have published, with thirty-eight percent reporting publications. Still, the two-year faculties are not publication oriented with ninety-two percent of the women and eighty-seven percent of the men reporting having either none or one or two articles.

Turning attention to the number of books published, Table 4.9 reveals sex differences once again, although these appear to be less substantial than the differences occurring when looking at the number of articles published.

TABLE 4.9: NUMBER OF BOOKS WRITTEN OR EDITED, ALONE OR IN COLLABORATION, WHICH HAVE BEEN PUBLISHED

NUMBER OF BOOKS	1969			
	UNIVERSITY & FOUR-YEAR COLLEGE		JUNIOR COLLEGE	
	% WOMEN	% MEN	WOMEN	% MEN
NONE	74	60	91	80
1 - 2	20	25	8	15
3 - 4	4	9	1	3
5 OR MORE	3	6	0	1
	(1703)	(9255)	(108)	(301)

NUMBER OF BOOKS	1975			
	UNIVERSITY & FOUR-YEAR COLLEGE		JUNIOR COLLEGE	
	% WOMEN	% MEN	WOMEN	% MEN
NONE	73	57	87	76
1 - 2	20	28	13	20
3 - 4	4	9	1	3
5 OR MORE	3	6	0	1
	(838)	(3462)	(189)	(388)

A majority of men and women have not published any books. This applies across year, institution and sex. The likelihood of four-year faculty writing or editing at least one book is still greater than that of the two-year faculty, and the likelihood of men at either type of institution producing at least one book is still greater than that of women. This sex difference appears to be only approximately fifteen percentage points at the university and senior college level, and eleven percentage points at the junior college level.

It has been pointed out that the proportion of women on academic

faculties has increased steadily over the past twenty years. If, as a group, they are concentrated at the newer end of the career ladder, it could be of interest to consider when publication is taking place. The Carnegie study included a question on the number of professional writings accepted for publication in the preceding two years. This question appeared in both the 1969 and the 1975 surveys. The response to this item is described in Table 4.10.

TABLE 4.10: NUMBER OF PROFESSIONAL WRITINGS ACCEPTED FOR PUBLICATION IN LAST TWO YEARS

NUMBER OF PUBLICATIONS IN LAST TWO YEARS	1969		JUNIOR COLLEGE	
	UNIVERSITY & FOUR-YEAR COLLEGE		WOMEN % MEN	
	% WOMEN	% MEN		
NONE	63	33	88	83
1 - 2	24	29	10	13
3 - 4	9	20	1	2
5 OR MORE	5	18	1	2
	(1691)	(9271)	(106)	(298)

NUMBER OF PUBLICATIONS IN LAST TWO YEARS	1975		JUNIOR COLLEGE	
	UNIVERSITY & FOUR-YEAR COLLEGE		WOMEN % MEN	
	% WOMEN	% MEN		
NONE	54	32	87	81
1 - 2	30	30	11	15
3 - 4	11	19	1	3
5 OR MORE	5	18	1	1
	(838)	(3462)	(187)	(387)

In 1969 when two-thirds of the men had had something accepted for publication in the preceding two years, only approximately one-third of

the women had produced anything. By 1975, close to one-half of the women had had something accepted for publication within two years and the men remained constant. Perhaps, then, this later period has, in fact, witnessed a rise in publication rate for women which is reactive either to their increased participation on college and university faculties, or to the relaxing of institutional constraints so as to facilitate some increases in production.

At the two year colleges there is no real difference between men and women and no real difference from the earlier time period to the later. The differences observed between men and women in the 1975 sample in Table 4.8 may be a result of men remaining in these colleges who had publications from earlier in their careers.

Exactly what these findings mean is unclear. Perhaps, once again, they suggest that following a cohort of people as they embark upon academic careers is the desirable method of discovering how faculty men and women compare in terms of productivity and rewards.

Since the exception in academia is to write or edit books, and since the data at hand does not readily allow for the combination of articles and books into an index, a good single indicator of publication productivity is the total number of articles published.

In an effort to understand how a variety of variables contribute to publication productivity, a regression equation was run using the number of articles published as the dependent variable. Increasingly difficult

to deal with in a study of this type is discerning how variables relate to each other in time order: e.g. Are longer hours in classroom instruction a consequence of low productivity, or does low productivity result from longer time demands of classroom instruction? These variables may be important in recounting the features of academic careers but are not helpful in explaining the direction such careers take. Thus, where possible, such variables are excluded from the regression analysis. While our focus on professional productivity has been how men and women compare and contrast in terms of publications, we have first run a general regression on the number of articles published to determine what are contributors to such productivity, and if sex, in fact, is among these.

The number of articles published was regressed on the highest degree held, year of highest degree, sex, the type of institution appointed to, professional orientation, and, whether or not the respondent had any research support within the preceding year. With the exception of the dependent variable (the number of published articles) and the year of highest degree, variables were dichotomized and dummy variables were created. So, one could have a masters degree or a doctorate degree³¹, be male or female, be at a university/four-year college or at a junior

31. People with less than a masters degree were excluded from consideration with the rationale that they were exceptions and, in some cases, anomalies, either representing older people in the system, left from a time when degree requirements differed, or, were people with qualifications considered equivalent to higher degrees but for which we had no definition or measurement.

college, have a research or teaching orientation³², and have received research funds in the preceding year or received no research funds during this time. The variables, number of articles published and year of degree reflect problems in coding in that while they are continuous ordinal variables they are not at interval level, and, therefore, we cannot talk about units of these variables in easily comprehensible language. The number of articles in its pre-coded form could have fallen into any of the following categories: none, one - two, three - four, five - ten, eleven - twenty, and, greater than twenty. The year of highest degree included categories of relatively equal sizes with the exception of those at the extremes: 1933 or before, 1934-1938, 1939-1943, 1944-1948, 1949-1953, 1954-1958, 1959-1963, 1964-1968, and, in the case of the 1975 data, 1969-1971, 1972-1975. Although these coding categories make it impossible to calculate the precise strength of a relationship in terms of the dependent variable, they presumably will allow us to discover whether or not a relationship exists and the approximate amount of variance that can be explained.

32. The variable, Professional Orientation, is taken from the question: "Are your interests in teaching or in research?" In the absence of other questions which measure an orientation to and active participation in professional activities, it is believed that this item will provide some indication of professional activities that might encourage publication.

TABLE 4.11: NUMBER OF ARTICLES PUBLISHED REGRESSED ON HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, TYPE OF APPOINTMENT INSTITUTION AND SEX.

SEX	1969		1975	
	BETA	F	BETA	F
	<u>-.07</u>	<u>60.98</u>	<u>-.09</u>	<u>43.34</u>
HIGHEST DEGREE HELD	.34	1369.53	.32	508.74
YEAR OF HIGHEST DEGREE	.36	1843.09	.28	489.12
PROFESSIONAL ORIENTATION	.23	673.66	.31	494.14
RESEARCH SUPPORT	.16	323.66	.15	121.69
TYPE OF INSTITUTION	<u>.04</u>	<u>23.74</u>	<u>.10</u>	<u>53.81</u>
	6/7722df	$R^2 = .47$	6/3181df	$R^2 = .50$

In Table 4.11 we see that we are able to explain approximately fifty percent of the variance in articles published by regressing the number of articles on six variables. When controlling for the other variables, Sex actually makes a very small contribution. It explains less than one percent of the variance. The highest degree held turns out to explain twelve percent of the variance in 1969 and ten percent in 1975. The length of time one has held the highest degree accounts for thirteen percent of the variance in 1969 and eight percent in 1975. While increasing in 1975, type of appointment institution explains virtually none of the variance in number of published articles. Professional orientation appears to explain some of the variance in publication. In 1969, Professional Orientation accounted for five percent of the variance in publication productivity, and, in 1975, it was even more important, contributing ten percent of the variance.

The computed variable, Research Support, is used as an indicator of

research activity and, net of the other variables, explains five percent of the variance in articles published. The problem with using this variable is that it is computed by combining items that note research funding from a variety of sources within the past year only. If, in fact, present research funding is indicative of past research activities, this is an appropriate variable to consider. However, it may be that recent research support is a result, in part, of previous publications and Research Support is then an exogenous variable. Since this variable constituted the sole index of professional activities, it was included in the equation. However, the regression model was run without including Research Support. This did not affect the relationship of the other variables to publication and the Betas were similar. Appendix 4 details the results of these regression runs.

Much of the previous discussion has centered around presenting the faculty at universities/four-year colleges and at junior colleges separately. The rationale for this, as already articulated, was that the orientation and corresponding definition of task at two-year institutions differed from that at four-year institutions. To that end, we have, in fact, described differences in publication records between the members of the two types of institutions (see Tables 4.8, 4.9 and 4.10). The results of the regression presented in Table 4.11 further explains the relationship between institution and articles published. Net of other variables, Type of Appointment Institution explains virtually none of the variance (less than one-fourth of one percent in 1969 and one percent in 1975.) This suggests that other academic characteristics such as the highest degree held and the length

of time with that degree affect institutional placement and explain differences in professional activities such as publication.

There were items included in the 1969 survey that were not included in 1975 and with the possibility that some of these variables (such as the Quality of the Graduate Institution, and Whether Assistantships were Received as Graduate Students) might add to our explanation of publication productivity, a regression equation was run which included such variables. The result is found in Appendix 5 and indicates that additional variance is not explained by their inclusion.

Generally, it can be seen from Table 4.11 that the strength of variables contributing to the variance in publications has shifted somewhat from 1969 to 1975. In 1969, Year of Highest Degree and Highest Degree Held are about equal in contributing to the variation in publications. By 1975, both contribute less to the overall variance and the Year of the Highest Degree went from a Beta of .36 to a Beta of .28. Additionally, in 1975, having an orientation toward research appeared to contribute notably more (ten percent of the variance) than it previously had (five percent of the variance.)

Since this is a study of how men and women in academia compare, it is appropriate to examine their publication patterns separately to determine what contributes to such productivity. Table 4.12 presents the results of the regression analyses for women and men in each of the years under review.

TABLE 4.12: NUMBER OF ARTICLES PUBLISHED BY WOMEN AND MEN REGRESSED ON HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, AND TYPE OF APPOINTMENT INSTITUTION.

	<u>1969</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE HELD	.40	182.19	.33	1180.02
YEAR OF HIGHEST DEGREE	.27	89.68	.38	1828.02
PROFESSIONAL ORIENTATION	.16	28.85	.24	631.86
RESEARCH SUPPORT	.20	44.64	.16	290.05
APPOINTMENT INSTITUTION	.04	1.52	.04	21.91
	5/767df	$R^2 = .39$	5/6900df	$R^2 = .45$

	<u>1975</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE HELD	.35	79.55	.32	430.90
YEAR OF HIGHEST DEGREE	.26	52.46	.30	439.35
PROFESSIONAL ORIENTATION	.18	22.78	.33	457.22
RESEARCH SUPPORT	.21	31.55	.15	95.67
APPOINTMENT INSTITUTION	.14	13.11	.10	38.21
	5/488df	$R^2 = .38$	5/2650df	$R^2 = .48$

We are able to explain thirty-nine percent of the variance in articles published for women in 1969 and forty-five percent for men. For both men and women Appointment Institution appears not to have any effect, net of the other variables, on publication. Highest degree held contributes the most to the variance for women (sixteen percent of the variance is explained by it), and the number of years with the degree contributes about seven percent of the variance. For men, the highest degree held accounts for eleven percent of the variance in the number of publications, and the number of years with the highest degree contributes fourteen percent. This is interesting. Year of highest degree, which translates to the number of years with the degree, might be posed as a surrogate for the length of time participating in academic careers. It would follow that the longer one has been in an academic position, the more articles one could publish. Why, then, is this variable less relevant for women than for men? One possibility is that women have redefined their positions and orientations in academia with increasing proportions of them entering such careers. In this way, women, newer to the system, may have an orientation to publishing that causes them to be as productive as those women who have been in such careers for longer periods and have published sluggishly over the course of time. Another plausible explanation is that women interrupt their careers for socially defined reasons such as to have children or to move geographically in deference to family pressures.

If either one of these explanations has been true, the regression run on the 1975 data indicates that an equalizing effect has taken place. By 1975, the patterns of how variables contribute to the

variance in publications are similar for men and women. The Betas for men and women are much more similar in looking at the Highest Degree Held and the Years with the Highest Degree than they were in 1969. The Highest Degree Held explains twelve percent of the variance for women and ten percent for men, and the Year of Highest Degree has gone down for men in 1975 to explain only nine percent of the variance, while remaining relatively stable for women in explaining seven percent of the variance in number of articles published. Professional Orientation, while remaining constant for women, has increased to explain eleven percent of the variance for men in 1975. Type of Appointment Institution, also, appears to add more to explaining the variance in 1975 than it had at the earlier period, although it still contributes a rather small amount (two percent for women and one percent for men). With the exception of Research Orientation, then, the patterns of variables in explaining the number of articles published appear to be similar for women and men in 1975.

Summary

In concentrating on the professional activities of academics, we have found that women are more apt to teach undergraduates than graduate students, and that, generally, they spend more time in classroom instruction than men. Further, the position, or rank, in the academic hierarchy does not suffice to explain differences in teaching patterns.

Examination of research activities and patterns also point to differences by sex. Women at four-year institutions are less likely than men to report interest in conducting research and are less likely

to receive research funding. Even so, they rate the availability of research funds no differently than do their male colleagues. These differences, where they exist, at two-year colleges are not quite as strong, largely because very little research activity takes place among faculty at these locations.

The publication histories of men and women also show significant differences. Women are notably less likely to publish than men, although, if we consider most recent publication history, the gap has narrowed some by the later time period.

While we have recognized substantial differences in these career activities by type of institution, regression equations of a professional productivity variable (number of articles published) show that, net of the Highest Degree Held, Year of Highest Degree, Professional Orientation and Research Support, Appointment Institution has no real effect. In other words, the differences in composition of faculty at the two types of institution essentially define these institutions.

Further, when we compare men and women on the number of articles published, we find the Year of Highest Degree (taken as a surrogate for time in the profession) orders higher for men than for women, as does Research Orientation. For women, the most important contributor in explaining the variance in publication is the Highest Degree Held.

For the most part so far, the observed differences in faculty men and women have not been directly attributable either to sex, or to the institutions of which they are a part. Now we will turn to those variables structured by these institutions to both reward career performance and facilitate continued upward mobility.

CHAPTER FIVE

ACADEMIC REWARDS AND POSSIBLE INSTITUTIONAL DISCRIMINATION

The rewards in academic careers generally translate to tenure, promotion and salary. Determining just how faculty men and women attain these rewards presents great difficulties. Once again, we get into the issue of how criteria are established and evaluated. Disciplines often differ in research and/or publication criteria. Within departments people may be hired for different professional tasks. Institutions may differ in terms of professional orientation and consequent demands on faculty members. Issues of quality may be subjective, in part, and professional esteem in the larger forum of the academic discipline, outside of the home department, may be hard to calibrate. Despite these difficulties in establishing clear and reliable indicators of the professional credentials and accomplishments that colleges and universities reward, some model of professional advancement exists. This is, that having a doctorate, longer years of service in the profession, publishing, and participating in professional activities will lead to tenure, promotion and concomitant salary increments.

The extent to which men and women with equivalent qualifications are granted these rewards differentially is of central concern in this study. If men and women with the same characteristics are equally rewarded, the issue of institutional descrimination in its literal

sense is narrowed to focusing on hiring and severance practices.³³ If, on the other hand, women and men are not equally rewarded, and critical variables have been considered in determining "equivalent" qualifications, then this amounts to saying that the universities and colleges are actually involved in sex discrimination.

Further complicating the application of rewards in academia is the changing composition of the labor market. The proportion of women embarking upon academic careers and, by definition, at the lower ranks has been increasing with time (see Appendix 3), and the best way to exclude such labor market variables has only recently come under consideration in studies of sex discrimination in professional rewards.³⁴ Unfortunately, these methods cannot be employed in our analyses because of limitations in the available data.

A General Overview of Academic Rewards

Once again, there are differences in the distribution of faculty between two and four-year institutions. In 1975,³⁵ fifty-eight percent of the faculty in senior colleges and universities were at the

33. Although these studies should be conducted in an effort to get a total picture of how women are treated by institutions of higher education, these data are not available to us for such analyses. In addition, we cannot hope to tap the notions that institutions informally thwart women in working toward necessary qualifications for advancement, although these actions may necessarily be interpreted as a form of discrimination.

34. See Blumberg, Borgatta, Foss and Van Hoewyk, Op.Cit.

35. In 1969 these differences were even greater with fifty-three percent of the four-year faculty at the top two ranks in contrast to twenty-one percent at junior colleges.

top ranks of Professor and Associate Professor. This is in contrast to thirty-three percent of the junior college faculty at the top two ranks. This puts to rest any notion that rank is distributed equivalently in different types of institutions. Thus, it may be helpful for us to continue to consider the faculties at two-year and four-year institutions separately for part of the presentation of data.

Table 5.1 shows how faculty are distributed in the rank hierarchy.

TABLE 5.1: RANK BY SEX AND TYPE OF APPOINTMENT INSTITUTION

	<u>1969</u>			
	<u>UNIVERSITY & FOUR-YEAR COLLEGE</u>		<u>JUNIOR COLLEGE</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>WOMEN</u>	<u>% MEN</u>
PROFESSOR	13	32	4	11
ASSOCIATE PROFESSOR	19	25	17	11
ASSISTANT PROFESSOR	33	30	17	20
INSTRUCTOR-LECTURER	36	13	63	59
	(1644)	(9209)	(84)	(205)

	<u>1975</u>			
	<u>UNIVERSITY & FOUR-YEAR COLLEGE</u>		<u>JUNIOR COLLEGE</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>WOMEN</u>	<u>% MEN</u>
PROFESSOR	13	37	14	16
ASSOCIATE PROFESSOR	22	27	12	20
ASSISTANT PROFESSOR	38	27	23	28
INSTRUCTOR-LECTURER	27	9	51	36
	(818)	(3419)	(169)	(303)

In both 1969 and 1975, men were much more likely to be found at the top rank, Professor, than were women. In fact, where the proportion of women has remained constant from 1969 to 1975, men have a slightly higher representation at the level of Professor in 1975 than they did in the earlier survey. By 1975 at the junior colleges, women (although a majority are located at the lowest rank) have a similar likelihood of being at the level of Professor as do men. In general though, the largest gaps between men and women are found at the extreme ranks, that is, Professor and Instructor-Lecturer, with women appearing in smaller proportions than men at the top extreme, and in greater proportions than men at the lower extreme.

In Chapter Three we found that women were substantially less apt to hold a doctorate degree than men. If degree is critical in assignment to rank, controlling for it should demonstrate smaller differences in rank by sex. Table 5.2 presents these findings.

TABLE 5.2: RANK BY SEX, HIGHEST DEGREE HELD AND TYPE OF APPOINTMENT
INSTITUTION

	1969							
	UNIVERSITY & FOUR-YEAR COLLEGE				JUNIOR COLLEGE			
	DOCTORATE		MASTERS		DOCTORATE		MASTERS	
	%W	%M	%W	%M	%W	%M	%W	%M
PROFESSOR	27	38	3	15	-	25	3	10
ASSOCIATE PROFESSOR	26	28	14	17	-	35	21	10
ASSISTANT PROFESSOR	39	30	31	31	-	15	16	19
INSTRUCTOR- LECTURER	9	5	51	38	-	25	59	62
	(643)	(6639)	(814)	(1918)	(5)	(20)	(61)	(126)
	1975							
	UNIVERSITY & FOUR-YEAR COLLEGE				JUNIOR COLLEGE			
	DOCTORATE		MASTERS		DOCTORATE		MASTERS	
	%W	%M	%W	%M	%W	%M	%W	%M
PROFESSOR	22	43	5	13	33	31	15	15
ASSOCIATE PROFESSOR	29	28	16	24	17	27	14	21
ASSISTANT PROFESSOR	42	25	37	34	22	23	31	30
INSTRUCTOR- LECTURER	6	3	42	29	28	19	41	34
	(385)	(2662)	(380)	(622)	(18)	(48)	(108)	(193)

Controlling for the highest degree held does seem to make a difference in assignment to rank, although it is clearly not a sufficient explanation. The effect of introducing highest degree differs from rank to rank. At the four-year colleges and universities, introducing degree lowers the percentage difference between men and women full professors. In the case of the associate professors, highest degree appears to explain most of the small sex difference originally observed in Table 5.1. Assistant professors who hold doctorate degrees at these institutions appear to show larger percentage differences by sex than had initially been stated, while the original percentage differences for instructors virtually disappear for faculty with doctorates, and those with masters degrees show smaller percentage differences.

