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AN ABSTRACT OF THE THESIS OF Miriam Grace McClure for the Master of Arts in Sociology presented May 20, 1970.

Title: Women in the Professions and Status Inconsistency.

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:

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The general concern of this thesis is with the position of women in the United States. Specifically, the focus is on women in the professions. The theoretical perspective is taken from Everett C. Hughes' 1945 discussion of "Dilemmas and Contradictions of Status." Hughes maintained that when an incumbent of a status holds an unexpected auxiliary characteristic he is in a dilemma because others do not know how to respond to the contradictory stimuli. Others' responses tend to reflect unfavorably back on the individual's self-image and he seeks to avoid reactions from others by adopting behavior to reduce the impact of the discrepant status.

The professions in the United States are characterized by a basic body of abstract knowledge and the ideal of service. Thirteen occupa-

tions were established as professions, ranked on the basis of these characteristics and a boundary line was drawn between professions and non-professions. A selection of seven professions was made on which to test the hypotheses. These seven were: medicine, university teaching, dentistry, natural science, social science, with veterinary medicine and social work marking off the lower boundary.

Women in these professions were considered to be in an inconsistent status because they hold the unexpected characteristic of being a female in a male-dominated occupation and meet the other conditions of status inconsistency. Since the female professional can do nothing about changing her discrepant characteristic of being female, it is hypothesized that she adopts behavior which brings her status characteristics in accord and reduces the impact of her inconsistent status. This behavior may consist of avoidance, isolation and/or social segregation on the part of the female professional and her clients or colleagues.

The modes of adaptation selected are the basis of the eight hypotheses of the study: 1) women enter the professions in smaller proportions than men, 2) women professionals do not participate fully in the colleague-group, 3) women enter positions isolated from the public, 4) women tend to be salaried rather than self-employed, 5) women tend to be in career lines apart from positions of power and prestige, 6) women fill the lower echelons of a profession, 7) women specialize in those areas relating to the normatively accepted women's role, and 8) women tend to deal with patients of equal or lower status.

The data on which the hypotheses were tested were obtained from many different published sources relating to the seven professions. These sources consisted in the main of census tabulations, professional

directories, sample surveys, National Education Association publications, and the National Register of Scientific and Technical Personnel.

It was found that the data generally supported all the hypotheses with the exception of hypothesis number three which could not be tested. There seems to be a consistent pattern for the few women who do enter the professions to enter a limited number of them and to specialize in those areas which are consistent with the prescribed role of women in American society. Moreover, they tend to teach or enter research, work in educational institutions and be on salary. Women are not usually found in the top positions nor the most lucrative positions within a profession. Further, their career lines do not lead to the top positions and they tend to fill the lower echelons within each profession.

It may be concluded that women professionals adopt this pattern throughout the professions, that their career pattern is very different than that of male professionals, and it is suggested that they adopt this pattern in order to reduce the impact of their inconsistent status set.

WOMEN IN PROFESSIONS AND STATUS INCONSISTENCY

by

MIRIAM GRACE McCLURE

A thesis submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS
in
SOCIOLOGY

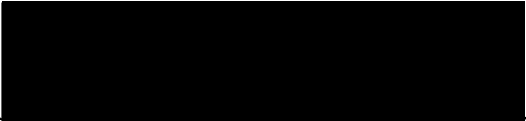
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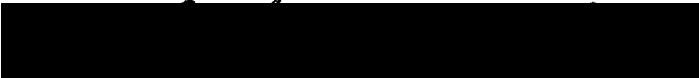
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CHAPTER I

INTRODUCTION

Purpose of the Study

The increasing interest in women's position in the United States as evidenced by the renewed woman's rights movements and in the mass media, necessitates more information and analysis concerning women's position. In accord with this, the purpose in this study is to analyze woman's position as a professional with the focus on her behavior and the help of those with whom she associates.