At the community colleges, the 1969 data are impossible to interpret because of the small number of women with doctorates, but the 1975 data show interesting differences when highest degree is introduced. First, while the difference between men and women professors was initially quite small (four percentage points favoring men), controlling for degree brought that difference among faculty holding doctorates down to only two percentage points in favor of women, and there was no observed difference among professors holding masters degrees. In fact, at the two-year colleges, with the exception of the associate professors, all percentage differences are brought down by controlling for highest degree held.

While, generally, differences between men and women in assignment

to rank are smaller when we introduce highest degree, they do not disappear and, therefore, some other variable(s) may account for these differences. It remains to be seen if that variable is Sex.

Turning attention to another keystone of academic careers, whether or not the appointment is tenured, we also find differences between men and women.

TABLE 5.3: TYPE OF APPOINTMENT BY SEX AND APPOINTMENT INSTITUTION

<u>1969</u>				
	<u>UNIVERSITY & FOUR-YEAR COLLEGE</u>		<u>JUNIOR COLLEGE</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>WOMEN</u>	<u>% MEN</u>
TENURED APPOINTMENT	38	55	56	58
APPOINTMENT NOT TENURED	62	45	44	42
	(1623)	(9003)	(108)	(297)
<u>1975</u>				
	<u>UNIVERSITY & FOUR-YEAR COLLEGE</u>		<u>JUNIOR COLLEGE</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>WOMEN</u>	<u>% MEN</u>
TENURED APPOINTMENT	44	66	51	66
APPOINTMENT NOT TENURED	56	34	49	34
	(738)	(3244)	(179)	(355)

The 1969 data reveal that at four-year schools, men are more likely to have tenured appointments than are women. Over one-half of the men have such appointments, while a little more than one-third of the women are so appointed. At the junior colleges, men and women showed no difference in type of appointment. Here fifty-six percent of the women and fifty-eight percent of the men held tenured appointments. In general, men are awarded tenure in the same proportion regardless of

type of institution. Women at two-year colleges are more likely to get tenure than those at four-year institutions.

Surprisingly, in 1975 the gap between men and women had widened. While a slightly larger proportion of women in four-year institutions now report having tenured appointments, men also increased their proportions with tenure and so the earlier seventeen percentage point difference has become a twenty-two percentage point difference in 1975. At the junior colleges in 1975, where no difference had been observed in 1969, a fifteen percentage point difference surfaces.

One expectation in academic mobility is that tenure and rank have high associations. Generally, people at the top ranks have tenure and people without tenure are found at the lowest ranks. We would anticipate that controlling for rank would wipe out most of the sex differential observed in Table 5.3. If, in fact, this occurs, we can say that inequity in getting tenure is an artifact of assignment to rank. If it does not occur, we have to posit that the expected relationship between rank and tenure is not as strong as has been suggested, and/or, that something else, possibly sex discrimination, accounts for these differences.

TABLE 5.4: TYPE OF APPOINTMENT BY SEX, RANK AND APPOINTMENT INSTITUTION
1969

	UNIVERSITY & FOUR-YEAR COLLEGE							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR	
	%W	%M	%W	%M	%W	%M	%W	%M
TENURED APPOINTMENT	93	94	75	76	30	15	8	9
APPOINTMENT NOT TENURED	7	6	25	24	70	85	92	91
	(206)	(2900)	(299)	(2244)	(510)	(2652)	(526)	(1019)

	JUNIOR COLLEGE							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR	
	%W	%M	%W	%M	%W	%M	%W	%M
TENURED APPOINTMENT	-	82	86	71	46	49	42	42
APPOINTMENT NOT TENURED	-	18	14	29	54	51	58	58
	(3)	(22)	(14)	(21)	(13)	(39)	(52)	(111)

1975

	UNIVERSITY & FOUR-YEAR COLLEGE							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR	
	%W	%M	%W	%M	%W	%M	%W	%M
TENURED APPOINTMENT	95	96	77	84	26	21	12	8
APPOINTMENT NOT TENURED	5	4	23	16	74	79	88	92
	(97)	(1222)	(174)	(902)	(282)	(836)	(163)	(232)

	JUNIOR COLLEGE							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR	
	%W	%M	%W	%M	%W	%M	%W	%M
TENURED APPOINTMENT	82	91	81	88	54	67	32	47
APPOINTMENT NOT TENURED	18	9	19	12	46	33	68	53
	(22)	(46)	(21)	(60)	(37)	(78)	(74)	(91)

Immediately apparent in Table 5.4 is the strong relationship between Rank and Type of Appointment. Tenure is positively related to Rank. This is not surprising given the way academic careers advance. Normally, as one progresses in the faculty network, he or she receives tenure or moves out. In this respect we do not expect a high proportion of non-tenured full and associate professors.

A second finding of some interest is that a higher proportion of faculty at two-year institutions have tenured appointments than at the four-year institutions. This may be a reflection of a stable faculty with an, already noted, teaching orientation.

Rank does serve to explain a great deal of the differential initially noted between men and women in Tenure. At the universities and four-year colleges there is no difference by sex for the rank of Professor, and very small differences at Associate Professor and Instructor level. For Assistant Professors in 1969 the sex differential apparent in Table 5.3 persists. However, in 1975, women at this rank are more likely to have tenured appointments than are men.

At the junior colleges, in 1969, we find that the only observed difference is at the rank of Associate Professor and this favors women by fifteen percentage points. In 1975, the original differences by sex remain, although they are less marked as one moves up the rank ladder.

In general, introducing Rank accounts for much of the relationship between Sex and Tenure, although it does not explain the sex

differential completely. Other plausible contributors to whether or not faculty are awarded Tenure will be considered a little later in this chapter. In the meantime we will describe the distribution of faculty in regard to a further reward - Salary.

While salary is inextricably linked to rank, focusing on it as an important variable addresses further questions of discrimination. There are a variety of ways in which women may be denied equal access to academic rewards. They may be unfairly placed at lower ranks than their male counterparts and have related salary inequities. However, these inequities may not persist when men and women are compared within ranks. They may be placed at lower ranks than their male counterparts and have additional salary differentials within these ranks. Finally, they may be placed at the same rank positions as their male counterparts and still show inequities in salary. In Table 5.5 we examine salary differences within rank.

TABLE 5.5: SALARY BY SEX, RANK AND TYPE OF APPOINTMENT INSTITUTION

	<u>1969</u>							
	UNIVERSITY & FOUR-YEAR COLLEGE							
	ASSOCIATE				ASSISTANT			
	PROFESSOR		PROFESSOR		PROFESSOR		INSTRUCTOR	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
Less than \$10,000	5	1	16	5	55	27	90	73
\$10,000-13,999	19	12	60	52	39	59	8	20
\$14,000-19,999	50	52	21	37	5	12	1	5
\$20,000-24,999	12	23	2	5	1	2	0	1
\$25,000 and above	13	12	*	2	0	1	0	1
	(210)	(2940)	(302)	(2275)	(529)	(2754)	(585)	(1172)

	JUNIOR COLLEGE							
	ASSOCIATE				ASSISTANT			
	PROFESSOR		PROFESSOR		PROFESSOR		INSTRUCTOR	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
Less than \$10,000	-	27	7	18	36	45	60	61
\$10,000-13,999	-	23	79	59	57	55	31	32
\$14,000-19,999	-	46	14	23	7	0	10	8
\$20,000-24,999	-	5	0	0	0	0	0	0
\$25,000 and above	-	0	0	0	0	0	0	0
	(3)	(22)	(14)	(22)	(14)	(40)	(52)	(120)

1975

	UNIVERSITY & FOUR-YEAR COLLEGE							
	ASSOCIATE				ASSISTANT			
	PROFESSOR		PROFESSOR		PROFESSOR		INSTRUCTOR	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
Less than \$10,000	1	1	1	1	6	2	39	29
\$10,000-13,999	4	1	25	11	57	47	50	40
\$14,000-19,999	44	23	58	65	32	41	10	24
\$20,000-24,999	38	37	11	16	2	7	1	3
\$25,000 and above	13	38	6	6	3	3	0	3
	(102)	(1251)	(181)	(923)	(306)	(913)	(210)	(296)

	JUNIOR COLLEGE							
	ASSOCIATE				ASSISTANT			
	PROFESSOR		PROFESSOR		PROFESSOR		INSTRUCTOR	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
Less than \$10,000	9	0	0	2	8	1	32	21
\$10,000-13,999	14	4	14	13	40	43	47	36
\$14,000-19,999	32	47	66	45	50	50	21	38
\$20,000-24,999	27	35	19	37	3	5	0	5
\$25,000 and above	18	14	0	3	0	1	0	1
	(22)	(49)	(21)	(62)	(38)	(84)	(86)	(107)

Within rank, women appear to be paid less than men are. These differences seem to be greatest at the higher ranks. So, at the four-year schools in 1969, twenty-five percent of the women professors were earning over twenty thousand dollars a year, while thirty-five percent of the male professors were earning this much. Twenty-four percent of the women at this highest rank were earning less than fourteen thousand dollars. In 1975, the picture has not changed much. Now, fifty-one percent of the women professors are in the highest salary categories, that is, earning over twenty thousand dollars, in contrast to a full seventy-five percent of the male professors in this category. The distribution at the junior colleges reflect similar sex differentials.

Of course, in comparing 1969 and 1975 data we must focus on salary categories as opposed to absolute dollars, since salaries had inflated over the six year period. Even so, women are not earning as much as their male counterparts in either time period.

What do we now know about how rewards are distributed by sex? We know that women have a greater likelihood of being at a lower rank, even controlling for highest degree, that they are slightly less likely to have a tenured appointment, even considering rank. Finally, we know that women earn substantially less than men, and rank is not a sufficient indicator of salary. Whether or not these differences constitute unequal treatment remains to be shown and in the next part of this chapter we will attempt to investigate further these sex differences.

General Comments on the Regression Analyses of Academic Rewards

A number of existing studies report that women are not represented appropriately in rank, are less likely to receive tenure, and, even at the same levels, are paid less than men.³⁶ Other studies conclude that sex differences disappear with the introduction of adequate independent variables.³⁷ Thus, in addition to theoretical concerns and data limitations, choosing appropriate variables for inclusion in studies of academic rewards are at issue.

While important criteria for career mobility are knowable, no formula for how these criteria are applied exists. Generally, however, several items are purported to be important for success in academe. These are: the highest degree held, number of years engaged in an academic career, publications, research activity, and professional esteem. In some cases teaching evaluations also lend weight to academic mobility. Problems exist in that these variables are often not all available, and when available, may not be easily translatable into quantitative measures. Nonetheless, where they exist, they serve as indicators of success, albeit crude ones.

A number of such variables are available to us for use in regression

36. See, for example, Rita J. Simon, and Evelyn Rosenthal, "Profile of the Woman PhD in Economics, History and Sociology" in Journal of the American Association of University Women, 1967, Vol. 60, No. 3; Alice Rossi, "Status of Women in Graduate Departments of Sociology, 1968-69" in American Sociologist, Vol. 5, No. 1 (1970).

37. See, for example, Jonathan R. Cole, Fair Science (1979); and Alan Bayer and Helen S. Astin, "Sex Differences in Academic Rank and Salary Among Science Doctorates in Teaching" in Journal of Human Resources, Vol. 3 (1968).

analyses, along with attending liabilities. The two most overt problems are in the use of surrogate measures for career activities and the coding of response categories in some variables. The first problem exists in one particular case: the variable Year of Highest Degree. The Year of Highest Degree is a necessary indicator of length of service in the profession. However, in that it cannot account for people who drop out of careers for periods of time for whatever reasons, this variable is imprecise. An equally important problem exists in the uneven classification of responses in the salary and publication variables.³⁸ The groupings are not equal in terms of the number of units each represents and consequently relationships may be slightly distorted.

Concurrently, at least two variables are missing that would have been helpful to include: number of years in an academic position at current appointment institution, and years at other full-time academic positions. These, coupled with year of highest degree would provide a more complete separation between those people who are new to academic careers and those who have been in the system for long periods. However, year of highest degree will have to suffice in suggesting length of career service. With these shortcomings in mind, we will now attempt to partial out the contributory variables of academic rewards and determine whether Sex is among them.

38. Salary was coded by the Carnegie Commission of Higher Education into the following categories which are not at interval levels: less than \$7,000, \$7,000-9,999, \$10,000-11,999, \$12,000-13,999, \$14,000-16,999, \$17,000-19,999, \$20,000-24,999, \$25,000 and more. The Number of Articles Published existed in these following categories: None, 1-2, 3-4, 5-10, 11-20 and more than 20.

Academic Rank

It has already been asserted that the single most important mark of success in academic careers is rank. To assume that colleges and universities operate under some fixed model in assigning these rewards would be a gross over-simplification. Institutions of high prestige will promote promising members early, and schools with exclusively teaching orientations will promote members routinely on the basis of seniority. If the institutions themselves differ, the departments within these settings also invoke different criteria for promotion. Thus, it is helpful in attempting to determine the correlates of rank to have some measure of length of service, as well as professional productivity.

In our regression analysis of Rank, we have included variables we suspect will contribute to its assignment:³⁹ Highest Degree Held, Year of Highest Degree, Number of Articles Published, Professional Orientation (that is, whether one prefers research or teaching), Research Support, Type of Appointment Institution and Sex. Once again, we use Year of Degree as a surrogate for years of service. There are other variables that we would have liked to include such as the prestige of the appointment institution but for lack of reliable

39. We attempted to use variables in our analyses that have traditionally been believed to have impact on career success. Two other variables were of interest: Father's Occupation (whether father had a professional occupation or not) and Sex Domination of Field (whether the academic discipline of appointment is over 50% male or over 50% female). These variables were included in runs on all the dependent variables and the largest Beta associated with either of these variables is .03. See Appendix 7 for a regression analysis of Rank which includes these two variables.

information on this in the data. Even so, we have been able to explain fifty-one percent of the variance in 1969 and forty-eight percent in 1975 by regressing rank on seven available independent variables.

TABLE 5.6: RANK REGRESSED ON SEX, HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, NUMBER OF ARTICLES PUBLISHED, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, AND TYPE OF APPOINTMENT INSTITUTION.

	<u>1969</u>		<u>1975</u>	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
SEX	-.08	102.04	-.09	49.35
HIGHEST DEGREE HELD	.27	786.35	.28	324.69
YEAR OF HIGHEST DEGREE	.42	2254.40	.41	862.78
NUMBER OF ARTICLES	.27	592.34	.27	220.45
PROFESSIONAL ORIENTATION	-.04	18.96	-.09	34.60
RESEARCH SUPPORT	-.02	5.43	-.03	3.31
TYPE OF INSTITUTION	.03	18.51	.02	2.03
	7/7721df	R ² = .51	7/3180df	R ² = .48

Immediately apparent in Table 5.6 is the very low Beta coefficient for Sex. In both time periods, Sex accounts for less than one percent of the variance in Rank. Actually the ordering of the variables is notably stable in the two time periods, as are the Betas for variables. The variable that explains the most variance in Rank is Year of Highest Degree, which explains about seventeen percent. Then, the Number of Articles Published and the Highest Degree Held contribute equally about seven percent of the variance each. The other variables in the equation do not appear to contribute anything to speak of in the variation in Rank. Professional Orientation, Research Support and Appointment Institution each explains only a fraction of one percent of

the overall variance.

The notion that longer service in the profession (measured by Year of Highest Degree) and professional productivity (measured by the Number of Articles Published) are critical in assignment of higher ranks appears to be borne out, and these variables coupled with Highest Degree Held explain a major portion of the variance in Rank. The marked differences in Rank by Sex observed in Tables 5.1 and 5.2 seems to be accounted for by controlling for Highest Degree, Year of Highest Degree and the Number of Articles Published. In fact, in stepwise regressions on Rank, the Betas for Sex drop dramatically when Degree Held and Year of Degree are added to the equation. (See Appendix 8 for the presentation of these stepwise regressions.) When Rank is regressed with Sex alone, we are able to explain seven percent of the variance in 1975 and five percent in 1969. Simply adding Highest Degree Held and the Year of Highest Degree drops Sex down to contribute only one percent of the variance and that goes even lower as the other four variables are introduced into the equation.

Differences in Type of Appointment Institution demonstrated earlier, again appear to be artifacts of other variables, such as Highest Degree Held and Years with Highest Degree. Historically, people with doctorate degrees have not been located at two-year colleges. However with tightening labor market conditions, newer people with doctorates are appearing at these schools. Professional Orientation and Research Support may also be closely linked to the Highest Degree Held and length of service in the profession, and

consequently have no real impact on these variables.

A word of caution is in order at this point. The interpretation of the findings in Table 5.6 would be clear, that sex differentials appear to be explained by differences in qualifications of faculty men and women, if we were completely satisfied with the level of our measures. Unfortunately, coding problems with continuous variables that cannot be considered at internal level may serve to distort relationships somewhat. In this way, it must be reiterated that problems in the data make us conservative in our interpretations of findings. What we can say at this point is that, on the surface, our data indicates that no sex discrimination attributable to behavior of academic institutions exists in assignment to rank.

In considering men and women separately we find different patterns in accounting for the variation in rank.

TABLE 5.7: RANK OF WOMEN AND MEN REGRESSED ON HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, NUMBER OF ARTICLES PUBLISHED, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, AND TYPE OF APPOINTMENT INSTITUTION

	<u>1969</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE	.35	124.29	.25	635.73
YEAR OF HIGHEST DEGREE	.34	143.15	.46	2232.53
NUMBER OF ARTICLES	.25	53.83	.26	500.88
PROFESSIONAL ORIENTATION	-.03	1.28	-.04	15.57
RESEARCH SUPPORT	.02	0.51	-.02	4.52
TYPE OF INSTITUTION	.02	0.77	.04	17.83
	6/766df	$R^2 = .45$	6/6899df	$R^2 = .49$

	<u>1975</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE	.36	67.35	.27	245.64
YEAR OF HIGHEST DEGREE	.33	68.11	.45	861.64
NUMBER OF ARTICLES	.21	19.73	.28	202.25
PROFESSIONAL ORIENTATION	-.09	4.84	-.10	33.03
RESEARCH SUPPORT	-.03	0.62	-.03	2.95
TYPE OF INSTITUTION	.0014	0.01	.02	1.61
	6/480df	$R^2 = .33$	6/2649df	$R^2 = .47$

While the variables Highest Degree Held, Year of Highest Degree and Number of Articles Published contribute the most in explaining Rank both for men and women and for both time periods, they order differently. For women, the Highest Degree and Year of Highest Degree have similar relationships to Rank (about twelve percent of the variance is explained by each of these variables) and Number of Articles Published explains less of the variance (only six percent in 1969 and four percent in 1975).

When we look at the regressions for men, we notice that Year of Highest Degree is the single largest contributor to Rank. The Betas for this item are considerably higher for men than they are for women and this variable explains about twenty percent of the variance for men in both years. Also, the Number of Articles Published and the Highest Degree Held have essentially the same Beta coefficients.

Professional Orientation, Research Support and Type of Institution do not add anything to speak about to the variation in Rank. In 1975, however, Professional Orientation does seem to have increased in importance to explain about one percent of the variance for both men and women.

Interestingly, then, Rank is explained for women and men largely by the same three variables, although they order differently. This suggests that, in fact, criteria for assignment to rank do differ for men and women. An interaction effect between these variables (Highest Degree, Year of Highest Degree and Number of Articles Published) and

Sex in relation to Rank seems to have taken place. This effect may well be a result of the changing proportions of women doctorates entering academic careers.

Tenure

If rank is the mark of achievement in Academia, tenure is the notation of acceptance and security. Tenure is assigned in much the same way as is Rank. That is, a faculty member's professional qualifications, as well as contributions, or potential contributions, to the department and institution are evaluated and tenure is extended or denied as a result. While, generally, people at the higher ranks are apt to have tenure (their qualifications for it are evidenced in that they have moved up in the hierarchy), and people at the lower ranks have a greater likelihood of not yet having received tenure or having had it denied to them, this is not always the case. Because of job mobility from institution to institution, traditional in academe, rank is sometimes not a correlate of tenure. Nonetheless, since we have not found any real discrimination between women and men in placement in rank, we can omit Rank from our list of independent variables in attempting to determine how Tenure is assigned. Table 5.8 presents the results of the general regression equation on Tenure.

TABLE 5.8: TENURE REGRESSED ON SEX, HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE HELD, NUMBER OF ARTICLES PUBLISHED, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, AND TYPE OF APPOINTMENT INSTITUTION.

	<u>1969</u>		<u>1975</u>	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
SEX	<u>-.03</u>	<u>8.77</u>	<u>-.09</u>	<u>29.68</u>
HIGHEST DEGREE HELD	.06	26.20	.09	22.19
YEAR OF HIGHEST DEGREE	.31	724.41	.37	457.95
NUMBER OF ARTICLES	.18	171.03	.17	57.71
PROFESSIONAL ORIENTATION	-.08	47.63	-.10	28.19
RESEARCH SUPPORT	.03	6.50	-.04	4.20
TYPE OF INSTITUTION	<u>-.06</u>	<u>36.12</u>	<u>-.07</u>	<u>17.60</u>
	7/7721df	R ² = .19	7/3059df	R ² = .23

We are only able to explain nineteen percent of the variance in Tenure in 1969 and twenty-three percent in 1975.⁴⁰ However, in these equations, sex has virtually no relationship to Tenure, net of the variables present, and this is a statistically significant finding. In fact, even the Highest Degree Held explains no variation, to speak of, in Tenure. Only the Year of Highest Degree and the Number of Articles Published appear to contribute substantially to the explained variance in assignment to tenure. In this way, once one is in the system, regardless of highest degree, seniority and publications appear to relate most importantly to having tenure.

40. When we include Rank in the equation, we explain fifty-one percent of the variance in Tenure in 1969 and forty-five percent in 1975, and the Beta for Sex is even smaller. See Appendix 9.

There are two noteworthy occurrences in Table 5.8. Although the Betas are quite small and account for only about one percent of the overall variance, Professional Orientation has a negative value. Contributing even less to the variance, but also negative, is the Type of Appointment Institution. Thus, having a teaching orientation and being at a junior college may have the effect (net of the other variables in the equation) of contributing a fractional amount to having Tenure. This supports the findings in Table 5.4. These differences are really too small to be considered important, however.

Although it is still rather small, the Beta for Sex has increased slightly in 1975, as has the Beta for the Year of Highest Degree. Just what this suggests is unclear, since the ordering of the variables is so similar in both years.

When we consider men and women separately in our analysis of Tenure, we find that the ordering of the variables is quite constant.

TABLE 5.9: TENURE OF WOMEN AND MEN REGRESSED ON HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, NUMBER OF ARTICLES PUBLISHED, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, AND TYPE OF APPOINTMENT INSTITUTION.

	<u>1969</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE HELD	.02	0.31	.07	30.41
YEAR OF HIGHEST DEGREE	.28	61.31	.32	675.51
NUMBER OF ARTICLES	.16	13.66	.18	150.11
PROFESSIONAL ORIENTATION	-.04	1.32	-.08	48.44
RESEARCH SUPPORT	.01	0.14	.03	6.20
TYPE OF INSTITUTION	-.10	9.12	-.05	21.98
	6/766df	R ² = .14	6/6899df	R ² = .19

	<u>1975</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE	.10	3.67	.09	20.24
YEAR OF HIGHEST DEGREE	.33	50.52	.39	422.28
NUMBER OF ARTICLES	.09	2.45	.17	52.03
PROFESSIONAL ORIENTATION	-.11	5.73	-.10	24.04
RESEARCH SUPPORT	-.02	0.15	-.04	5.12
TYPE OF INSTITUTION	-.07	2.57	-.08	16.01
	6/445df	R ² = .15	6/2568df	R ² = .23

In 1969, the order of the variables accounting for variance in Tenure is essentially the same for women and men. In actuality, only Year of Degree and the Number of Articles Published (in that order) make any basic contribution. In 1975, the Number of Articles Published no longer contributes anything to speak of to the variance in Tenure for women. This variable is constant for men, however, contributing the same amount of explanation to the variation in Tenure as it had in 1969.

In sum, there appears to be no real sex differential in Tenure, even when we do not include Rank as an independent indicator.

Salary

We have already posited that there are a number of ways in which institutions may formally discriminate against women. Women may meet discrimination at the levels of entry, promotion, salary and severance. It is beyond our capabilities to investigate possible inequities at hiring and severance, and we have already seen that when we consider highest degree held, year of that degree, and the number of articles published we don't uncover any significant difference by sex in Rank. (Although these variables do order differently for women and men, suggesting differences at some level.) Now, we will turn attention to the issue of possible salary inequality. In Table 5.5 we saw that differences by sex existed when we controlled for rank. When we regress Salary on Rank, Highest Degree, Year of Degree, Number of Articles, Tenure, Professional Orientation, Research Support and Type of Appointment Institution, we find that any significant sex differences disappear.

TABLE 5.10: SALARY REGRESSED ON SEX, RANK, HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, NUMBER OF ARTICLES, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, TYPE OF APPOINTMENT INSTITUTION AND TENURE.

	<u>1969</u>		<u>1975</u>	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
SEX	-.08	112.46	-.07	30.84
RANK	.42	1313.99	.45	488.99
HIGHEST DEGREE HELD	.09	109.61	.06	12.42
YEAR OF HIGHEST DEGREE	.15	255.61	.13	72.18
NUMBER OF ARTICLES	.22	473.20	.19	106.51
PROFESSIONAL ORIENTATION	.01	2.14	.02	1.04
RESEARCH SUPPORT	.06	65.36	.04	7.07
TYPE OF INSTITUTION	-.03	19.73	.05	14.48
TENURE	.04	21.72	.04	4.80
	7/7721df	$R^2 = .19$	7/3059df	$R^2 = .23$

Once again the regression results in 1969 and in 1975 are remarkably similar. Sex accounts for about one-half of one percent of the variance in Salary, net of the other variables. By far the variable with the largest Beta coefficient is Rank, although, as expected it is not the sole significant contributor to the overall variance in Salary. The Number of Articles Published introduces the next highest Beta and the Year of Highest Degree also contributes to the variance in salary. The Highest Degree, net of the other independent variables, accounts for less than one percent of the overall variation in salary.

Even if we run the Salary regression without introducing Rank, we find that the original relationship between Salary and Sex is explained by Year of Degree, Number of Articles Published and Highest Degree

Held, and while the Beta for Sex is slightly larger than in Table 5.10, it still is only $-.12$, accounting for only one percent of the variance in Salary. (See Appendix 12.)

The amount of variance we are able to explain in the equations in Table 5.10 is quite large. In 1969, the $R^2=.60$ and in 1975, the $R^2=.52$. We must repeat our earlier concerns about the nature of the data. Salary is not available as a continuous interval variable and so, we are cautious about strong interpretations of the findings.

When Salary was regressed on Sex, alone, it accounted for only about eight percent of the overall variance. The Beta for Sex immediately drops to $-.11$ (from $-.28$) upon introducing Rank. This suggests, at the very least, that within ranks, Sex does not appear to be a critical variable in describing Salary.⁴¹

Upon conducting regression analyses on men and women separately, our findings are similar to those in Table 5.7. This is that variables that explain the overall variance in Salary order differently for women than they do for men. Table 5.11 presents these results.

41. See Appendix 11 for the stepwise Regression on Salary.

TABLE 5.11: SALARY OF WOMEN AND MEN REGRESSED ON RANK, HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, NUMBER OF ARTICLES, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, TYPE OF APPOINTMENT INSTITUTION, AND TENURE.

	<u>1969</u>			
	<u>BETA</u>	<u>WOMEN</u> <u>F</u>	<u>BETA</u>	<u>MEN</u> <u>F</u>
RANK	<u>.45</u>	<u>158.34</u>	<u>.42</u>	<u>1120.01</u>
HIGHEST DEGREE HELD	.14	19.81	.09	97.72
YEAR OF HIGHEST DEGREE	.07	5.81	.17	262.04
NUMBER OF ARTICLES	.19	37.30	.22	410.86
PROFESSIONAL ORIENTATION	.02	0.45	.01	1.46
RESEARCH SUPPORT	.08	10.27	.07	62.34
TYPE OF INSTITUTION	-.12	23.51	-.02	5.28
TENURE	<u>.09</u>	<u>9.38</u>	<u>.04</u>	<u>15.05</u>
	8/764df	R ² = .57	8/6897df	R ² = .55

	<u>1975</u>			
	<u>BETA</u>	<u>WOMEN</u> <u>F</u>	<u>BETA</u>	<u>MEN</u> <u>F</u>
RANK	<u>.45</u>	<u>84.16</u>	<u>.45</u>	<u>374.93</u>
HIGHEST DEGREE HELD	.11	6.88	.04	6.05
YEAR OF HIGHEST DEGREE	.06	2.37	.16	78.80
NUMBER OF ARTICLES	.16	12.90	.19	91.56
PROFESSIONAL ORIENTATION	.05	1.43	.01	0.66
RESEARCH SUPPORT	.05	1.83	.03	4.87
TYPE OF INSTITUTION	-.08	5.04	-.05	8.49
TENURE	<u>.10</u>	<u>5.49</u>	<u>.09</u>	<u>1.46</u>
	8/443df	R ² = .46	8/2566df	R ² = .49

Not surprisingly, Rank is by far the single most significant variable in explaining Salary. Beyond Rank, the Number of Articles Published have similar Beta coefficients for men and women in each time period. However, the Highest Degree Held and Year of Highest Degree act in opposite ways for women and men. For men, Year of Highest Degree explains three percent of the variation in Salary. Although this is small, it is in contrast to the finding for women that Year of Highest Degree does not have any real contribution to the variation in Salary.

We have the repeated suggestion of some interaction between Year of Highest Degree and Highest Degree which may reflect the differences in the way men and women have been represented in the available labor pool. Even so, these effects are considered small and the original finding of no sex difference with regard to Salary cannot be ignored.

Summary

When we first look at distributions of faculty in terms of Rank, Tenure and Salary we note marked differences between men and women. Sex differences in Rank are not fully explained by the Highest Degree Held, and the largest gaps emerge at the universities and senior colleges. When we review the distribution of Tenure at institutions of higher education, we find that women at two-year colleges are more likely to have tenured positions than their counterparts at four-year institutions. While Rank explains much of the sex differential in Tenure, it does not explain all of it. Salary, also, while inextricably associated with Rank, appears to be unevenly distributed by sex.

In an effort to explain these initially apparent sex differentials, regression analyses were conducted and the overall findings suggest that Sex explains virtually none of the variation in Rank, Tenure and Salary, when other academic characteristics are included in the equations.

Three variables emerge as important correlates of Rank: Highest Degree Held, Year of Highest Degree (used as a surrogate for length of professional service), and Number of Articles Published. The Highest Degree Held makes the largest contribution in explaining the variation in Rank. Year of Highest Degree and the Number of Articles Published add equally to the explained variance.

Without including Rank in the analysis, two variables appear to be important in explaining how Tenure is assigned: Year of Highest Degree and the Number of Articles Published. These variables order the same for men and women.

In addition to Rank as an obvious determinant of Salary, Number of Articles Published and Year of Highest Degree add to the explanation of variance.

The Highest Degree Held and the Year of Highest Degree do order differently for men and women in explaining Rank and Salary, suggesting that some process, possibly due to changing proportions of women entering college and university faculties, is different for men and women in academic careers. Nonetheless, these differences are not very

large.

Professional Orientation (whether one prefers teaching or research), Research Support, Type of Appointment Institution, and Sex do not individually contribute a noteworthy amount of explanation for the variation in academic rewards. Initially, when we look at simple distributions of men and women in regard to these rewards, we find that being placed at a junior college means something different than being at a university or senior college. However, the results of regression analyses indicate that the degree characteristics and publication records of faculty women and men account for these initially apparent insitutional differences.

There are problems with our data which may make these findings suspect. Coding problems in particular may serve to minimize relationships where they exist. However, we would expect major differences by sex to show up in some way, even in deflated form, and this does not occur. With these limitations in mind, it seems that Sex does not account for much of the variation in academic rewards, suggesting that institutions of higher education are not involved in overt discrimination against women faculty.

Of further interest is the contrast between what our initial examination of assignment of rewards suggests and what our more comprehensive regression reveals. By simply considering how Rank, Tenure and Salary are distributed on faculties, even controlling for highest degree held, we replicate findings prominent in the sociological

literature; that residual sex differences exist. However, these differences are adequately explained by characteristics other than Sex when we control for several independent indicators in regression equations. Thus, the problem of assuming the existence of unequal treatment when only one or two important variables at a time are considered is more clearly punctuated.

CHAPTER SIX

FAMILY STATUS AND ROLE CONFLICT

The question facing educators in the nineteenth and early part of the twentieth centuries was whether a woman's mind was intended by nature to "grapple with intellectual training." (Cross, 1965). In the first sixty years of this century, the belief that education was "wasted" on women who married, raised children and did not participate in academic life was espoused. The last few decades have reflected a political commitment (of lesser or greater degree) to integrate women into the academic network. The question of feasibility of fully integrating women into the male dominated college and university is basic (although largely ignored in sociological literature) to the question of equal representation. Adrienne Rich does, in fact, speak of the inability as well as undesirability of women being integrated into existing college and university structures. In "Toward a Woman-Centered University" (1975), she suggests that women need to bring some of the values and orientations that have kept them out of the male dominated universities to these same institutions now. Until this happens, Rich argues, women can never really succeed in academia. Nor should they want to until our universities become more amenable to structural changes that will enable women to express themselves professionally. The need for shared responsibility in childrearing is, perhaps, one of the most frequently cited requisites. Can women assume the same professional responsibilities as men as long as there are much

greater time and energy demands in the home?⁴² Improved child care programs coupled with increased participation of men in the home pose movement in the direction of equal opportunity.

The evidence has been overwhelming: a woman engaging in a professional career faces role conflict that a man rarely experiences. Epstein (1970) suggests that the working woman need deal with two conflicting priority systems. Moreover, even when a woman considers her career secondary to family obligations, the occupational demands are not lowered for her. Also, there is evidence that marital conflict occurs more frequently among couples with working wives than among those with non-working wives. Conflict appears to arise in dual-career families over difficulties in the management of household tasks and child care. (Blood, 1963). Nye (1963) indicated that dual-income couples are inclined to quarrel frequently on more topics than single-income couples. The incidence of divorce, also, is substantially higher for professional women than for professional men. (Epstein, 1970).

Thus, the notion that marriage and career do not mix has been pervasive through much of the history of women in the academic labor force. In fact, traditionally, being married excluded women for consideration for many positions and single women placed in academic careers were often dismissed from positions if they married after being

42. A recent UNESCO study showed the average working mother had 2.8 hours of free time on a typical workday vs. 4.1 hours for a working man. Astin found in 1969 that women PhDs in the U.S. spent approximately 28 hours per week on household tasks.

appointed.⁴³ Most studies show that prior to 1920, close to eighty-five percent of the men with doctorates at institutions of higher education were married. In contrast, only twenty percent of the women doctorates were married. By 1975, in our sample, fifty percent of the women doctorates were married. Nonetheless, it would be simplistic to assume that, as yet, juggling careers with familial responsibilities worked in similar ways for women and men. The questions that surface about marital characteristics and academic women run in several directions. First, how do academic men and women differ in marital characteristics. Second, how do married women differ from non-married women. Third, what kind of role conflict do faculty men and women report in responding to questions relating familial roles to career activities. Finally, how does marital status and related conflict affect productivity and consequently academic placement for faculty women as compared to men. This chapter will address these issues in an effort to place academics, to a limited extent, in the context of a larger social network.

Family Characteristics: Marital Status and Dependent Children

Let us first turn attention to the marital statuses of faculty men and women. Table 6.1 presents these data.

43. See Jonathon Cole, Fair Science, pp. 248-255

TABLE 6.1: MARITAL STATUS BY SEX.

	<u>1969</u>		<u>1975</u>	
	<u>% Women</u>	<u>% Men</u>	<u>% Women</u>	<u>% Men</u>
NEVER MARRIED	42	9	33	8
MARRIED	47	88	52	87
DIVORCED/SEPARATED	7	2	11	5
WIDOWED	5	1	4	1
	(1845)	(9792)	(1036)	(3874)

Clearly, women faculty are much less likely to be married than their male colleagues. While close to ninety percent of the men in both time periods report being married, only approximately one half of the women indicate that they are presently married. Also, a larger proportion of women were divorced or separated than men.

Recalling that earlier we found that women were more heavily represented in the youngest age categories than men, one might expect that introducing age will demonstrate similar sex differences in marital status. It would be surprising for all differences to be explained by age given the relatively small sex differentials by age, in general, and the large sex differentials in marital status detailed above. Table 6.2 shows that Age fails to add much to our understanding of these differences in marital status.

TABLE 6.2: MARITAL STATUS BY SEX AND AGE.

1969

	<u>less than 30</u>		<u>30 - 39</u>		<u>40 - 49</u>		<u>50 - 59</u>		<u>60 and older</u>	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
NEVER MARRIED	44	20	39	8	34	6	50	5	53	7
MARRIED	52	78	53	90	54	90	31	91	27	89
DIVORCED/SEPARATED	5	2	6	2	9	3	9	3	15	1
WIDOWED	0	0	2	*	4	1	11	1	14	3
	(340)	(1350)	(482)	(3578)	(525)	(2677)	(346)	(1468)	(139)	(701)

1975

	<u>less than 30</u>		<u>30 - 39</u>		<u>40 - 49</u>		<u>50 - 59</u>		<u>60 and older</u>	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
NEVER MARRIED	39	23	34	10	25	5	28	5	50	8
MARRIED	53	73	56	85	60	90	50	91	28	87
DIVORCED/SEPARATED	8	4	10	6	11	5	15	3	14	3
WIDOWED	0	0	1	0	4	*	7	1	9	2
	(125)	(195)	(341)	(1441)	(260)	(1161)	(204)	(745)	(105)	(328)

Men, clearly, have a greater likelihood of being married than do women regardless of age, and this is true for both time periods. Additionally, women are more likely to be divorced or separated, or at least to remain that way, than are men. Particularly interesting is the fact that older women appear to be considerably more likely to have never been married than do younger women. In 1969, fifty-three percent of the women over sixty were never married, as compared to forty-four percent of the women under thirty. In 1975, the findings were similar with fifty percent of the women over sixty reporting that they had never been married in contrast to thirty-nine percent of the women under thirty.

The fact that the differences between men and women in marital status are smaller in 1975 than in the 1969 study, suggests that mixing marriage and career is becoming more possible for academic women. Even so, the sex differences are great when we consider marital patterns of women and men, and age does not appear to be an adequate source of explication of these differences.

Research on graduate education has found that, for women, marriage has a deleterious effect on success.⁴⁴ If, for faculty, the mark of success is Rank, we find similarly that being married is negatively associated with success for women, and additionally, being married works in reverse ways for women and men.

44. See Saul Feldman, Escape from the Doll House, Chapter 6.

TABLE 6.3: RANK BY SEX AND MARITAL STATUS.

	1969							
	NEVER-MARRIED		MARRIED		DIVORCED/ SEPARATED		WIDOWED	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
PROFESSOR	18	17	6	33	13	29	23	60
ASSOCIATE PROFESSOR	24	19	13	25	19	26	25	20
ASSISTANT PROFESSOR	27	37	36	30	36	25	29	15
INSTRUCTOR- LECTURER	31	27	45	13	33	21	24	6
	(721)	(773)	(791)	(8336)	(124)	(234)	(80)	(55)
	1975							
	NEVER-MARRIED		MARRIED		DIVORCED/ SEPARATED		WIDOWED	
	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>	<u>%W</u>	<u>%M</u>
PROFESSOR	19	20	9	37	17	28	14	59
ASSOCIATE PROFESSOR	20	22	21	27	19	26	25	24
ASSISTANT PROFESSOR	37	37	34	26	32	35	44	18
INSTRUCTOR- LECTURER	25	21	37	10	31	11	17	0
	(328)	(282)	(506)	(3250)	(109)	(163)	(36)	(17)

Regardless of the year, we find in Table 6.3 that married men are much more apt to be found at the higher ranks than are unmarried men. The exception here is the category of Widowed Men and we can assume that this is a function of age and concurrently, length of service. For women, quite the opposite is true. Married women are less likely to be at the higher ranks than are unmarried women, although we see a slight lessening of this differential by 1975 (with the exception of widowed people.)

Abundantly clear from Table 6.3 is that the notion that where men are able to integrate family and career, women cannot, is applicable. The problem in interpretation exists in that it is not obvious how these two statuses conflict. That is to say, do women find it too difficult to meet the demands of the two roles, and consequently set priorities to resolve the conflict? Or, do the institutions of higher education make assumptions about women caught in the chasm of dual roles which discourage commitment and participation on the part of these women? Possibly, some interaction of these internal and external factors occurs.