The theoretical perspective of this study is taken from Everett Cherrington Hughes' discussion in 1945 entitled "Dilemmas and Contradictions of Status." Hughes maintained that when an incumbent of a status holds an unexpected auxiliary characteristic, he or she is in a dilemma because others do not know how to respond to the contradictory stimuli. Others' responses tend to reflect unfavorably back on the individual's self-image so he or she seeks to avoid reactions from others by adopting behavior to reduce the impact of the discrepant status.

The concept Hughes was concerned with has since come to be known as status inconsistency.¹ It has been a popular concept in the literature

¹Status inconsistency is used throughout this paper and in the literature to be synonymous with status incongruence, status discrepancy and to be opposite from status consistency, status congruence and status crystallization, which are also synonymous and interchangeably used. My focus is on status inconsistency because the subject under consideration, women in the professions, connotes inconsistent statuses.

and has been examined in relation to social participation (Lenski, 1956), symptoms of stress (Jackson, 1962), preference for social change (Goffman, 1957).

For purposes of this paper, the perspective of status inconsistency is taken from Everett Hughes as he applied it to occupations with the goal being to test out some of his implications on data concerning the particular case of women in the professions.

Plan of the Study

In order to test Everett Hughes' implications concerning status inconsistency, we must first understand his perspective. In Chapter II on Status Inconsistency, a discussion and analysis of his article is presented. The dynamic of status inconsistency is discussed. Then the conditions which must be met in order to place an individual in the category of a status inconsistent are considered.

Everett Hughes focused his discussion on occupations; this study deals with the professions. In Chapter III the professions are defined, and a boundary is drawn between professions and non-professions. It is indicated that the professions can be classified according to their ranking on the two dimensions of a) professional knowledge and b) the service ideal. A selection out of the range of the thirteen professions is made of seven professions in which hypotheses in this study may be tested.

In Chapter IV the particular case of women in the professions is examined. Women professionals may be considered to be status inconsistencies since they meet the conditions necessary to be categorized as such. In order to reduce the impact of their inconsistent status, it

is hypothesized that they and others adopt certain behavior. This behavior refers to avoidance, isolation and social segregation. These categories are then explained.

Specific hypotheses concerning the behavior of women professionals and those with whom they associate are then presented in Chapter V. Eight hypotheses are formulated concerning the three categories of avoidance, isolation and social segregation. How each of the hypotheses will be tested is discussed in Chapter VI. Definitions of terms in the hypotheses are given and sources of data are described. Since this study has been done through library research, the data come from a variety of available publications concerning each of the seven professions selected.

The hypotheses are tested and the findings presented in Chapter VI. A thorough discussion of the findings is made in the next chapter with the final conclusions presented in Chapter VIII.

CHAPTER II

STATUS INCONSISTENCY

Everett C. Hughes' Article

Everett Hughes discussed the dilemmas in which individuals find themselves because of their contradictions of status. He elaborated some of the mechanisms people use in order to reduce the impact of their dilemmas. However, he did not lay out specific ways in which his ideas could be tested empirically nor did he test them. The purpose of this thesis is to test some of the implications of Hughes' analysis by examining the particular case of women in professional occupations and the effects of status inconsistency on them.

In order to discuss the implications of Hughes' ideas, it is necessary first to summarize his 1945 article. After the summary, I will specify further what I mean by status inconsistency and how it relates to women in the professions.

Hughes¹ noted that in our society there are a great variety of social positions and a great number of rank-determining characteristics. In America we put emphasis upon change in social positions and upon social mobility of the individual by achievement. In the struggle for achievement, the individual traits of the person tend to stand out as separate entities. And they occur in peculiar combinations which make

¹ The following discussion and quotations are taken from Everett C. Hughes, "Dilemmas and Contradictions of Status," American Journal of Sociology, 50 (1945), 353-359.

for confusion, contradiction, and dilemmas of status.²

For any given social status or position, there tends to be specifically determining traits which identify that particular status. These traits may be formal or legal, e.g., a doctor's license, and require technical competence, e.g., medical skill. In addition to these determining traits, a complex of auxiliary characteristics develop which come to be expected of the status' incumbents. Roman Catholic priests should be men. Most professionals are men. Certain combinations of these auxiliary characteristics seem more natural and acceptable to people than others. "Thus a white, male, Protestant physician of old American stock and of a family of at least moderate social standing would be acceptable to patients of almost any social category in this country."