In 1975, there are virtually no differences between single women and single men in attainment of Rank. This is a change from the earlier period when single women appeared to have a slight edge on single men. Again, what is apparent from these data is that, for men, being married somehow provides supports helpful in achieving the qualifications necessary for upward mobility, and staying single allows women more movement toward achieving professional rewards.

Popular lore has been that women make their most important contribution in bearing and rearing children. The extent to which women who commit themselves to academic careers also have children is of particular interest. Unfortunately, the Carnegie studies were more concerned with whether or not faculty members have "dependent" children. In 1969, respondents were asked how many dependent children they had. However, in 1975, two questions were included, one asking

about the number⁴⁵ of dependent children under six years old, and the other asking the number of dependent children who were over six years old. These questions would be helpful if we were following a cohort over the course of careers, however, they are not particularly helpful in our study of faculty at different stages of their careers. Consequently, we will rely on a composite item from the 1975 survey to indicate whether or not respondents have dependent children. This necessarily limits us in that we don't have any child-rearing information about faculty whose children are grown but who were dependent at critical junctures earlier in their careers.

TABLE 6.4: DEPENDENT CHILDREN

	<u>1969</u>	
	<u>% WOMEN</u>	<u>% MEN</u>
HAVE NO DEPENDENT CHILDREN	65	27
HAVE DEPENDENT CHILDREN	35	73
	(1789)	(9735)

	<u>1975</u>	
	<u>% WOMEN</u>	<u>% MEN</u>
HAVE NO DEPENDENT CHILDREN	51	26
HAVE DEPENDENT CHILDREN	49	74
	(1046)	(3884)

45. Again, the coding categories were such that a computed variable could not have indicated the number of children. Therefore, the variable Dependent Children is treated as a dichotomous item: (1) Have No Dependent Children (2) Have Dependent Children.

While only about one-third of the women in 1969 have dependent children, fully three-quarters of the men have children. In 1975, the proportion of women who had dependent children was notably higher than in 1969, when about one-half of the women reported having children who were still dependent. This suggests that changing expectations are allowing women to integrate careers with childrearing. The increased number of women with dependent children in 1975 may also be a reflection of the increasing proportions of women of childbearing ages in academia.

Role Conflict

In 1969, respondents were asked how often they were able to spend four hours or more at a time on professional work. Where thirty-nine percent of the women reported that they did this at least once a week, forty-eight percent of the men were able to do this that frequently. The extent to which having less time to spend on professional activities detracts from productivity and advancement remains to be seen. Unfortunately, this variable was not repeated in 1975 and so, no comparison of women with the intervening five year period is possible.

A number of questions that tap perceptions of how professional and familial roles conflict were asked in both surveys. For the most part, however, these items do not contain real measures of role conflict. For example, asking how often one gets to devote four hours uninterruptedly on professional work does not have universal application. It is not the case that four hours of work means the same thing to different individuals. Further, it is not clear what prevents respondents from getting the time to spend on professional work. Even

more problematic are questions that deal with perceptions such as "Do you have time to give your work proper attention?" For one person, spending four hours a week might constitute "proper attention", for another fifty hours may be insufficient. Nonetheless, some of these variables allow us to construct a picture of how men and women integrate their professional and personal lives.

Three questions, in particular, appear in both studies. Respondents were asked to agree or disagree with these statements. Table 6.5 presents the distribution of respondents on these items.

TABLE 6.5:

"I hardly ever get the time to give a piece of work the attention it deserves."

	<u>1969</u>		<u>1975</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>% WOMEN</u>	<u>% MEN</u>
AGREE	52	47	40	40
DISAGREE	48	53	59	60
	(1825)	(9693)	(1027)	(3852)

"I tend to subordinate all aspects of my life to my work."

	<u>1969</u>		<u>1975</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>% WOMEN</u>	<u>% MEN</u>
AGREE	42	44	36	37
DISAGREE	58	56	64	63
	(1830)	(9696)	(1029)	(3857)

"My commitment to different aspects of my job are the source of considerable strain."

	<u>1969</u>		<u>1975</u>	
	<u>% WOMEN</u>	<u>% MEN</u>	<u>% WOMEN</u>	<u>% MEN</u>
AGREE	43	45	37	36
DISAGREE	57	55	63	64
	(1828)	(9685)	(1027)	(3860)

Most interesting in Table 6.5 is that there are virtually no differences between women and men on any of these items.

In 1969, about one-half of the respondents, regardless of sex, claim not to be able to give work the attention it deserves. A little more than forty percent of the respondents agree that they tend to subordinate all aspects of their lives to their work, and the same proportion indicate that their job commitment is the source of considerable strain. By 1975, all of these proportions of respondents agreeing with the above statements had decreased. It would seem, then, that role conflict on the order of time constraints and commitments are lessening with time.

The liability in considering these questions seriously exists in the latitude for interpretation of the statements. For example, what does "considerable strain" refer to; strain on other outside relationships, or heightened anxiety over work related activities, etc. Problems of interpretation notwithstanding, our suspicion that more conflict is articulated by women was not confirmed.

The 1975 survey included four questions that add a further dimension to how men and women integrate familial and career activities. These questions were not asked in the earlier study.

They are:

"My career comes second to my family obligations."

"I share equally in housework and child-care with my spouse."

"Have you ever resigned from a job and moved for your spouse or family?"

"Have you ever refused a job offer because of your spouse or family?"

While there was only a small difference between men and women in ranking family obligations, there was a larger differential in indicating that they share equally in the housework and child care.

TABLE 6.6:

"My career comes second to my family obligations." (1975)

	<u>% WOMEN</u>	<u>% MEN</u>
AGREE	40	46
DISAGREE	60	54
	(998)	(3777)

"I share equally in housework and child-care with my spouse." (1975)

	<u>% WOMEN</u>	<u>% MEN</u>
AGREE	62	47
DISAGREE	38	53
	(549)	(3370)

Contrary to common expectations, women were slightly less apt to indicate that their family came before their careers than were men. Perhaps this supports the notion that women who enter career positions have been forced to establish priorities in deference to these careers from the onset.

Equally interesting was the fact that faculty women were more likely to be sharing housework and child-care responsibilities with their husbands, than faculty men were with their wives. This points to the less traditional family arrangements employed in order for women to progress in professional careers. Unfortunately, we have no earlier version of this question, so we cannot measure any change over time in marital relationships which may be reflective of the fundamental changes in male-female relationships that politically active spokespeople have been calling for.

Questions directly related to career conflict exist in the 1975 survey, and the results of these items suggest that women have a greater likelihood of leaving a job or not accepting a job offer because of family commitments.

TABLE 6.7:

"Have you ever resigned from a job and moved for family reasons?"

(1975)

	<u>% WOMEN</u>	<u>% MEN</u>
YES	26	6
NO	74	94
	(1025)	(3847)

"Have you ever refused a job because of your spouse or family?"

(1975)

	<u>% WOMEN</u>	<u>% MEN</u>
YES	26	18
NO	74	82
	(1013)	(3840)

While only six percent of the men had ever resigned from a job and moved because of family, more than one-fourth of the women report having done this. More than one-fourth of the women also indicated that they had refused a job offer because of family pressures, although the difference between men and women was not as great here. (Eighteen percent of the men reported having refused a job offer for family reasons.) The critical finding here is that a full one-quarter of the academic women state that they have actively made adjustments in their careers because of family commitments. Not surprisingly, this form of role conflict, or resolution to role conflict, does not seem to be as pervasive among the faculty men.

The Effects of Family Variables and Role Conflict on Productivity

To better understand how marital status and related family characteristics contribute to productivity in academic careers, the Number of Articles Published was regressed on Marital Status (coded unmarried or married), Age (Year of Birth), Whether or not respondent has Dependent Children, along with the independent variables introduced in Chapter Four. In addition, indicators of role strain were used, although these indicators were available in the two time periods through different items. In 1969, we have a variable that indicates how often respondents were able to spend at least four hours on professional work. This variable, which we will call Work Time, was dichotomized to indicate that respondents spent at least four hours once a week or more on such work, or they got at least four hours to spend on professional work less frequently than once a week. Three variables were included in the regressions using the 1975 survey data. These are: Whether or not respondents shared equally with spouse in housework and child-care responsibilities (Share Responsibilities), whether or not one's career was said to be second to family obligations (Career Second) and, finally, whether or not the respondent had ever resigned from a position to move because of spouse or family (Moved From Job).

TABLE 6.8: NUMBER OF ARTICLES PUBLISHED REGRESSED ON SEX, HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, TYPE OF APPOINTMENT INSTITUTION, YEAR OF BIRTH, MARITAL STATUS, DEPENDENT CHILDREN, WORK TIME, SHARE RESPONSIBILITIES, CAREER SECOND, AND MOVED FROM JOB.

	<u>1969</u>		<u>1975</u>	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
SEX	-.05	29.52	-.07	20.72
HIGHEST DEGREE HELD	.30	1110.28	.30	388.96
YEAR OF HIGHEST DEGREE	.34	754.61	.31	313.76
PROFESSIONAL ORIENTATION	.29	915.76	.37	592.29
RESEARCH SUPPORT	.14	254.76	.12	77.35
TYPE OF INSTITUTION	.03	12.35	.07	21.39
YEAR OF BIRTH	.04	11.37	.01	0.41
MARITAL STATUS	.02	4.13	.03	5.43
DEPENDENT CHILDREN	.04	19.31	-.01	0.26
WORK TIME	.04	17.84	-	-
SHARE RESPONSIBILITIES	-	-	.01	0.85
CAREER SECOND	-	-	.02	3.05
MOVED FROM JOB	-	-	.01	1.01
	10/7901df $R^2 = .50$		12/2671df $R^2 = .54$	

Turning attention first to the Family Status and Role Conflict variables we observe that they contribute virtually no additional explanation of the variance in the number of articles published. In fact, the Beta coefficients for the independent variables in the equation that were initially considered in Chapter Four are remarkably similar in Tables 6.8 and 4.11.

Again, there are no real differences between the 1969 and the 1975

data in terms of how variables order to explain the variation in publications, as well as the strength and the direction of the coefficients for these variables. Only Professional Orientation has increased in 1975 to explain a larger amount of the variance. In 1969, having a research vs. a teaching orientation explained eight percent of the variance. In 1975, it explained fourteen percent of the variance in the number of articles published.

Thus, the variables we have identified as describing family status and associated role conflict, net of the professional characteristics already engaged in our description of professional productivity, do not seem to add further explanation in the variation in publications.

If these family variables add little to our understanding of publication productivity, it may be that they somehow work differently for women than for men. We have run the equations separately for women and men, with some interesting results.

TABLE 6.9: NUMBER OF ARTICLES PUBLISHED BY WOMEN AND MEN REGRESSED ON HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, TYPE OF APPOINTMENT INSTITUTION, YEAR OF BIRTH, MARITAL STATUS, DEPENDENT CHILDREN, WORK TIME, SHARE RESPONSIBILITIES, CAREER SECOND, AND MOVED FROM JOB.

	<u>1969</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE HELD	.33	116.20	.30	993.35
YEAR OF HIGHEST DEGREE	.19	25.60	.38	762.29
PROFESSIONAL ORIENTATION	.20	40.61	.30	883.97
RESEARCH SUPPORT	.21	50.45	.13	201.51
TYPE OF INSTITUTION	.04	1.71	.03	8.94
YEAR OF BIRTH	.13	11.78	.03	3.35
MARITAL STATUS	-.002	0.003	.02	5.76
DEPENDENT CHILDREN	-.05	2.33	.05	30.44
WORK TIME	.06	4.25	.04	16.47
	9/791df	R ² = .41	9/7051df	R ² = .49
	<u>1975</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE HELD	.34	37.09	.30	350.22
YEAR OF HIGHEST DEGREE	.28	21.72	.32	271.65
PROFESSIONAL ORIENTATION	.21	14.84	.40	628.75
RESEARCH SUPPORT	.19	13.07	.12	63.82
TYPE OF INSTITUTION	.10	3.54	.06	17.33
YEAR OF BIRTH	.02	0.13	.01	0.09
MARITAL STATUS	-.01	0.08	.04	6.19
DEPENDENT CHILDREN	.02	0.24	.01	0.48
SHARE RESPONSIBILITIES	.002	0.002	.01	0.60
CAREER SECOND		.64	.02	2.51
MOVED FROM JOB	.02	0.15	.02	1.54
	11/253df	R ² = .41	11/2379df	R ² = .53

The 1969 data show differences in the ordering of the variables explaining publication productivity for women and those that explain such variation for men. We are also explaining less of the overall variance for women than for men with the available independent variables. Additionally, marital status and whether or not the respondent has dependent children have negative values for women (although these coefficients are not statistically significant in either case) and positive for men.⁴⁶

For women, Age appears to contribute more to the overall variance than it does for men, although the amount of variance it accounts for is, at best, trivial. Interestingly, however, Year of Highest Degree is less important for women when we include family status variables, suggesting some interaction. This may be explained by the introduction of Age as a variable. Presumably, Age and Year of Degree are tapping similar concepts: years of service in the profession. It has already been posited that Year of Highest Degree is lacking as an indicator of length of service because people move in and out of the labor force for a variety of reasons that cannot be categorized with our data. If, as common notions about women and work suggest, women are more likely to interrupt careers because of childbearing, childrearing and other personal-social reasons, it may be that Age is picking up the lag in the Year of Highest Degree as a surrogate. This may, then, explain the difference between women and men in the ordering and strength of variables predicting publication performance.

46. The marital status variable was coded (1) not married (2) married; Dependent Children was coded (1) no dependent children and (2) have dependent children.

By 1975, Age has no real effect for women as well as men, and the ordering of the variables in explaining the variance in publications is virtually identical to that found in Table 4.12 for the 1975 study population. Thus, whatever interaction effect occurred in 1969 between family status variables and professional variables disappeared in 1975.

Again, we find Professional Orientation is substantially more important in explaining the variation in publications for men than for women. Professional Orientation explains about sixteen percent of the variance for men and only four percent for women. In fact, Professional Orientation (favoring research rather than teaching orientation) appears to be the most important contributor to the variation in publications for men, where the Highest Degree Held remains key for women.

The Effects of Family Variables and Role Conflict on Rank

Professional productivity is but one aspect of assignment to Rank. We have already seen in Chapter Five that most of the variance in assignment to Rank is explained by three variables: Year of Highest Degree, Highest Degree Held and Number of Articles Published. Whether or not marital status and related variables add further explanation to variation in Rank remains to be seen. Table 6.10 introduces these family status and conflict variables to the regression equation in Rank.

TABLE 6.10: RANK REGRESSED ON SEX, HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, NUMBER OF ARTICLES PUBLISHED, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, TYPE OF APPOINTMENT INSTITUTION, YEAR OF BIRTH, MARITAL STATUS, DEPENDENT CHILDREN, WORK TIME, SHARE RESPONSIBILITIES, CAREER SECOND, AND MOVED FROM JOB.

	<u>1969</u>		<u>1975</u>	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
SEX	<u>-.11</u>	<u>178.94</u>	<u>-.08</u>	<u>28.41</u>
HIGHEST DEGREE HELD	.24	704.28	.32	394.46
YEAR OF HIGHEST DEGREE	.26	434.28	.34	346.47
NUMBER OF ARTICLES	.23	477.71	.22	127.82
PROFESSIONAL ORIENTATION	-.01	2.12	-.07	18.69
RESEARCH SUPPORT	.001	0.01	-.02	1.67
TYPE OF INSTITUTION	.04	33.27	.01	0.56
YEAR OF BIRTH	.27	496.53	.17	88.91
MARITAL STATUS	.03	10.35	.01	0.55
DEPENDENT CHILDREN	.02	5.03	-.003	0.05
WORK TIME	.02	7.92	-	-
SHARE RESPONSIBILITIES	-	-	.03	4.45
CAREER SECOND	-	-	.03	7.65
MOVED FROM JOB	-	-	.05	7.12
11/7900df R ² = .56		13/2670df R ² = .55		

The overall impact of Marital Status, Dependent Children, Work Time, Share Responsibilities, Career Second and Moved From Job is negligible in explaining placement in Rank. None of these variables accounts for more than a fraction of one percent of the overall variance (the largest Beta is .05 for Moved From Job).

While the ordering of the variables that explain the variance in Rank has remained constant (compared to Table 5.6), Year of Highest Degree has much smaller coefficients for both years than was initially observed. Year of Birth does add further to our explanation of the overall variation in Rank. In 1975, it has less impact, only explaining three percent of the variance. The fact that Year of Birth has any effect again suggests that it interacts with Year of Highest Degree to tap the concept of length of service in the profession.

One further observation in Table 6.10 is that the coefficient for Sex, while remaining negative, has increased in the 1969 data from our earlier findings in regard to Rank. Thus, including these family associated variables and age, has served to unmask slightly a relationship between Sex and Rank. It must be emphasized, nonetheless, that Sex now accounts for only one percent of the variance in Rank, which is not very much.

When we run regression equations on Rank separately for women and men, our findings are consistent with previous findings.

TABLE 6.11: RANK OF WOMEN AND MEN REGRESSED ON HIGHEST DEGREE HELD, YEAR OF HIGHEST DEGREE, NUMBER OF ARTICLES, PROFESSIONAL ORIENTATION, RESEARCH SUPPORT, TYPE OF APPOINTMENT INSTITUTION, YEAR OF BIRTH, MARITAL STATUS, DEPENDENT CHILDREN, WORK TIME, SHARE RESPONSIBILITIES, CAREER SECOND, AND MOVED FROM JOB.

	1969			
	WOMEN		MEN	
	BETA	F	BETA	F
HIGHEST DEGREE HELD	.34	139.17	.22	540.97
YEAR OF HIGHEST DEGREE	.17	26.32	.29	430.80
NUMBER OF ARTICLES	.20	38.95	.22	382.03
PROFESSIONAL ORIENTATION	-.004	0.03	-.02	3.92
RESEARCH SUPPORT	.05	4.18	.005	0.36
TYPE OF INSTITUTION	.03	1.25	.05	33.33
YEAR OF BIRTH	.27	61.20	.28	423.23
MARITAL STATUS	-.08	8.80	.008	0.85
DEPENDENT CHILDREN	-.13	19.98	-.04	28.17
WORK TIME	.001	0.004	.02	5.57
	10/785df	R ² = .54	10/7050df	R ² = .55
	1975			
	WOMEN		MEN	
	BETA	F	BETA	F
HIGHEST DEGREE HELD	.45	59.71	.28	271.95
YEAR OF HIGHEST DEGREE	.27	19.48	.35	297.14
NUMBER OF ARTICLES	.14	5.11	.23	133.75
PROFESSIONAL ORIENTATION	-.10	3.23	-.07	13.92
RESEARCH SUPPORT	-.03	0.41	-.02	1.17
TYPE OF INSTITUTION	.04	0.50	.02	1.58
YEAR OF BIRTH	.21	12.79	.21	119.37
MARITAL STATUS	-.06	1.32	.03	3.93
DEPENDENT CHILDREN	-.01	0.02	-.01	0.35
SHARE RESPONSIBILITIES	.01	0.05	.03	4.06
CAREER SECOND	.04	0.80	.03	6.02
MOVED FROM JOB	.03	0.37	.03	4.42
	12/252df	R ² = .45	12/2378df	R ² = .54

Highest Degree Held is more important for women than for men in accounting for Rank, and the Year of Highest Degree is more important for men than for women. In general, for both women and men, when we enter age and family status variables into the equation, the coefficient for Year of Highest Degree becomes notably smaller.

While the family status and conflict variables still do not add much of the total explanation of variation in Rank, several interesting findings do emerge in Table 6.11. First, Age has identical impact for both women and men. Age explains about eight percent of the variance in 1969, net of the other variables including Year of Highest Degree, and four percent of the variance in 1975. Thus, whatever impact it has independent of other variables is consistent for men and women in terms of assignment to Rank, and is also smaller in the more recent study.

Marital Status, although adding virtually nothing to our understanding of Rank, net of other variables, is negative for women in both time periods, suggesting that the fraction of a percentage of the variance that might be explained by it works in opposite ways for women and men. Thus, being single may be an advantage for a career woman and a disadvantage for her male colleague. However, it must be emphasized that with the exception of women in 1969, the coefficients for Marital Status are not statistically significant.

Having dependent children may be a liability for both men and women, although its impact is, again, minute, with the exception of the

women in the 1969 survey where the Beta is $-.13$, explaining close to two percent of the variation in Rank.

Activities that respondents report in response to conflict between professional and family roles do not appear, net of the other variables, to explain variation in Rank, the mark of achievement in academia, and this is true for both men and women on university and college faculties.

Summary

The marital patterns of academic women and men are quite different. While close to ninety percent of the men are married, only about one-half of the women are married. Women are also more likely to be divorced or separated than are men. On the surface, faculty women appear to be at higher ranks in larger proportions when they are not married, in contrast to men who fare better in Rank if they are married. Not surprisingly, men are more likely to have dependent children than are women. These findings are slightly less marked in the later period under consideration.

When respondents were asked to indicate whether or not they subordinated all aspects of their lives to work and whether or not commitment to different aspects of their jobs were the source of strain, there was virtually no difference between women and men on these items. Also, the 1975 data reflected fewer people who reported role strain in these terms, regardless of sex, but these differences are generally not substantial. Faculty women are more apt to be

involved in marriages where they share responsibility for housework and children with their spouse than are their male colleagues. An interesting contrast exists in that men are slightly more likely to agree that their career comes second to family obligations. Still, when it comes to actually making firm accommodations in one's career because of familial demands, women are more apt to do so. Thus, a full one-quarter of the women report having resigned from a position to move for family reasons, while only six percent of the faculty men reported this.

None of the variables used to indicate family status and accompanying role conflict individually add anything to the explanation of the variance in Productivity or Rank. However, Year of Birth does contribute some additional explanation of the variation in Rank, and concurrently Year of Highest Degree has a smaller coefficient than it had without Age and family variables included in the regression equations. When we regress Publications separately for women and men, we find that, net of other variables, Age contributes considerably more to the overall variance for women than it does for men. It is proposed that interaction between Age and Year of Degree may be accounting for leaves of absence and other breaks in careers. In general, it should be added that we are able to explain less of the overall variance for women than for men for both Publication Productivity and Academic Rank with the available independent variables.

In sum, we find differences between men and women in family status variables which do not appear to directly account for professional

achievements. It may be, though, that men get more support in family relationships going into these careers and that support affects the highest degree attained, professional orientation and other pertinent predictors of professional advancement. Even so, our data lends evidence to the fact that the gap between men and women in family characteristics has narrowed somewhat with time.

CONCLUSIONS

STUDYING ACADEMIC WOMEN - REAPPRAISEDGeneral Observations of Faculty Women

Studying faculty women proves to be a rather complicated undertaking. Woven into the fabric of women in higher education is a complex set of norms and values that serve to separate men and women even prior to the onset of their careers. These normative expectations may be both implicit and explicit in appearance. So, the early socialization that creates more passive participants in women is not easily described in some patterned and overt way. In contrast, particular cultural pressures, such as those assumed to be reflective of the incompatibility of marital and career roles for women, are more readily detailed and available, in part, for empirical analysis. Even so, it would be simplistic to suggest that a clear picture of such cultural input into women's careers can be quantified in useful measures to our satisfaction. Thus, much of the story of women in professional careers, in general, and in academic positions, in particular, is not available for empirical investigation.

Beyond notions of social and cultural impediments to careers for women, are assertions that discriminatory practices are routinely and systemically present in such institutions as our universities and colleges. These practices are deemed to be both overtly and covertly accomplished. The impact of direct discrimination on faculties is clear-cut: Women and men with the same qualifications are treated differently. Women may be over-looked for hire despite equivalent or

superior qualifications, precisely because they are women. Women may be hired at lower positions than equivalent male candidates, again, because they are women. Women may be passed over for tenure, promotion or salary increments, or they may be eased out of the institution altogether, as result of sex discrimination. These particular actions on the part of institutions of higher education do lend themselves to empirical investigation, although not without some confusion over the appropriate methods of study.

Institutional conditions also exist under which women are discouraged in surreptitious ways from succeeding in academic careers. Women may be dissuaded from getting a higher degree. They may not be availed of research support to the same extent as their male colleagues, and they may be given work loads that consume time necessary to devote to publications. These kinds of deterrents to career mobility are even more difficult to investigate, although they may be just as important an issue of discrimination as not being granted an earned promotion or salary increment. Necessarily, we are not able to do much more than infer the existence of general institutional behavior aimed at thwarting the progress of faculty women when it exists in this form.

What we have, then, in the tale of faculty women is the story of where women are vis a vis men: How are their backgrounds different? How do their interests and activities compare? How do they fare in terms of the rewards of academe? And, what does having a career mean in terms of the larger social network? Where differences exist, we

must attempt to validate the conditions that appear to define such differences.

What do our data tell us about faculty women?

The social origins of faculty women are remarkably similar to those of faculty men. However, women are slightly more likely to report having parents with higher education, and mothers who worked than are men. Men and women with fathers with high status occupations fare better than those with fathers in lower status occupation.

When we consider educational differences between men and women we find some marked sex differentials. Regardless of academic discipline or type of appointment institution, women are less apt to hold a doctorate degree than are men. Moreover, of those people holding doctorate degrees, women take longer to get such degrees than do men. Interestingly, while there are no differences between men and women in rating their graduate education, women did not receive scholarships and assistantships in the same proportions as men. Men and women are evenly distributed in terms of the quality of the graduate institution, although they are not evenly distributed by type of appointment institution. A higher proportion of men are found in universities than are women, even controlling for academic discipline.

Further, women have a greater likelihood of teaching undergraduate students than graduate students, and they generally spend more time in classroom instruction than men. This is true even when we hold rank

constant. Women are less likely to receive research funds and they also express interests in research considerably less often than faculty men. Concurrently, fewer women report publishing professional work than men. Most of the variation in publication is explained by the highest degree held, the year of highest degree, and professional orientation (whether respondent prefers research or teaching).

Differences in Rank, Tenure and Salary - the rewards of Academe - are explained by the highest degree held, year of highest degree held and the number of articles published, leaving sex to account for virtually none of the variance.

The data show that marital patterns are radically different for women and men. Where only fifty percent of the women are married, ninety percent of the men report being married. Nonetheless, this fifty percent represents a significant increase in the proportion of women able to integrate, to some extent, marriage and career. Faculty women are also less apt to have children than faculty men. These women report that they have resigned from a position or turned down a professional opportunity because of family obligations in higher proportions than men do. Even so, marital and family variables, net of those other variables already mentioned - Highest Degree, Year of Highest Degree and Number of Publications - appear to contribute little in explaining variation in academic rewards.

Our data cannot tell us how men and women are hired into academic

positions and how they are severed from them. Institutions may well be guilty of discrimination at these levels for which we have no appropriate measures. The data additionally does not account for the changing proportions of women in the available labor pool. To a limited extent, Year of Highest Degree taps this critical item, but it does not provide a precise surrogate and, thus, we have no true measure of the impact of introducing women into the available pool in growing and differing proportions.

Sex Discrimination Reconsidered

In the Introduction we brought attention to some of the studies that have been prominent in sociological literature on academic women, particularly in relation to sex discrimination. These studies shared a method of describing institutional sex discrimination that used simple distribution of academic women and men along one or two variables at a time. Women were found to be at lower ranks than men, for example, even controlling for highest degree held. This finding is actually consistent both with the existence and with the absence of institutional discrimination. If women are indeed victims of institutional procedures that fail to assign rewards equitably, we expect there to be large differentials in rank by sex, with a higher proportion of women found at the lower ranks. If, on the other hand, women and men of equal qualifications are entering academia in changing proportions, with women steadily increasing their participation, we also expect there to be larger proportions of women at the lower ranks, even in the absence of discrimination.

Thus, we must attempt to establish what the characteristics are that explain the distribution of rewards, and whether Sex is among them, in an effort to determine if institutions of higher education are treating women and men unequally. We must further attempt to control for the changing distribution of women entering academic careers. While we cannot accomplish this in any precise way, given already noted limitations of our data, some surrogate variables do allow for approximate controls. We are able to approach duplication of the distribution of men and women as they have entered academic careers by using Year of Highest Degree as an independent variable.

To use only Highest Degree Held or the Number of Articles Published or Year of Highest Degree in determining unequal assignment to Rank is necessarily flawed. If women entered the academic market in the same proportions each year and if only one or two known variables explained the variation in Rank, simple crosstabulations by Sex would be both appropriate and sufficient in examining institutional treatment of faculty women and men. Unfortunately, neither of these conditions are true, and consequently the empirical studies that have dominated the area of sex discrimination in higher education have been seriously inadequate. The analysis presented in this monograph has illustrated this inadequacy most clearly. When we look at crosstabulations of Rank, Tenure and Salary by Highest Degree and Sex, we find large sex differentials. In this way, we have replicated the findings of these earlier studies. However, when we extend these crosstabulations to use more variables in a regression equation, including Year of Highest Degree, we are able to explain a great deal of the variance in Rank,

Tenure and Salary. Most important, Sex does not appear to be of consequence in assigning these academic rewards, suggesting that colleges and universities are not using different standards in promoting women and men, and this is true for both the 1969 and the 1975 periods.

While the findings are important, they are not presented without reservations. First, the variables that are important in explaining the variance in Rank, Tenure and Salary are not ordered the same way for men and women. This suggests that the career patterns of women and men differ slightly. Exactly what this means is speculative. Perhaps, the fact that women are newer to the academic marketplace has some impact on how they progress. Second, while we have done little more than suggest the impact of differential socialization on career performance, we are emphatic in calling attention to it in understanding more fully the situation of academic women. Such achievements as degree held and publications are clearly imbedded in the overall position of women in the larger culture. Early childhood socialization and later socialization into a profession may play a significant role in career patterns that follow much later.

Nonetheless, we are convinced that issues involved in studying unequal treatment in academia need to center around the way the problem is conceived and researched. For the majority of researchers apriori notions of how our colleges and universities operate in regard to the distribution of rewards may encourage investigations that stop short of reasonable approaches to what are empirical questions. For, while the

larger social problem of bringing women into professional careers in appropriate proportions and establishing cultural values that encourage rather than discourage their full participation are often inaccessible for study, empirical tests of unequal treatment are difficult, but not impossible, to accomplish.

APPENDICES

APPENDIX 1

1969 FACULTY QUESTIONNAIRE

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Sincerely,

Clark Kerr
Chairman
Carnegie Commission
on Higher Education

[illegible]

7. About how many students, at all levels, are enrolled in your courses this term?

- None ☐ Under 25 ☐ 25-49 ☐ 50-99 ☐ 100-249 ☐ 250-399 ☐ 400 or more ☐

8. Do you discourage undergraduates from seeing you outside your regular office hours?

- Yes, almost always ☐ Yes, but with many exceptions ☐ No ☐

9. Please indicate your agreement or disagreement with each of the following statements.

1. Strongly Agree ☐ 2. Agree With Reservations ☐ 3. Disagree With Reservations ☐ 4. Strongly Disagree ☐

Most undergraduates are mature enough to be given more responsibility for their own education. ☐
Graduate students in my subject do best if their undergraduate major was in the same general field. ☐
Most graduate students in my department are basically satisfied with the education they are getting. ☐
Most Ph.D. holders in my field get their degrees without showing much real scholarly ability. ☐
My department has taken steps to increase graduate student participation in its decisions. ☐
The graduate program in my department favors the bright, imaginative student. ☐
Many of the best graduate students can no longer find meaning in science and scholarship. ☐
Graduate education in my subject is doing a good job of training students. ☐
Some of the best graduate students drop out because they do not want to "play the game" or "beat the system". ☐
The female graduate students in my department are not as dedicated as the males. ☐
The typical undergraduate curriculum has suffered from the specialization of faculty members. ☐
This institution should be concerned about students' personal values as it is with their intellectual development. ☐
If no graduate program in your department, leave blank. ☐

MARKING INSTRUCTIONS

This questionnaire will be read by an electronic scanning device. Certain marking requirements are essential to this process. Your careful observance of these few simple rules will be most appreciated. Use soft black lead pencil only. (No. 2's or softer) Make heavy black marks that completely fill the circle. Erase completely any answers you wish to change. Avoid making any stray marks in this booklet.

1. What is your present rank?

- Instructor ☐ Assistant Professor ☐ Associate Professor ☐ Professor ☐ Lecturer ☐ No rank designated ☐ Other ☐

2. What kind of appointment do you have here?

- Regular with tenure ☐ Regular without tenure ☐ Acting ☐ Visiting ☐

3. During the spring term, how many hours per week are you spending in formal instruction in class? (Give actual, not credit hours)

- None ☐ 7-8 ☐ 9-10 ☐ 11-12 ☐ 13-16 ☐ 17-20 ☐ 21 or more ☐

4. Are your teaching responsibilities this academic year

- Entirely undergraduate ☐ Entirely graduate ☐ Some undergraduate, some graduate ☐ Not teaching this year ☐

5. How much do you control the content of your undergraduate courses?

- Almost completely ☐ Substantially ☐ Somewhat ☐ Hardly at all ☐

6. In about how many of the undergraduate courses you teach do you use the following?

- Term papers ☐ Frequent quizzes ☐ Graduate teaching assistants ☐ Closed-circuit television ☐ Computer or machine-aided instruction ☐ Quarter, semester, trimester, etc. ☐

9. Continued.

Most undergraduates here are basically satisfied with the education they are getting. ☐

A man can be an effective teacher without personally involving himself with his students. ☐

Most faculty here are strongly interested in the academic problems of undergraduates. ☐

Most American colleges reward conformity and crush student creativity. ☐

This institution should be actively engaged in solving social problems. ☐

Most minority group undergraduates should be admitted here even if it means relaxing normal academic standards of admission. ☐

Any institution with a substantial number of black students should offer a program of Black Studies if they wish it. ☐

Any special academic program for black students should be administered and controlled by black people. ☐

Undergraduate education in America would be improved if: ☐

a) All courses were elective ☐

b) Grades were abolished ☐

c) Course work were more relevant to contemporary life and problems ☐

d) More attention were paid to the emotional growth of students ☐

e) Students were required to spend a year in community service at home or abroad ☐

f) Colleges and universities were governed completely by their faculty and students ☐

g) There were less emphasis on specialized training and more on broad liberal education ☐

10. For each of these areas, should present academic standards in your institution (a, b) and your graduate department (c, d) be--

1. Much higher ☐ 2. Somewhat higher ☐ 3. Left as they are ☐ 4. Somewhat lower ☐ 5. Much lower ☐ 6. No graduate department ☐

a) Undergraduate admissions ☐ b) Bachelor's degrees ☐ c) Graduate admissions ☐ d) Advanced degrees ☐

11. Do you feel that the administration of your department is:

- Very autocratic ☐ Somewhat autocratic ☐ Somewhat democratic ☐ Very democratic ☐

Here and hereafter, if you have a joint appointment, answer for your main department. If your institution has no departments, answer for the equivalent administrative unit (e.g., division for junior colleges).

12. Is the chairman of your department appointed for a fixed term (3 years or less) or for a long or indefinite period?

- Long/Indefinite ☐ Short term ☐

13. Roughly how many regular members (not the rank of instructor or above) does your department have this year?

- 3 or fewer ☐ 4-5 ☐ 6-7 ☐ 8-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ 31-40 ☐ 41 or more ☐

14. How much has your department changed in size in the last 3 years? Is it:

- Much larger ☐ Somewhat larger ☐ About the same ☐ Smaller ☐

15a. Do you think your department is now

- Too big ☐ About right ☐ Too small ☐

b. Do you think your institution is now

- Too big ☐ About right ☐ Too small ☐

16. How active are you (a) in your own department's affairs? (b) in the faculty government of your institution (committee memberships, etc.)?

- (Mark one in each column)
- | Institution | Department |
|--|--|
| Much more than average ☐ | Much more than average ☐ |
| Somewhat more than average ☐ | Somewhat more than average ☐ |
| About average ☐ | About average ☐ |
| Somewhat less than average ☐ | Somewhat less than average ☐ |
| Much less than average ☐ | Much less than average ☐ |

12. How much opportunity do you feel you have to influence the policies (a) of your department? (b) of your institution?

(Mark one in each column)

	Department	Institution
A great deal.....	☐	☐
Quite a bit.....	☐	☐
Some.....	☐	☐
None.....	☐	☐

18. How many of the people you see socially are:

(a) members of the faculty here?

Almost all..... ☐ Some..... ☐
Most..... ☐ Almost none..... ☐
About half..... ☐

(b) members of your department?

Almost all..... ☐ Some..... ☐
Most..... ☐ Almost none..... ☐
About half..... ☐

19. What do you think of the emergence of radical student activism in recent years?

Unreservedly approve..... ☐
Approve with reservations..... ☐
Disapprove with reservations..... ☐
Unreservedly disapprove..... ☐

20. With respect to the student revolt at Columbia last year, were you in sympathy with

the students' aims and their methods..... ☐
their aims but not their methods..... ☐
neither their aims nor their methods..... ☐
I don't know enough about it to judge..... ☐

21. Have any of your children been active in civil rights, anti-Vietnam, or other demonstrations?

Yes..... ☐
None active..... ☐
None of that age..... ☐

22. Has your campus experienced any student protests or demonstrations during the current academic year?

Yes..... ☐ No..... ☐ (If no, skip to No. 23)

23. How would you characterize your attitude toward the most recent demonstration?

Approved of the demonstrators' aims and methods..... ☐
Approved of their aims but not their methods..... ☐
Disapproved of their aims..... ☐
Uncertain or mixed feelings..... ☐
Indifferent..... ☐

24. What was your role in this demonstration? (Mark all that apply)

Helped to plan, organize, or lead the protest..... ☐
Joined in active protest with the demonstrators..... ☐
Openly supported the goals of the protestors..... ☐
Openly opposed the goals of the protestors..... ☐
Tried to mediate in the protest..... ☐
Was not involved actively in any way..... ☐

25. What effect have student demonstrations (on your campus or elsewhere) had on each of the following? (Mark one in each row)

	1. Very favorable	2. Fairly favorable	3. Fairly harmful	4. Very harmful	5. No effect
Your research.....	☐	☐	☐	☐	☐
Your teaching.....	☐	☐	☐	☐	☐
Your relations with departmental colleagues.....	☐	☐	☐	☐	☐
Your relations with other colleagues.....	☐	☐	☐	☐	☐
Your relations with students.....	☐	☐	☐	☐	☐
Your view of your campus administration.....	☐	☐	☐	☐	☐
Your institution's relations with the local community.....	☐	☐	☐	☐	☐

26a. What role do you believe undergraduates should play in decisions on the following?

1. Control
2. Voting power on committees
3. Formal consultation
4. Informal consultation
5. Little or no role

Faculty appointment and promotion..... ☐

Undergraduate admissions policy..... ☐

Provision and content of courses..... ☐

Student discipline..... ☐

Bachelor's degree requirements..... ☐

26b. What role do you believe graduate students should play in decisions on the following?

Faculty appointment and promotion..... ☐

Departmental graduate admissions policy..... ☐

Provision and content of graduate courses..... ☐

Student discipline..... ☐

Advanced degree requirements..... ☐

27. Please indicate your agreement or disagreement with each of the following statements.

1. Strongly agree
2. Agree with reservations
3. Disagree with reservations
4. Strongly disagree

The normal academic requirements should be relaxed in appointing members of minority groups to the faculty here..... ☐

Opportunities for higher education should be available to all high school graduates who want it..... ☐

Most American colleges and universities are racist whether they mean to be or not..... ☐

Public colleges and universities must be more responsive to public demands than are private institutions..... ☐

Junior faculty members have too little say in the running of my department..... ☐

A small group of senior professors has disproportionate power in decision-making in this institution..... ☐

This institution would be better off with fewer administrators..... ☐

There should be faculty representation on the governing board of this institution..... ☐

Trustees' only responsibilities should be to raise money and gain community support..... ☐

The administration here has taken a clear stand in support of academic freedom..... ☐

Faculty unions have a divisive effect on academic life..... ☐

Teaching assistants' unions have a divisive effect on academic life..... ☐

Faculty members should be more militant in defending their interests..... ☐

Collective bargaining by faculty members has no place in a college or university..... ☐

Most rules governing student behavior here are sensible..... ☐

Campus rules here are generally administered in a reasonable way..... ☐

Undergraduates known to use marijuana regularly should be suspended or dismissed..... ☐

Political activities by students have no place on a college campus..... ☐

27 Continued.

Student demonstrations have no place on a college campus..... ☐

Students who disrupt the functioning of a college should be expelled or suspended..... ☐

Most campus demonstrations are created by far left groups trying to cause trouble..... ☐

College officials have the right to regulate student behavior off campus..... ☐

Respect for the academic profession has declined over the past 20 years..... ☐

A student's grades should not be revealed to anyone off campus without his consent..... ☐

Faculty members should be free on campus to exercise violent resistance to unjust authority..... ☐

Faculty members should be free to present in class any idea that they consider relevant..... ☐

Campus disruptions by militant students are a threat to academic freedom..... ☐

28. Have you known of a case here within the past two years in which a man's politics affected his chances for retention or promotion?