These auxiliary characteristics are not necessarily consciously put together by people but rather, people carry in their minds these sets of expectations concerning specific positions in our society. These expectations appear as advantageous or disadvantageous to those aspiring to certain positions (new to persons of their kind), depending upon how well or poorly they fit the expectations. These combinations of expected characteristics become embodied in the stereotypes of conversation, cartoons, fiction, motion pictures and television. Hughes asserts it is these stereotypes which are worked most intricately into

² Hughes takes status to mean "a defined social position for whose incumbents there are defined rights, limitations of rights and duties." And "since statuses tend to form a hierarchy, the term itself has . . . had the additional meaning of rank" (p. 353).

the sentiment and conduct of the colleague-group or fellow worker group. They become the basis for the colleague-group's definition of its common interests, of its informal code, and of its selection of those who become the "inner fraternity." The colleague-group has a vested interest in the things which control the number of potential candidates for their occupation. It is a threat to the order of things, which members rely on, if "new" members - new in kind - break or do not abide by the informal rules of the game of an occupation. The colleague-group is referred to as the "informal brotherhood" in which "experiences are exchanged, competence built up and the formal code elaborated and enforced." And new people are not usually drawn into this brotherhood.

Hughes maintains that our society, in spite of its social mobility and heterogeneity, "remains a white, Anglo-Saxon, male, Protestant culture in many respects. These are the expected characteristics for many favored statuses and positions." Prejudice is never directed at these people but rather at people of other races, religions, sex, and ethnicity. Included in the stereotyped prejudices concerning others is usually the assumption that these other people are peculiarly adapted to the places they have held to the present and similarly that they are not quite fit for new positions to which they may aspire. Generally, advancement of the new groups - e.g., women, blacks - to a new level of positions does not eliminate the stereotypes but only modifies them. For example, "in Quebec the idea that French-Canadians were good only for unskilled industrial work was followed by the notion that they were especially good at certain kinds of skilled work but were not fit to repair machines or to supervise the work of others." In this series of modifications the expected qualities for the most-favored positions

remains intact. At the same time, however, the forces which make for mobility continue to create marginal people on new frontiers.

Hughes discusses technical changes which alter occupations and which also create new jobs. These changes work to break up configurations of expected status characteristics or to lead to a lack of definition in the case of new positions. The new qualifications take time in developing.

But Hughes is more interested in the consequences of the appearance of new kinds of people in established positions. "Every such occurrence produces, in some measure, a status contradiction. It may also create a status dilemma for the individual concerned and for other people who have to deal with him."

The black American in a profession is an outstanding example of this status dilemma. Membership in the black race in the United States may be called a "master status-determining trait." It tends to overpower, in most crucial situations, any other characteristic. But since professional standing is also a powerful characteristic, these two characteristics clash. The result is a dilemma for those who must deal with the black professional and for the black himself in dealing with others. People must choose between treating him as a black or as a member of his profession. And the black professional must be aware of these discrepant characteristics and determine how he wants to handle them.

One way to reduce this particular status conflict is for the white client to avoid any contact with a black professional. If that cannot be done, then in seeking his help, all non-professional contact must be avoided. Conflict is reduced by keeping the relationship formal and

specific, e.g., in a doctor's office a specific room is set for the relationship with a door which can be firmly closed when one leaves. Some professions lend themselves to this formal relationship more than others. For example, a family physician and a schoolteacher are more exposed and accessible to the public and may be expected to participate more broadly in the community as compared to a medical or legal specialist who is called in for a specific problem and not expected to enter into any other relationships.