I know definitely of a case..... ☐
I've heard of a case..... ☐
I don't know of a case..... ☐
I'm sure it hasn't happened..... ☐

29. In recent years, have you ever felt intimidated in your classes by students with strong political or racial views?

Yes..... ☐ No..... ☐

30. In what year did you obtain your highest degree?

1928 or before..... ☐ 1949-1953..... ☐
1929-1933..... ☐ 1954-1956..... ☐
1934-1938..... ☐ 1957-1959..... ☐
1939-1943..... ☐ 1960-1964..... ☐
1944-1948..... ☐ 1965 or later..... ☐

31. How many years elapsed between your obtaining your bachelor's degree and your highest degree?

No degree higher than bachelor's..... ☐
1 or still working for a higher degree..... ☐
1-2 years..... ☐
3-4 years..... ☐
5-7 years..... ☐
8-10 years..... ☐
11-15 years..... ☐
Over 15 years..... ☐

32. On the following list, please mark

- (If any) the degree(s) for which you are currently working
- All degrees that you have earned
- All degrees you have earned at this institution

Working Toward
Now hold
Earned here

Less than Bachelor's (A.A., etc.)
Undergraduate Bachelor's
First professional law degree
First professional medical degree (e.g., M.D., D.D.S.)
Other first professional beyond undergraduate bachelor's
Master's (except first professional)
Doctor of Arts or equivalent for doctorate degree without dissertation
Ph.D.
Ed.D.
Other doctorate (except first professional)
None
None
None

33. From the following list, mark one subject in each column; mark the most appropriate fine categories, if applicable; where your precise field does not appear, mark the most similar category.

- Undergraduate major
- Highest postgraduate degree
- Present principal teaching field
- Present primary field of research, scholarship, creativity
- Department of teaching appointment

NONE
Agriculture and/or Forestry
Architecture and/or Design
Biological Sciences (General)
Biology
Bacteriology, Molecular biology, Virology, Microbiology
Biochemistry
General Botany
Physiology, Anatomy
General Zoology
Other Biological Sciences
Business, Commerce and Management
Education
Elementary and/or Secondary
Foundations
Educational Psychology and Counseling
Educational Administration
Other Education fields

34. On the following list of large American universities, mark one in each column; if the names of your institutions do not appear, mark appropriate "other" categories.

- Bachelor's degree
- Highest degree
- First regular teaching job

NONE or not appropriate
Boston University
Brown University, R.I.
California Institute of Technology
California, University of, at Berkeley
California, University of, at Los Angeles
Carnegie Institute of Technology, Pittsburgh
Catholic University of America, D.C.
Chicago, University of
Colorado, University of
Columbia University Teachers' College, N.Y.
Columbia University, N.Y.
Cornell University, N.Y.
Duke University, N.C.
Florida, University of
Fordham University, N.Y.
Harvard University, Mass.
Illinois, University of
Indiana University at Bloomington
Iowa State University
Iowa, University of
Johns Hopkins University
Kansas, University of
Louisiana State University
Maryland, University of
Massachusetts Institute of Technology
Michigan State University
Michigan, University of
Minnesota, University of
Missouri, University of, at Columbia
Nebraska, University of
New York University
North Carolina, University of
Northwestern University, Ill.
Notre Dame University, Ind.
Ohio State University
Oklahoma, University of
Oregon State University
Oregon, University of
Pennsylvania State University
Pittsburgh, University of
Princeton University, N.J.
Purdue University
Rochester, University of
Rutgers University, N.J.
Southern California, University of
Stanford University, Calif.

Mark main department, if you have a joint appointment.

34 Continued

Syracuse University, N.Y.
Texas, University of
Utah, University of
Virginia, University of
Washington University, Mo.
Washington, University of, Wash.
Western Reserve University, Ohio
Wisconsin, University of
Yale University, Conn.
Other private Ph.D.-granting university
Other state Ph.D.-granting university
Other private college (no Ph.D. program)
Other public college (no Ph.D. program)
A foreign institution
A junior or community college

35. How long have you been employed (beyond the level of teaching or research assistant):

e. in colleges or universities?
1 year or less
2-3 years
4-6 years
7-9 years
10-14 years
15-19 years
20-29 years
30 years or more

b. at this institution?

1 year or less
2-3 years
4-6 years
7-9 years
10-14 years
15-19 years
20-29 years
30 years or more

36. At how many different colleges or universities have you been employed full-time (beyond the level of teaching or research assistant)?

None
One
Two
Three
Four
Five
Six
Seven or more

37. Comparing yourself with other academic men of your age and qualifications, how successful do you consider yourself in your career?

Very successful
Fairly successful
Fairly unsuccessful
Very unsuccessful

38. In general, how do you feel about this institution?

It is a very good place for me
It is fairly good for me
It is not the place for me

56. Are you a member of any of the following organizations? (Mark all that apply)

- American Association of University Professors. ☐
- American Federation of Teachers. ☐
- A National Education Association affiliate. ☐
- A local or state association or union of college teachers. ☐
- A state, county or city employees' association or other association not confined to college teachers. ☐
- An association limited to teachers at your institution (other than the Academic Senate). ☐

57. Do you feel that there are circumstances in which a strike would be a legitimate means of collective action:

- a. for faculty members
- Definitely yes. ☐
- Probably yes. ☐
- Probably not. ☐
- Definitely not. ☐
- b. for teaching assistants
- Definitely yes. ☐
- Probably yes. ☐
- Probably not. ☐
- Definitely not. ☐

58. Please indicate your agreement or disagreement with each of the following statements.

1. Strongly agree
2. Agree with reservations
3. Disagree with reservations
4. Strongly disagree
- 1 2 3 4

- Where de facto segregation exists, black people should be assured control over their own schools. ☐
- Racial integration of the public elementary schools should be achieved even if it requires busing. ☐
- Meaningful social change cannot be achieved through traditional American politics. ☐
- With a few exceptions, the Chicago police acted reasonably in curbing the demonstrations at the Democratic National Convention. ☐
- Hippies represent an important criticism of American culture. ☐
- Marijuana should be legalized. ☐

58 Continued

- Some form of Communist regime is probably necessary for progress in underdeveloped countries. ☐
- In the USA today there can be no justification for using violence to achieve political goals. ☐
- The main cause of Negro riots in the cities is white racism. ☐

59. Which of these positions on Vietnam is closest to your own?

- The U.S. should withdraw from Vietnam immediately. ☐
- The U.S. should reduce its involvement, and encourage the emergence of a coalition government in South Vietnam. ☐
- The U.S. should try to reduce its involvement, while being sure to prevent a Communist takeover in the South. ☐
- The U.S. should commit whatever forces are necessary to defeat the Communists. ☐

60. How active were you in last year's political campaigns:

- a. before the conventions?
- Very active. ☐
- Fairly active. ☐
- Not very active. ☐
- Not active at all. ☐
- b. after the conventions?
- Very active. ☐
- Fairly active. ☐
- Not very active. ☐
- Not active at all. ☐

61.

1. Left
2. Liberal
3. Middle-of-the-road
4. Moderately conservative
5. Strongly conservative
- 1 2 3 4 5

- a. How would you characterize yourself politically at the present time? ☐
- b. What were your politics as a college senior? ☐
- c. What were your father's politics while you were growing up? ☐
- d. How would you describe the prevailing political sentiments of undergraduates here? ☐

62. Whom would you have favored:

- a. At the Republican convention:
- Nixon. ☐ Rockefeller. ☐

- b. At the Democratic convention:
- Humphrey. ☐ McCarthy. ☐

63. Whom did you vote for in November?

- Humphrey. ☐ Another candidate. ☐
- Nixon. ☐ Did not vote. ☐
- Wallace. ☐ No answer. ☐

64. Whom did you vote for in 1964?

- Johnson. ☐ Another candidate. ☐
- Goldwater. ☐ Did not vote. ☐
- No answer. ☐

65. a. Are you a United States citizen? ☐ Yes ☐ No
- b. IF YES: Have you ever been a citizen of another country? ☐ Yes ☐ No

66. Have you ever been a member of a student political club or group? ☐ Yes ☐ No

67. Have you ever attended a junior or community college as a student? ☐ Yes ☐ No

68. During your career as a graduate student:
- Were you ever a teaching assistant? ☐ Yes ☐ No
- Were you ever a research assistant? ☐ Yes ☐ No
- Were you ever awarded a fellowship or scholarship worth \$1,000 per year or more? ☐ Yes ☐ No
- Was there a faculty member who acted as your "sponsor" when you were looking for your first job? ☐ Yes ☐ No

69. Do you have a working association with any research institute or center within your institution? ☐ Yes ☐ No

70. In your department, are decisions other than personnel matters normally made by the vote of the whole department, including junior members? ☐ Yes ☐ No

71. a. Are you now chairman or head of your department? ☐ Yes ☐ No
- b. IF NO: Have you ever been chairman or head of a university or college department? ☐ Yes ☐ No

72. a. Do you hold a full-time administrative position outside your own department? ☐ Yes ☐ No
- b. IF NO: Do you hold a part-time administrative position outside your own department? ☐ Yes ☐ No

73. a. Are you now negotiating for, or have you already found or accepted, another position for the fall of 1969? ☐ Yes ☐ No
- b. IF NO: Are you looking for another position? ☐ Yes ☐ No
- c. IF NO: Would you seriously consider a reasonable offer of another position? ☐ Yes ☐ No
74. Would you describe yourself as conservative in your religious beliefs? ☐ Yes ☐ No

75. How would you rate each of the following?

1. Excellent
2. Good
3. Fair
4. Poor
- 1 2 3 4

- Your own salary. ☐
- Your own graduate education. ☐
- The academic reputation of your department outside your institution. ☐

At your institution:

- The intellectual environment. ☐
- Faculty salary levels. ☐
- Teaching load. ☐
- Ratio of teaching faculty to students. ☐
- The administration. ☐
- The effectiveness of your campus senate or faculty council. ☐
- General research resources (e.g., library, labs, computers, space, etc.). ☐
- Availability of research funds from all sources. ☐
- Cultural resources. ☐

In your department:

- The intellectual environment. ☐
- Personal relations among faculty. ☐
- Faculty/student relations. ☐

76. How often, on average, do you

1. Once a week or more
2. Two or three times a month
3. About once a month
4. A few times a year
5. Once a year or less
- 1 2 3 4 5

- See undergraduates informally (for meals, parties, informal gatherings)? ☐
- Spend 4 hours uninterruptedly on professional reading, writing or research? ☐

Attend:

1. A religious service. ☐
2. A concert. ☐
3. An "art" film. ☐
4. A play. ☐
5. An art exhibition. ☐
6. An athletic event. ☐

APPENDIX 2

1975 FACULTY QUESTIONNAIRE

1975 FACULTY QUESTIONNAIRE

Carnegie Council on Policy Studies in Higher Education

Dear Colleague:

Six years ago the Carnegie Commission on Higher Education sponsored three broad surveys of undergraduate and graduate students and faculty members in a large representative sample of American colleges and universities. These surveys provided a solid basis of fact about student and faculty opinions, and about actual conditions in our twenty-eight hundred colleges and universities. The information gathered was of great value to the Commission and its staff in developing policy recommendations for higher education--many of which have since been adopted--and was also made available without restraint to many other scholars and policy-making groups.

Since then much has changed. Reduced budgets and a slower growth rate, or even a decline in enrollments, have replaced the rapid growth of the 1960's. A variety of other new problems are posed by issues such as affirmative action; the changing role of women; the changing job market for graduates; new ideas in undergraduate education; new forms of academic governance; and changes in the forms and levels of student support.

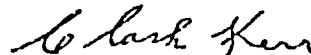
The Carnegie Council on Policy Studies in Higher Education (a new, privately supported agency concerned with crucial problem areas in American higher education) is sponsoring another set of national surveys of faculty and students, in part to see what changes have occurred over the past six years, in part to examine problems and issues that have emerged since the last surveys were done. As before, the information will be used by the Council to inform its own reports, and will also be made available to the whole academic community for scholarly and policy-making uses. The surveys, like those of 1969, will be conducted at the University of California, Berkeley, under the direction of Professor Martin Trow.

We know that you have much to do, and that other surveys may have made similar demands on your time. But the present survey, together with its predecessor, will provide a unique source of information: it is the first to ask similar questions over a period of years of students and faculty in the same or similar institutions. Its accuracy and the worth of its findings are dependent on your willingness to answer our questions. We believe the importance of the study will justify the time you give it.

Finally, we assure you that your answers will be held in strictest confidence. We are interested only in statistical relationships and will under no circumstances report responses on an individual or institutional basis. The numbers punched on your form are used by National Computer Systems for internal quality control, and by ourselves for our sampling procedures. When the questionnaires are returned, all names and addresses will be destroyed, and no link will exist between you and your responses. It may be some further reassurance that there was not a single breach of confidentiality in the course of the earlier national surveys.

We hope you will find the questionnaire interesting to answer and that you will complete and return it to us while you have it at hand.

Sincerely,



Clark Kerr, Chairman

P.S.

One other matter. Clearly, in a broad scale survey it is impossible to frame questions all of which are equally relevant to faculty members in different fields and institutions. You may find some that seem inappropriate to your situation--for instance, questions relating to graduate education may be less relevant to teachers in Liberal Arts and community colleges. We urge you to answer all the questions as well as you can; in our analysis we will be able to take into account the special circumstances that affect replies to some questions.

USE NUMBER 2 (OR SOFTER) LEAD PENCIL

1. What is your present rank?

- ☐ Instructor
☐ Assistant Professor
☐ Associate Professor
☐ Professor
☐ Lecturer
☐ No ranks designated
☐ Other

2. Are you now chairperson or head of your department?

- ☐ Yes ☐ No

If NO: Have you ever been chairperson or head of a university or college department?

- ☐ Yes ☐ No

* Here and hereafter, if your institution has no departments, answer for the equivalent administrative unit (e.g., division or school); if you have a joint appointment, answer for your main department.

3. Do you hold an administrative position outside your own department?

- ☐ Yes, full-time
☐ Yes, part-time
☐ No

4. What kind of appointment do you have here?

- ☐ Regular with tenure
☐ Regular without tenure
☐ Acting
☐ Visiting

5. If you have tenure, please skip to question 6.

Is your appointment (Mark one)

- ☐ Untenured, but on tenure-track
☐ Covered by a collective agreement which provides job security
☐ Neither of these

6. Are your teaching responsibilities this academic year

- ☐ Entirely undergraduate
☐ Some undergraduate, some graduate
☐ Entirely graduate
☐ Not teaching this year

7. About how many students at each level are enrolled in your courses this term? (Mark one in each row)

- | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| None | Under 10 | 10 - 25 | 26 - 49 | 50 - 99 | 100 - 249 | 250 - 399 | 400 or more |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
- ☐ Introductory undergraduate
☐ Advanced undergraduate
☐ Graduate and professional

8. During the Spring term*, how many hours per week on the average are you spending in each of the following activities? (Mark one in each row)

Hours per week												
None	1-2	3-4	5-6	7-8	9-10	11-12	13-16	17-20	21 or more			
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
										Formal classroom		
										instructions in under-		
										graduate courses (give		
										actual, not credit		
										hours)		
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
										Formal classroom in-		
										struction in graduate or		
										professional courses		
										(give actual, not credit		
										hours)		
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
										Scheduled office hours		

*Quarter, semester, trimester, etc.

9. Please indicate the extent of your agreement or disagreement with each of the following statements. (Mark one circle for each item)

- | | |
|--|-------------------------------|
| | 1. Strongly agree |
| | 2. Agree with reservations |
| | 3. Disagree with reservations |
| | 4. Strongly disagree |
- ☐ ☐ ☐ ☐ Faculty promotions should be based in part on formal student evaluations of their teachers.
- ☐ ☐ ☐ ☐ Junior faculty members have too little say in the running of my department.
- The increased participation by students in academic governance
- ☐ ☐ ☐ ☐ a) has greatly increased the time that faculty members spend on academic committees.
- ☐ ☐ ☐ ☐ b) has introduced inappropriate political criteria into academic decision-making.
- ☐ ☐ ☐ ☐ A small group of senior professors has disproportionate power in decision-making in this institution.
- The faculty senate of a college or university should be able to take political stands
- ☐ ☐ ☐ ☐ a) on matters directly related to the institution.
- ☐ ☐ ☐ ☐ b) on political issues external to the institution.
- ☐ ☐ ☐ ☐ Graduate fellowships and scholarships should be awarded strictly on the basis of ability rather than need.

9. Continued

-
1. Strongly agree
 2. Agree with reservations
 3. Disagree with reservations
 4. Strongly disagree

- 1 1 1 1 On the whole, financial aid to students should take the form of federally guaranteed low interest loans, rather than direct grants or stipends
- ① ② ③ ④ a) for graduate students.
- ① ② ③ ④ b) for undergraduates.
- ① ② ③ ④ Teaching effectiveness, not publications, should be the primary criterion for promotion of faculty.
- ① ② ③ ④ Student political demonstrations have no place on a college campus.
- ① ② ③ ④ Students who disrupt the functions of a college should be expelled or suspended.
- ① ② ③ ④ The only basis for salary differentiation among the faculty in the same rank at a given institution should be age or seniority.
- ① ② ③ ④ Faculty members should be free to present in class any idea that they consider relevant, however much I may disagree with their views.
- ① ② ③ ④ The faculty in my department have fundamental differences about the nature of the discipline.
- ① ② ③ ④ Students in my department are very competitive.
- ① ② ③ ④ Professors at state colleges in my state ought to get the same pay as professors of equal seniority at our leading public university.
- ① ② ③ ④ Undergraduates known to use marijuana regularly should be suspended or dismissed.
- ① ② ③ ④ Students should have the right to inspect all confidential recommendations concerning them.
- ① ② ③ ④ The abolition of faculty tenure would on the whole improve the quality of American higher education.
- ① ② ③ ④ The administration here strongly supports academic freedom.
- ① ② ③ ④ Collective bargaining by faculty members has no place in a college or university.
- ① ② ③ ④ Collective bargaining by faculty is likely to bring higher salaries and improved benefits.
- ① ② ③ ④ Faculty members should be more militant in defending their interests.
- ① ② ③ ④ There are circumstances in which a strike would be a legitimate means of collective action by faculty members.
- ① ② ③ ④ Collective bargaining by faculty will tend to reduce student influence in academic decisions.

9. Continued

-
1. Strongly agree
 2. Agree with reservations
 3. Disagree with reservations
 4. Strongly disagree

- ① ② ③ ④ The normal academic requirements should be relaxed in appointing members of minority groups to the faculty here.
- ① ② ③ ④ By and large, women are more emotional than men.
- ① ② ③ ④ By and large, women are less ambitious than men.
- ① ② ③ ④ More minority group undergraduates should be admitted here even if it means relaxing normal academic standards of admission.
- ① ② ③ ④ Issues raised by affirmative action are causing serious strains among the faculty in my department.
- ① ② ③ ④ Affirmative action is unfair to white males.
- ① ② ③ ④ Any special academic program for black students should be administered and controlled by black people.
- ① ② ③ ④ On the whole, women have not been discriminated against in academic life.
- ① ② ③ ④ Most American colleges and universities are racist whether they mean to be or not.
- ① ② ③ ④ Affirmative action "labels" members of minority groups in such a way that they can never be judged on merit alone.

Compared to men, women graduate students are

- ① ② ③ ④ a) As intellectually competent
- ① ② ③ ④ b) As likely to finish their degrees
- ① ② ③ ④ c) As likely to make important contributions to their fields
- ① ② ③ ④ d) As imaginative
- ① ② ③ ④ Any institution with a substantial number of black students should offer a program in Black Studies if they wish it.

10. If affirmative action procedures affect my chances for future appointments and promotions, at all, they will probably (Mark one)
- ☐ Improve my chances a great deal
- ☐ Improve my chances a little
- ☐ Hurt my chances a little
- ☐ Hurt my chances a great deal
- ☐ Make no difference

11. Do your interests lie primarily in teaching or in research?

- ☐ Very heavily in research
☐ In both, but leaning toward research
☐ In both, but leaning toward teaching
☐ Very heavily in teaching

12. How many articles have you published in academic or professional journals?

- ☐ None ☐ 5-10
☐ 1-2 ☐ 11-20
☐ 3-4 ☐ More than 20

13. How many books or monographs have you published or edited, alone or in collaboration?

- ☐ None ☐ 3-4
☐ 1-2 ☐ 5 or more

14. How many of your professional writings have been published or accepted for publication in the last two years?

- ☐ None ☐ 3-4 ☐ More than 10
☐ 1-2 ☐ 5-10

15. In a normal week, what proportion of your work time is devoted to the following activities? (Mark one in each row)

- | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
| None | 1-10% | 11-20% | 21-40% | 41-60% | 61-80% | 81-100% | |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | A. Administration (departmental or institutional including committee work) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | B. Consulting (with or without pay) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | C. Outside professional practice |

16. In about how many of the undergraduate courses that you teach do you use the following: (Mark one in each row)

- | | | | |
|-----------------------|-----------------------|-----------------------|---------------------------------------|
| Most | Some | None | |
| ☐ | ☐ | ☐ | Graduate teaching assistants |
| ☐ | ☐ | ☐ | Pass-fail grading |
| ☐ | ☐ | ☐ | Closed circuit television |
| ☐ | ☐ | ☐ | Computer or machine aided instruction |
| ☐ | ☐ | ☐ | Self-paced or programmed instruction |
| ☐ | ☐ | ☐ | Pre-recorded lectures on TV cassettes |

17. Are you currently engaged in any scholarly or research work which you expect to lead to publication?

- ☐ Yes
☐ No (If no, skip to No. 21)

18. Do you have a working association with any research institute or center within your institution?

- ☐ Yes ☐ No

19. In the past 12 months, did you (or your project) receive research support from: (Mark each row)

Yes No

- ☐ ☐ Institutional or departmental funds
☐ ☐ Federal agencies
☐ ☐ State or local government agencies
☐ ☐ Private foundations
☐ ☐ Private industry
☐ ☐ Other

20. Are any of the following working with you on any research project? (Mark each row)

Yes No

- ☐ ☐ Graduate research assistants
☐ ☐ Post-doctoral fellows or trainees
☐ ☐ Full-time professional level research personnel

21. During the past two years, have you served as a paid or unpaid consultant to: (Mark one in each row)

1. Yes, paid
 2. Yes, unpaid
 3. No

- ☐ ☐ ☐ State or local government agencies or schools
☐ ☐ ☐ Private business or industry
☐ ☐ ☐ A non-profit foundation
☐ ☐ ☐ Federal or foreign government
☐ ☐ ☐ A university-based research project
☐ ☐ ☐ Other

22. Please indicate the extent of your agreement or disagreement with each of the following statements. (Mark one circle for each item)

1. Strongly agree
 2. Agree with reservations
 3. Disagree with reservations
 4. Strongly disagree

- ☐ ☐ ☐ ☐ Only the members of a minority group have the personal knowledge that is essential for teaching about that group.
☐ ☐ ☐ ☐ One should attempt to insulate one's academic work from one's personal values.
☐ ☐ ☐ ☐ Scientists should publish their findings regardless of the possible consequences.
☐ ☐ ☐ ☐ In my subject, a person's teaching and research inevitably reflect his or her political values.
☐ ☐ ☐ ☐ Big contract research has become more a source of money and prestige for researchers than an effective way of advancing knowledge.

22. Continued

1. Strongly agree
2. Agree with reservations
3. Disagree with reservations
4. Strongly disagree

- ① ② ③ ④ When I was looking for my first job, I had a faculty member who acted as my "sponsor."
- ① ② ③ ④ I prefer teaching courses which focus on limited specialties to those which cover wide varieties of material.
- ① ② ③ ④ This department unduly stresses research and research training at the cost of properly preparing college teachers.
- ① ② ③ ④ In my undergraduate courses, I prefer teaching students majoring, or intending to major, in my own field to those with other interests.
- ① ② ③ ④ In my undergraduate courses, I prefer teaching students with a clear idea of the career they will be following.
- ① ② ③ ④ Exciting developments are taking place in my field.
- ① ② ③ ④ My field is too research oriented.
- ① ② ③ ④ By and large, my spouse and I share equally in housework and childcare responsibilities. (If no spouse, leave blank)
- ① ② ③ ④ I consider myself an intellectual.
- ① ② ③ ④ The new developments in my field are not very interesting to me.
- ① ② ③ ④ My job is the source of considerable personal strain.
- ① ② ③ ④ I tend to subordinate all aspects of my life to my work.
- ① ② ③ ④ I hardly ever get the time to give a piece of work the attention it deserves.
- ① ② ③ ④ I prefer doing work which is precise and rigorous to work which is speculative and intuitive.
- ① ② ③ ④ My career takes second place behind my family obligations.
- ① ② ③ ④ I am basically conservative in my religious beliefs.

23. Are you a member of any of the following organizations? (Mark all that apply)

- ☐ American Association of University Professors
- ☐ American Federation of Teachers
- ☐ A National Education Association affiliate
- ☐ A local or state association or union of college teachers
- ☐ A state, county or city employees' association or other association not confined to college teachers
- ☐ An association limited to teachers at your institution (other than the Academic Senate)

24. Are you currently working for a higher degree?

- ☐ Yes, at the institution where I teach
- ☐ Yes, at another institution
- ☐ No

25. On the following list, please mark: (Mark each column)

1. The degree(s) for which you are currently working, if any
2. All degrees that you now hold (Mark all that apply)
- ① ② Less than Bachelor's (A.A., etc.)
- ① ② Undergraduate Bachelor's
- ① ② First professional law degree
- ① ② First professional medical degree (e.g., M.D., D.D.S.)
- ① ② Other first professional beyond undergraduate bachelor's
- ① ② Master's (Except first professional)
- ① ② Doctor of Arts or equivalent degree for doctorate without dissertation
- ① ② Ph.D.
- ① ② Ed.D.
- ① ② Other doctorate (Except first professional)
- ① ② None

26. Have you ever attended a junior or community college as a student?

- ☐ Yes ☐ No

27. Have you ever, because your spouse or other family member needed to live or work in another area

- a) Resigned from a job you liked and moved elsewhere?
- ☐ Yes ☐ No
- b) Turned down an offer of a job you would otherwise have liked?
- ☐ Yes ☐ No

28. In general, how do you feel about this institution?

- ☐ It is a very good place for me.
- ☐ It is fairly good for me.
- ☐ It is not the place for me.

29. In each column below, please mark the one statement which best describes your position regarding another job for the fall of 1975:

1. Another academic job (Mark one)
2. A non-academic job (Mark one)
- ① ② I have found and accepted one
- ① ② I am now negotiating for one
- ① ② I am actively looking for one
- ① ② I would seriously consider a reasonable offer
- ① ② I would not consider an offer

30. From the following list, mark the most appropriate detailed subject for each question. (Where your precise field does not appear, mark the most-similar category or the "general/other" category).

- Department of teaching appointment? (if joint appointment, mark no more than two)
- Present primary field of Interest? (Mark one)
- Undergraduate major(s)? (Mark no more than two)
- Subject of highest Graduate degree now held? (Mark one)

(Please be sure that you mark at least one circle labeled D, one labeled I, one U and one G.)

☐	☐	☐	☐	Department
☐	☐	☐	☐	Interest
☐	☐	☐	☐	Undergraduate
☐	☐	☐	☐	Graduate
☐	☐	☐	☐	NONE
☐	☐	☐	☐	Agriculture and/or Forestry
☐	☐	☐	☐	Architecture and/or Design
BIOLOGICAL SCIENCES				
☐	☐	☐	☐	Bacteriology, Molecular Biology, Virology, Microbiology
☐	☐	☐	☐	Biochemistry
☐	☐	☐	☐	Biology
☐	☐	☐	☐	Botany
☐	☐	☐	☐	Physiology, Anatomy
☐	☐	☐	☐	Zoology
☐	☐	☐	☐	General/Other Biological Sciences
☐	☐	☐	☐	Business, Commerce and Management
EDUCATION				
☐	☐	☐	☐	Elementary and/or Secondary
☐	☐	☐	☐	Educational Administration
☐	☐	☐	☐	Educational Psychology and Counseling
☐	☐	☐	☐	Foundations
☐	☐	☐	☐	General/Other Educational Fields
ENGINEERING				
☐	☐	☐	☐	Aeronautical, Astronautical
☐	☐	☐	☐	Chemical
☐	☐	☐	☐	Civil
☐	☐	☐	☐	Electrical
☐	☐	☐	☐	Mechanical
☐	☐	☐	☐	General/Other Engineering
FINE ARTS				
☐	☐	☐	☐	Art
☐	☐	☐	☐	Dramatics and Speech
☐	☐	☐	☐	Music
☐	☐	☐	☐	Other Fine Arts
☐	☐	☐	☐	Geography
HEALTH SCIENCES				
☐	☐	☐	☐	Dentistry
☐	☐	☐	☐	Medicine
☐	☐	☐	☐	Nursing
☐	☐	☐	☐	Other Health Fields
☐	☐	☐	☐	Home Economics

30. Continued

☐	☐	☐	☐	Department
☐	☐	☐	☐	Interest
☐	☐	☐	☐	Undergraduate
☐	☐	☐	☐	Graduate
HUMANITIES				
☐	☐	☐	☐	English Language & Literature
☐	☐	☐	☐	Foreign Language & Literature
☐	☐	☐	☐	French
☐	☐	☐	☐	German
☐	☐	☐	☐	Spanish
☐	☐	☐	☐	Other Foreign Language
☐	☐	☐	☐	History
☐	☐	☐	☐	Philosophy
☐	☐	☐	☐	Religion & Theology
☐	☐	☐	☐	General/Other Humanities
☐	☐	☐	☐	Industrial Arts
☐	☐	☐	☐	Journalism
☐	☐	☐	☐	Law
☐	☐	☐	☐	Library Science
☐	☐	☐	☐	Mathematics and/or Statistics
☐	☐	☐	☐	Physical & Health Education
PHYSICAL SCIENCES				
☐	☐	☐	☐	Chemistry
☐	☐	☐	☐	Earth Sciences (incl. Geology)
☐	☐	☐	☐	Physics
☐	☐	☐	☐	General/Other Physical Sciences
☐	☐	☐	☐	Psychology
SOCIAL SCIENCES				
☐	☐	☐	☐	Anthropology & Archeology
☐	☐	☐	☐	Economics
☐	☐	☐	☐	Political Science, Government
☐	☐	☐	☐	Sociology
☐	☐	☐	☐	General/Other Social Sciences
☐	☐	☐	☐	Social Work, Social Welfare
☐	☐	☐	☐	Vocational-Technical (other)
☐	☐	☐	☐	ALL OTHER FIELDS

31. Please indicate the extent of your agreement or disagreement with each of the following statements. (Mark one circle for each item)

☐	☐	☐	☐	1. Strongly agree
☐	☐	☐	☐	2. Agree with reservations
☐	☐	☐	☐	3. Disagree with reservations
☐	☐	☐	☐	4. Strongly disagree
Undergraduate education in America would be improved if:				
☐	☐	☐	☐	a) All courses were elective
☐	☐	☐	☐	b) Grades were abolished
☐	☐	☐	☐	c) Students were required to spend a year in community service at home or abroad
☐	☐	☐	☐	d) Course work were more relevant to contemporary life and problems
☐	☐	☐	☐	e) More attention were paid to the emotional growth of students
☐	☐	☐	☐	f) There were less emphasis on specialized training and more on broad liberal education

31. Continued

1. Strongly agree
2. Agree with reservations
3. Disagree with reservations
4. Strongly disagree
- ① ② ③ ④ The typical undergraduate curriculum has suffered from the specialization of faculty members.
- ① ② ③ ④ "Interdisciplinary" courses are a less effective method of encouraging students to acquire a variety of perspectives than breadth requirements.
- ① ② ③ ④ Most undergraduates here are basically satisfied with the education they are getting.
- ① ② ③ ④ Inflation of undergraduate grades is becoming a serious problem.
- ① ② ③ ④ Graduate education in my subject is doing a good job of training students.
- ① ② ③ ④ Good research training requires that a graduate student have an apprentice relationship with a professor.
- ① ② ③ ④ In my department it is very difficult for a person to achieve tenure if he or she does not publish.
- ① ② ③ ④ In my department it is more difficult to achieve tenure than it was five years ago.
- ① ② ③ ④ Undergraduates should be offered the widest possible choice of subjects, without requirements or constraints.
- ① ② ③ ④ In today's job market, only outstanding students have a chance to get an academic job in my field.
- ① ② ③ ④ In the last two or three years it has become much harder to get research support for work in my field.
- ① ② ③ ④ The undergraduate curriculum here is in serious need of reform.
- ① ② ③ ④ In the past few years, grading standards in undergraduate courses here have become less rigorous.
- ① ② ③ ④ In this institution it is difficult to introduce academic innovations.
- ① ② ③ ④ By and large, undergraduates here are not getting as good an education as they were five years ago.
- ① ② ③ ④ On the whole, faculty salaries here have kept up with the rate of inflation.
- ① ② ③ ④ This institution has serious financial problems.
- ① ② ③ ④ In the next five years, I expect that some of the tenured faculty here will lose their jobs due to lack of funds.

If your institution, or your department, has no graduate or professional students, please skip to question 34.

31. Continued

1. Strongly Agree
2. Agree with reservations
3. Disagree with reservations
4. Strongly disagree
- ① ② ③ ④ My department has made significant changes in its graduate course offerings in response to the new, tighter job-market.
- ① ② ③ ④ Most graduate or professional students in my department are basically satisfied with the education they are getting.
- ① ② ③ ④ Many of the best graduate students can no longer find meaning in science and scholarship.
- ① ② ③ ④ Many of the best graduate students in my department drop out before completing their degrees.
- ① ② ③ ④ The female graduate students in my department are not as dedicated as the males.

32. Thinking about the next ten years, how would you rate the job prospects for graduate students from your department? (Mark one in each column)

1. for academic jobs (Mark one)
2. for non-academic jobs (Mark one)
- ① ② Very good
① ② Fairly good
① ② Fair
① ② Poor
① ② Very poor

33. How many doctoral dissertation committees are you chairperson of?

- None ○ 6-10
○ 1-2 ○ 11 or more
○ 3-5

34. By and large, what has been the effect of reforms in the curriculum during the past five years on the quality of undergraduate education at your institution? (Mark one in each row)

1. Substantial improvement
2. Some improvement
3. Some harm
4. Substantial harm
5. There has been no reform
- ① ② ③ ④ ⑤ Reform in departmental major requirements
- ① ② ③ ④ ⑤ Reform in institutional requirements

35. Roughly how many regular members (at the rank of instructor or above) does your department have this year?

☐ 3 or fewer ☐ 11-15 ☐ 31-40
☐ 4-5 ☐ 16-20 ☐ 41 or more
☐ 6-7 ☐ 21-25
☐ 8-10 ☐ 26-30

36. How much has your department changed in size in the last 3 years? Is it:

☐ Much larger ☐ About the same
☐ Somewhat larger ☐ Smaller

37. How active are you (1) in your own department's affairs? (2) in the faculty government of your institution (committee memberships, etc.)? (Mark one in each column)

	1. Department		2. Institution
☐ 1	☐ 2 Much more than average	☐ 1	☐ 2 Somewhat more than average
☐ 1	☐ 2 Somewhat more than average	☐ 1	☐ 2 About average
☐ 1	☐ 2 About average	☐ 1	☐ 2 Somewhat less than average
☐ 1	☐ 2 Somewhat less than average	☐ 1	☐ 2 Much less than average
☐ 1	☐ 2 Much less than average		

38. How much opportunity do you feel you have to influence the policies (1) of your department? (2) of your institution? (Mark one in each column)

	1. Department		2. Institution
☐ 1	☐ 3 A great deal	☐ 1	☐ 3 Quite a bit
☐ 1	☐ 3 Quite a bit	☐ 1	☐ 3 Some
☐ 1	☐ 3 Some	☐ 1	☐ 3 None
☐ 1	☐ 3 None		

39. Do you feel that the administration of (1) your department, (2) your institution is:

	1. Department (Mark one)		2. Institution (Mark one)
☐ 1	☐ 2 Very autocratic	☐ 1	☐ 2 Somewhat autocratic
☐ 1	☐ 2 Somewhat autocratic	☐ 1	☐ 2 Somewhat democratic
☐ 1	☐ 2 Somewhat democratic	☐ 1	☐ 2 Very democratic
☐ 1	☐ 2 Very democratic		

40. Is the chairperson of your department (Mark one)

☐ Appointed for a fixed short term (3 years or less) which is not normally renewed?
☐ Appointed for a fixed short term with the possibility or likelihood of renewal?
☐ Appointed for a long or indefinite period?
☐ Don't know.

41. In your department, are decisions other than personnel matters normally made by the vote of the whole regular faculty, including non-tenured members?

☐ Yes ☐ No ☐ It varies

42. What role do undergraduates in your institution now play in decisions on the following? What role do you believe they should play? (Mark one in each row)

	1. Control
	2. Voting Power on Committees
	3. Formal Consultation
	4. Informal Consultation
	5. Little or no role
	6. Don't know

Now Play

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Faculty appointments
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Faculty promotions
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Undergraduate admissions policy
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Provision and content of courses
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Bachelor's degree requirements

Should Play

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Faculty appointments
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Faculty promotions
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Undergraduate admissions policy
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Provision and content of courses
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Bachelor's degree requirements

| | | | | | If your institution or department
 | | | | | | has no graduate students, skip to
 | | | | | | question 43.

| | | | | | What role do graduates in your insti-
 | | | | | | tution play in decisions on the follow-
 | | | | | | ing? What role do you believe they
 | | | | | | should play?

Now Play

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Faculty appointments
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Faculty promotions
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Departmental graduate admissions policy
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Provision and content of courses
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	Advanced degree requirements

Should Play

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Faculty appointments
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Faculty promotions
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Departmental graduate admissions policy
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Provision and content of courses
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Advanced degree requirements

43. What contribution do you think each of the following could make to solving our society's problems? (Mark one in each row)

	None	A little	A fair amount	A great deal	
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	More knowledge about society
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	More governmental spending
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	More technology
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	More scientific knowledge

44. In general, for each of these areas, should present academic standards in your institution or your department be -- (Mark one in each row)

						1. Much higher
						2. Somewhat higher
						3. Left as they are
						4. Somewhat lower
						5. Much lower
						6. No graduate department
1	2	3	4	5		Undergraduate admissions
1	2	3	4	5		Bachelor's degrees
1	2	3	4	5	6	Graduate admissions
1	2	3	4	5	6	Advanced degrees

45. How would you rate each of the following? (Mark one in each row)

					1. Excellent
					2. Good
					3. Fair
					4. Poor
1	2	3	4		Your own salary
1	2	3	4		Your own graduate education
1	2	3	4		The academic reputation of your department outside your institution

At your institution

1	2	3	4	The intellectual environment
1	2	3	4	Faculty salary levels
1	2	3	4	Teaching load
1	2	3	4	Ratio of teaching faculty to students
1	2	3	4	The administration
1	2	3	4	The effectiveness of your campus senate or faculty council
1	2	3	4	The library
1	2	3	4	Cultural resources

In your department

1	2	3	4	The intellectual environment
1	2	3	4	Personal relations among faculty
1	2	3	4	Faculty/student relations
1	2	3	4	The academic ability of your graduate students
1	2	3	4	The academic ability of your undergraduate students

46. How would you compare these aspects of your work situation today with the situation five years ago? (Mark one in each row)

					1. Much better
					2. Somewhat better
					3. About the same
					4. Somewhat worse
					5. Much worse
1	2	3	4	5	Teaching load
1	2	3	4	5	Departmental morale
1	2	3	4	5	Job prospects for students
1	2	3	4	5	The library

47. Apart from possible major field requirements, should undergraduates in your institution be required to take: (Mark one)

☐	A common core curriculum
☐	Breadth requirements
☐	No required courses

48. Many goals have been proposed for undergraduate education. On the following list, please indicate how important you consider each of the following possible outcomes for the undergraduate. (Mark one in each row.)