Professional white colleagues may have a particularly difficult time relating to a black professional. The colleague-group is ideally a brotherhood; to have people in it who cannot be accepted as brothers is very uncomfortable. Further, white professionals may be particularly sensitive to the issue of whom the public - potential and actual clients - sees them meet. To avoid this dilemma, colleagues may often shun contacts with the black professional, particularly if their own reputation is not assured.

The black professional himself has a dilemma. If he appears content with his secondary status within the profession, he may be accused of sacrificing loyalty to his race. Being considered an exception by his white colleagues, he may seek advantage by fostering the idea that he is unlike others of his race.

On occasion there may be cases where the appearance of one or a few individuals of a specific unexpected kind immediately dissolves the old auxiliary expectations. But this is not the usual consequence. The expectations usually continue to exist, with modifications and with exceptions allowed.

A common solution to the dilemma is some elaboration of social segregation. The woman lawyer becomes a lawyer to women clients or she may specialize in some kind of legal service in keeping with women's role such as guardian of the home or of the morals of society. Women physicians may specialize in areas of which only women and children have need. The black male professional may find clients only among blacks. A female electrical engineer is urged to take a job to give the "woman's angle" to design of household electrical appliances. The Negro sociologist generally studies race relations and teaches in a Negro college. Personnel workers who deal only with Negro workers or women workers fit this category, too.

Another solution, which also results in a kind of isolation (if not in segregation), is that of putting the new kind of people in a library or laboratory, where they get the prestige of research people but are out of the view of patients and the public. Such positions do not ordinarily lead to the positions of corresponding importance in central areas of the occupation. They offer a career line apart from the main streams of promotion to power and prestige.

There are other solutions than these, but the point is that these solutions work to reduce the force of status contradiction by keeping the new kind of person apart from the situations most likely to be troublesome.

Analysis of Hughes' Ideas

What Everett Hughes seems to be saying, then, has to do with individuals who do not hold the expected auxiliary characteristics of incumbents of their status, how others respond to this discrepancy, how this response

in turn affects the individual's self-image and then how the individual adopts certain behavior patterns which minimize the impact of his or her self-image. Hughes discusses the person who holds all the auxiliary characteristics associated with his status, the status consistent, e.g., the white, Anglo-Saxon Protestant physician, and implies that others react positively and similarly to him in every situation, according him all the prestige and deference due his status. Consequently, the status consistent, in this case, the physician, has a favorable and positive self-image as a holder of that status and has no reason to adopt any behavior to change the reactions of others in order to alter his self-image.

On the other hand, Hughes points to the person who does not hold the auxiliary characteristics expected of incumbents of his status, the status inconsistent, e.g., the black physician. Here Hughes suggests others are in a dilemma as to how to respond; they may act negatively and/or differently from situation to situation. Others do not accord the status inconsistent all the prestige and deference due one of his status. The status inconsistent has an unfavorable self-image because of the negative or dissimilar reactions of others and seeks to counteract this unfavorable self-image by adopting certain kinds of behavior. To adopt this behavior is rewarding because it serves to maintain his self-image. Hence, not to adopt it is costly in several ways.

Essentially, then, we are dealing with a dynamic process. It is a dynamic process because it shows how the individual's structural position in the social organization affects his self-image. The dynamic link between these two is that of the reactions of others to one's status and associated characteristics. The reactions affect how the individual

views himself where positive reactions re-affirm his self-image and negative reactions place his self-image in doubt. In the latter case, the individual will seek to adopt behavior which will avoid the negative reactions of others or make them positive.

Hughes goes on to discuss behavior patterns adopted by status inconsistencies which I have labeled: avoidance, isolation, and social segregation. I will discuss these patterns in detail later.