				1. Very important
				2. Fairly important
				3. Fairly unimportant
				4. Very unimportant
1	2	3	4	Appreciation of literature and the arts
1	2	3	4	Firm moral values
1	2	3	4	Enhanced creative capacities
1	2	3	4	Competence in mathematics
1	2	3	4	Preparation for a career
1	2	3	4	Tolerance of diversity
1	2	3	4	Self-knowledge
1	2	3	4	Knowledge of one subject in depth

49. Universities and colleges should respond to any underrepresentation of minorities and women among a) their faculty and b) graduate and professional students by: (Mark one in each column)

		1. Women
		2. Minorities
		<u>FACULTY APPOINTMENTS</u>
1	2	Establishing firm goals and timetables and meeting them
1	2	Giving preference to women and minorities to increase their numbers, but without strict goals and timetables
1	2	Making special efforts to find more women and minority candidates, but giving no preference in appointment
1	2	Making appointments without any regard to race or sex

GRADUATE ADMISSIONS

1	2	Establishing firm goals and timetables and meeting them
1	2	Giving preference to women and minorities to increase their numbers, but without strict goals and timetables
1	2	Making special efforts to find more women and minority candidates, but giving no preference in admission
1	2	Making admissions without any regard to race or sex

50. On balance what effects do you think the student activism of the 1960's had: 1) on American colleges and universities; 2) on national political affairs? (Mark one in each column)

- | | | |
|---|---------------------------------------|--|
| | 1. On colleges and universities | |
| | 2. Nationally | |
| ① | ② It did much more good than harm | |
| ① | ② It did somewhat more good than harm | |
| ① | ② It did somewhat more harm than good | |
| ① | ② It did much more harm than good | |
| ① | ② It had no real effects | |

51. Please indicate the extent of your agreement or disagreement with each of the following statements. (Mark one circle for each item)

- | | |
|--|-------------------------------|
| | 1. Strongly agree |
| | 2. Agree with reservations |
| | 3. Disagree with reservations |
| | 4. Strongly disagree |
- ① ② ③ ④ Scientific progress these days is more of a threat than a positive contribution to human welfare.
- ① ② ③ ④ The United States is spending too much money on social programs.
- ① ② ③ ④ The United States is spending too much money for national defense and military purposes.
- ① ② ③ ④ Real poverty could be eliminated in this country within ten years if it were given a high national priority.
- ① ② ③ ④ Public policy in the United States should be aimed at equalizing income.
- ① ② ③ ④ Our present system of government is democratic in name only.
- ① ② ③ ④ In the U.S. today there can be no justification for using violence to achieve political goals.
- ① ② ③ ④ Economic well-being in this country is unjustly and unfairly distributed.
- ① ② ③ ④ The belief that there exist governmental solutions for any social problems has attained too high a measure of casual acceptance.
- ① ② ③ ④ I am very apprehensive about the future of this country.
- ① ② ③ ④ This country has not made any real progress towards racial equality in the last five years.
- ① ② ③ ④ Generally speaking our political system is working well in handling America's problems.
- ① ② ③ ④ Meaningful social change cannot be achieved through traditional American politics.
- ① ② ③ ④ The use of marijuana should be legalized.
- ① ② ③ ④ These days you hear too much about the rights of minorities and not enough about the rights of the majority.

51. Continued

- | | |
|--|-------------------------------|
| | 1. Strongly agree |
| | 2. Agree with reservations |
| | 3. Disagree with reservations |
| | 4. Strongly disagree |
- ① ② ③ ④ There is too much concern in the courts for the rights of criminals.
- ① ② ③ ④ Most youth who currently reject society's economic and political values will outgrow their present views.
- ① ② ③ ④ The only valid measure of equality between different groups in society is not equality of opportunity but equality of group achievement.
- ① ② ③ ④ The government should own and operate all essential industries.
- ① ② ③ ④ Some form of Communist regime is probably necessary for progress in underdeveloped countries.
- ① ② ③ ④ Where de facto segregation exists, black people should be assured control over their own schools.
- ① ② ③ ④ Racial integration of the public elementary schools should be achieved even if it requires busing.

52. How would you characterize yourself politically at the present time?

- ☐ Left
- ☐ Liberal
- ☐ Middle-of-the-Road
- ☐ Moderately Conservative
- ☐ Strongly Conservative

53. Academic research on the genetic basis of differences in intelligence

- ☐ Should not be permitted
- ☐ Should be discouraged
- ☐ Should encounter no limitations

54. In what religion were you raised?

- | | |
|----------------------------------|---------------------------------|
| ☐ Protestant | ☐ Other |
| ☐ Catholic | ☐ None |
| ☐ Jewish | ☐ No answer |

55. What is your present religion?

- | | |
|----------------------------------|---------------------------------|
| ☐ Protestant | ☐ Other |
| ☐ Catholic | ☐ None |
| ☐ Jewish | ☐ No answer |

56. Do you consider yourself

- ☐ Deeply religious
- ☐ Moderately religious
- ☐ Largely indifferent to religion
- ☐ Basically opposed to religion

57. Since obtaining your highest degree:

a) how long have you spent in each of the following types of employment? (Mark one in each row)

- | | |
|--|---|
| | 1. Never employed in this sector |
| | 2. 1 year or less |
| | 3. 2-5 years |
| | 4. 6 years or more |
| ☐ ☐ ☐ ☐ | Teaching in a university |
| ☐ ☐ ☐ ☐ | Teaching in a 4-year college |
| ☐ ☐ ☐ ☐ | Teaching in a junior or community college |
| ☐ ☐ ☐ ☐ | Non-faculty research position in a college or university |
| ☐ ☐ ☐ ☐ | Post-doctoral fellowship or trainee-ship in a university |
| ☐ ☐ ☐ ☐ | Full-time college or university administration |
| ☐ ☐ ☐ ☐ | Teaching or administration in an elementary or secondary school |
| ☐ ☐ ☐ ☐ | Research and development outside educational institutions |
| ☐ ☐ ☐ ☐ | Executive or administrative post outside educational institutions |
| ☐ ☐ ☐ ☐ | Other professional position |
| ☐ ☐ ☐ ☐ | Armed forces |
| ☐ ☐ ☐ ☐ | Other |
| None ☐ ☐ ☐ ☐ | |
| ☐ ☐ ☐ ☐ | b) how many years have you spent <u>not</u> in employment? |
| ☐ ☐ ☐ ☐ | c) for how many years in total have you been employed part-time? |

58. What is your spouse's occupation, and what are (were) your father's and mother's principal occupations? (Mark one in each column)

- | | | | |
|---|--|--|--|
| | 1. Spouse | | |
| | 2. Father | | |
| | 3. Mother | | |
| ☐ ☐ ☐ | No spouse | | |
| ☐ ☐ ☐ | College or university teaching, research or administration | | |
| ☐ ☐ ☐ | Elementary or secondary school teaching or administration | | |
| ☐ ☐ ☐ | Other professional | | |
| ☐ ☐ ☐ | Owner, large business | | |
| ☐ ☐ ☐ | Executive or managerial in business or industry | | |
| ☐ ☐ ☐ | Other managerial or administrative | | |
| ☐ ☐ ☐ | Technical and semi-professional | | |
| ☐ ☐ ☐ | Owner, small business | | |
| ☐ ☐ ☐ | Other white collar, clerical, retail sales | | |
| ☐ ☐ ☐ | Skilled wage worker | | |
| ☐ ☐ ☐ | Semi- and unskilled wage worker, farm laborer | | |
| ☐ ☐ ☐ | Armed forces | | |
| ☐ ☐ ☐ | Homemaker | | |

59. What is the highest level of formal education received by your spouse? Your father? Your mother? (Mark one in each column)

- | | | | |
|---|--|--|--|
| | 1. Spouse | | |
| | 2. Father | | |
| | 3. Mother | | |
| ☐ ☐ ☐ | No spouse | | |
| ☐ ☐ ☐ | 8th grade or less | | |
| ☐ ☐ ☐ | Some high school | | |
| ☐ ☐ ☐ | Completed high school | | |
| ☐ ☐ ☐ | Some college | | |
| ☐ ☐ ☐ | Graduated from college | | |
| ☐ ☐ ☐ | Attended graduate or professional school | | |
| ☐ ☐ ☐ | Attained advanced degree(s) | | |

60. During this academic year, are you carrying what your own department or institution considers a full teaching load, or is your personal load reduced for your research or administration?

- ☐ Full teaching load
- ☐ More than half but less than full-time load
- ☐ Half teaching load
- ☐ Less than half teaching load

61. Are you considered to be a full-time employee by your institution for at least nine months of the current academic year? (Mark one)

- ☐ Yes, full time
- ☐ No, part time, but more than half time
- ☐ No, half time
- ☐ No, less than half time

62. What is your basic institutional salary on a full-time basis before tax and deductions for the current academic year?

- | | |
|---|---|
| ☐ Below \$8,000 | ☐ \$16,000 - \$17,999 |
| ☐ \$8,000 - \$9,999 | ☐ \$18,000 - \$19,999 |
| ☐ \$10,000 - \$11,999 | ☐ \$20,000 - \$21,999 |
| ☐ \$12,000 - \$13,999 | ☐ \$22,000 - \$24,999 |
| ☐ \$14,000 - \$15,999 | ☐ \$25,000 or over |

63. Is this based on

- ☐ 9-10 months
- ☐ 11/12 months

64. In recent years, roughly how much have you earned over and above your basic salary? (Please estimate as a percentage of your basic salary.)

- | | |
|---------------------------------|------------------------------------|
| ☐ 0% | ☐ 30% - 39% |
| ☐ Under 10% | ☐ 10% - 19% |
| ☐ 10% - 19% | ☐ 20% and over |
| ☐ 20% - 29% | |

- ☐ No spouse
☐ \$0
☐ Below \$2,000
☐ \$2,000 - \$3,999
☐ \$4,000 - \$5,999
☐ \$6,000 - \$7,999
☐ \$8,000 - \$9,999
☐ \$10,000 - \$14,999
☐ \$15,000 - \$19,999
☐ \$20,000 - \$24,999
☐ \$25,000 and over

- ☐ Married (once only)
☐ Married (remarried)
☐ Separated
☐ Single (never married)
☐ Single (divorced)
☐ Widowed

- None
One
Two or more
- Under 6 years
Aged 6 and over

- ☐ Yes ☐ No ☐ No children

- ### A- Year of Birth

- B - Year of Highest Degree Now Held

- C- Year Tenure First
Awarded**

19

19

19

EXAMPLE

Mark this one blank circle if you are not tenured.

- ☐ White-Caucasian
☐ Black-Negro/Afro American
☐ Native American American Indian
☐ Mexican American Chicano
☐ Puerto Rican
☐ Oriental
☐ Other Asian
☐ Other

- ## Your Bachelor's degree

Name of Institution

City & State (or Country if non-U.S.)

Mark here if none ☐

The highest degree you now hold

Name of Institution

City & State (or Country if non-U.S.)

Mark here if none
higher than Bachelor's . . . ☐

DO NOT MARK IN THIS SHADED AREA

THANK YOU FOR YOUR COOPERATION."

Please return the questionnaire to:

Carnegie Council National Survey of Higher Education
P. O. Box 9407
Minneapolis, Minnesota 55440

If you have any other comments regarding the survey please write them on a separate sheet of paper and send to the above address.

APPENDIX 3

DEGREES CONFERRED TO WOMEN 1960-1978*

	<u>Doctorates</u>	<u>Medical Degrees</u>	<u>Law Degrees</u>	<u>Masters Degrees</u>
1960-61	10%	5%	3%	32%
1961-62	11%	5%	3%	31%
1962-63	11%	5%	3%	31%
1963-64	11%	6%	3%	31%
1964-65	11%	6%	3%	32%
1965-66	12%	7%	3%	34%
1966-67	12%	7%	4%	35%
1967-68	13%	8%	4%	35%
1968-69	13%	8%	4%	36%
1969-70	13%	8%	5%	40%
1970-71	14%	9%	7%	40%
1971-72	16%	9%	7%	41%
1972-73	18%	9%	8%	41%
1973-74	19%	11%	11%	43%
1974-75	21%	13%	15%	47%
1975-76	23%	16%	19%	47%
1976-77	24%	19%	22%	47%
1977-78	26%	21%	26%	48%

* Source: Digest of Educational Statistics (1961-1979), National Center for Educational Statistics, DHEW, Washington, D.C.

APPENDIX 4

Number of Articles Published Regressed on Highest Degree Held, Year of Highest Degree, Professional Orientation, Type of Appointment Institution and Sex.

	<u>1969</u>		<u>1975</u>	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
SEX	-.08	107.03	-.09	71.10
HIGHEST DEGREE HELD	.36	2072.91	.34	764.13
YEAR OF HIGHEST DEGREE	.36	2445.44	.29	725.73
PROFESSIONAL ORIENTATION	.28	1310.28	.34	933.05
TYPE OF INSTITUTION	<u>.05</u>	<u>37.54</u>	<u>.10</u>	<u>78.39</u>
	5/10439df	$R^2 = .44$	5/4558df	$R^2 = .48$

APPENDIX 5

Number of Articles Published Regressed on Sex, Highest Degree Held, Year of Highest Degree, Professional Orientation, Research Support. Type of Appointment Institution, High Quality Graduate Institution (whether Graduate Institution was rated High Quality or not), and Support as Graduate Student (1969)

	<u>BETA</u>	<u>F</u>
SEX	-.06	51.38
HIGHEST DEGREE HELD	.32	1173.54
YEAR OF HIGHEST DEGREE	.37	1892.67
PROFESSIONAL ORIENTATION	.22	612.62
RESEARCH SUPPORT	.15	289.79
APPOINTMENT INSTITUTION	.04	17.86
HIGH QUALITY GRADUATE INST.	.02	4.34
SUPPORT AS GRADUATE STUDENT	<u>.08</u>	<u>83.78</u>
	8/7720df	$R^2 = .47$

APPENDIX 6

Number of Articles Published by Women and Men Regressed on Highest Degree Held, Year of Highest Degree, Research Orientation, and Type of Appointment Institution.

	<u>1969</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE HELD	.43	410.75	.35	1708.68
YEAR OF HIGHEST DEGREE	.27	180.99	.39	2279.12
RESEARCH ORIENTATION	.20	91.42	.29	1173.73
TYPE OF INSTITUTION	.04	4.39	.05	32.10
	4/1561df	$R^2 = .36$	4/8799df	$R^2 = .42$

	<u>1975</u>			
	WOMEN		MEN	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
HIGHEST DEGREE HELD	.39	179.22	.33	596.24
YEAR OF HIGHEST DEGREE	.27	101.26	.31	618.85
RESEARCH ORIENTATION	.23	64.16	.37	821.75
TYPE OF INSTITUTION	.13	21.23	.10	56.88
	4/905df	$R^2 = .34$	4/3613df	$R^2 = .46$

APPENDIX 7

Rank Regressed on Sex, Highest Degree Held, Year of Highest Degree, Number of Articles Published, Professional Orientation, Research Support, Type of Appointment Institution, Sex Domination of Field, and Father's Occupation.

	<u>1969</u>		<u>1975</u>	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
SEX	-.09	113.15	-.09	44.30
HIGHEST DEGREE HELD	.27	804.74	.28	313.64
YEAR OF HIGHEST DEGREE	.42	2266.56	.41	838.38
NUMBER OF ARTICLES	.26	587.93	.27	214.26
PROFESSIONAL ORIENTATION	-.04	17.83	-.08	33.17
RESEARCH SUPPORT	-.02	6.09	-.03	3.30
TYPE OF INSTITUTION	.04	18.99	.02	2.10
SEX DOMINATION OF FIELD	.03	13.09	.0003	0.001
FATHER'S OCCUPATION	.02	4.33	-.02	2.25
	9/7719df	$R^2 = .51$	9/3090df	$R^2 = .48$

APPENDIX 8

Stepwise Regressions on RANK

<u>1969</u>				
	<u>STEP 1</u>	<u>STEP 2</u>	<u>STEP 3</u>	<u>STEP 4</u>
SEX	-.23*	-.12*	-.11*	-.08*
HIGHEST DEGREE HELD		.40*	.38*	.27*
YEAR OF HIGHEST DEGREE			.52*	.42*
NUMBER OF ARTICLES				.27*
PROFESSIONAL ORIENTATION				.04*
RESEARCH SUPPORT				-.02*
APPOINTMENT INSTITUTION				-.03*
	1/7727df R ² =.05	2/7726df R ² =.20	3/7725df R ² =.47	7/7721df R ² =.51
<u>1975</u>				
	<u>STEP 1</u>	<u>STEP 2</u>	<u>STEP 3</u>	<u>STEP 4</u>
SEX	-.27*	-.17*	-.12*	-.09*
HIGHEST DEGREE HELD		.38*	.38*	.28*
YEAR OF HIGHEST DEGREE			.48*	.41*
NUMBER OF ARTICLES				.27*
PROFESSIONAL ORIENTATION				-.09*
RESEARCH SUPPORT				-.03
APPOINTMENT INSTITUTION				.02
	1/3186df R ² =.07	2/3185df R ² =.21	3/3184df R ² =.44	7/3180df R ² =.48

*Significant Statistically

APPENDIX 9

Tenure Regression (including Rank)

	<u>1969</u>		<u>1975</u>	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
SEX	.008	1.10	-.03	4.45
RANK	.63	3063.44	.64	
HIGHEST DEGREE HELD	.10	115.97	.09	27.02
YEAR OF HIGHEST DEGREE	.15	224.72	.11	41.54
NUMBER OF ARTICLES	.06	35.24	.002	0.01
PROFESSIONAL ORIENTATION	-.04	24.18	-.08	7.01
RESEARCH SUPPORT	.01	2.96	-.02	1.69
TYPE OF INSTITUTION	<u>-.09</u>	<u>130.48</u>	<u>-.08</u>	<u>33.75</u>
	8/7720df	$R^2 = .51$	8/3058df	$R^2 = .45$

APPENDIX 10

Tenure Regressed on Sex, Highest Degree Held, Year of Highest Degree, Number of Articles Published, Professional Orientation, Research Support, and Type of Appointment Institution.

	<u>1969</u>			
	<u>STEP 1</u>	<u>STEP 2</u>	<u>STEP 3</u>	<u>STEP 4</u>
SEX	-.17*	-.14*	-.10*	-.09*
HIGHEST DEGREE HELD		.11*	.11*	.09*
YEAR OF HIGHEST DEGREE			.41*	.37*
NUMBER OF ARTICLES				.17*
PROFESSIONAL ORIENTATION				-.10*
RESEARCH SUPPORT				-.04*
APPOINTMENT INSTITUTION				-.07*
	1/3065df R ² = .03	2/3064df R ² =.04	3/3063df R ² = .21	7/3059df R ² =.23
	<u>1975</u>			
	<u>STEP 1</u>	<u>STEP 2</u>	<u>STEP 3</u>	<u>STEP 4</u>
SEX	-.09*	-.05*	-.04*	-.03*
HIGHEST DEGREE HELD		.13*	.12*	.06*
YEAR OF HIGHEST DEGREE			.38*	.31*
NUMBER OF ARTICLES				.18*
PROFESSIONAL ORIENTATION				-.08*
RESEARCH SUPPORT				.03
APPOINTMENT INSTITUTION				-.06*
	1/7727df R ² = .008	2/7726df R ² =.02	3/7725df R ² =.17	7/7721df R ² =.19

*Significant Statistically

APPENDIX 11

Stepwise Regression for Salary

	<u>1969</u>		
	<u>STEP 1</u>	<u>STEP 2</u>	<u>STEP 4</u>
SEX	-.27*	-.12*	-.08*
RANK		.69*	.42*
HIGHEST DEGREE HELD			.09*
YEAR OF HIGHEST DEGREE			.15*
NUMBER OF ARTICLES			.22*
PROFESSIONAL ORIENTATION			.01
RESEARCH SUPPORT			.06*
TYPE OF INSTITUTION			-.03*
TENURE			-.04*
	1/7727df R ² = .08	2/7726df R ² = .52	9/7719df R ² = .60
	<u>1975</u>		
	<u>STEP 1</u>	<u>STEP 2</u>	<u>STEP 4</u>
SEX	-.28*	-.11*	-.07*
RANK		.63*	.45*
HIGHEST DEGREE HELD			.06*
YEAR OF HIGHEST DEGREE			.13*
NUMBER OF ARTICLES			.19*
PROFESSIONAL ORIENTATION			.02
RESEARCH SUPPORT			.04*
TYPE OF INSTITUTION			-.05*
TENURE			.04*
	1/3065df R ² = .08	2/3064df R ² = .47	9/3057df R ² = .52

*Significant statistically

APPENDIX 12

Salary Regressed without Rank or Tenure

	<u>1969</u>		<u>1975</u>	
	<u>BETA</u>	<u>F</u>	<u>BETA</u>	<u>F</u>
SEX	-.12	194.33	-.12	69.05
HIGHEST DEGREE HELD	.21	478.66	.19	125.36
YEAR OF HIGHEST DEGREE	.34	1412.15	.33	488.85
NUMBER OF ARTICLES	.34	966.41	.32	266.76
PROFESSIONAL ORIENTATION	-.007	0.77	-.03	3.13
RESEARCH SUPPORT	.05	41.13	.02	2.48
TYPE OF INSTITUTION	-.02	6.39	.05	9.45
	7/7721df	$R^2 = .50$	7/3180df	$R^2 = .40$

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