Conditions of Status Inconsistency

Certain aspects of status inconsistency must be considered before a researcher may legitimately place individuals in the previously-mentioned category of status inconsistencies. First of all, the individual's inconsistent status must be perceived simultaneously by the same people (Malewski, 1966:304). That is, the contradictory stimuli must be perceived by others as contradictory in order for the individual to be in an incongruent status. If the inconsistent stimuli are presented to separate people or groups of people who are not aware of their inconsistency, the individual would not be in an incongruent status. For example, an executive who lives in a squalid room is in an incongruent status only if both his co-workers and neighbors are aware of the living conditions and occupational level, respectively.

Secondly, the individual himself must be aware of his own inconsistent status. If the individual does not get the message from others that his stimuli are discrepant, he will not be aware that they are. If he is not conscious of his inconsistent status, he will not adopt certain behavior in order to alleviate its impact. It does not follow that from a discrepancy between expected auxiliary characteristics and actual auxiliary

characteristics one is necessarily aware of this discrepancy. According to Leonard Broom (1959:431), awareness cannot be a priori imputed from measures of status inconsistency. It must be established in each case.

Third, the discrepant characteristic or status dimension on which the individual ranks low must be important to the position or status to which the individual aspires. Some characteristics carry more weight than others. The most important Hughes calls "master status-determining traits" because they tend to overpower any other characteristic which are associated with it. I would assume from his discussion that the criteria for being a powerful master status-determining trait would have to do with 1) visibility, whether the characteristic is readily discriminated by others, 2) salience to the society as a whole (such as race in the United States), and 3) the prestige of the occupation associated with the auxiliary characteristics. If a discrepant characteristic ranks high on all these criteria, then it could be considered powerful and come under Hughes' category of master status-determining trait. If a discrepant characteristic is unimportant or not salient to the status, it will cause less trouble to others and hence to the incumbent. In a discussion of status inconsistency, therefore, it must be established that the discrepant characteristic is relevant to the status.

Similar to the above condition, how different the inconsistent stimuli are also must be considered. Malewski (1966:305) suggests that the greater the divergence between the stimuli, the more uncertain the individual is as to how others will respond. The tendency is for people to respond to the lower of two status characteristics; therefore the more insecure will become the individual's status. I would suggest that great divergence for Malewski would mean the extreme case of ranking very high

on one or more dimensions and ranking very low on another. To give an example, in Hughes' terms, being a white female physician would not be as divergent as being a black female physician. In the latter case the extremes are reached - the stimuli could not be any more divergent. The black female physician would be more of a status inconsistent than the other and would find it more rewarding to eliminate her incongruence, to follow Malewski's analysis.

And finally, these discrepant characteristics must be shown to be inconsistent with the normative expectations of the environment in which one moves (Malewski, 1966:304). That is, since situations vary, each status must be analyzed in terms of the environment to which its incumbent belongs. What may be inconsistent in one environment may be entirely consistent in another. The black physician living and working entirely in a black neighborhood would be fulfilling the normative expectations of a doctor in that environment. He may never encounter nor be aware of any negative reactions to his inconsistent status - inconsistent in a wider context or in another environment.

To categorize individuals as status inconsistencies, these kinds of considerations must be made. In Chapter IV, through examining these aspects, it will be established that women in the professions fall into the category of status inconsistencies. First, however, we must turn in Chapter III to that special kind of occupation, the profession, in order to establish what we need to know in considering women in such occupations.

CHAPTER III

THE PROFESSIONS

The professions in America are a category of occupations which have as their task "the provision of solutions to life's problems that are beyond the capacity of the ordinary, socialized person" (Moore, 1967:319). Professions are characterized by: high income, prestige and influence; high educational requirements; professional autonomy; service to client; licensure; commitment of members to the profession; social sanction; codes of ethics; cohesion of the professional community; monopoly over task; and intensive adult socialization for recruits. William Goode suggests that a core or generating traits can be abstracted out of such lists of professional characteristics. He finds two such central generating qualities: 1) a basic body of abstract knowledge and 2) the ideal of service (Goode, 1969:276-80).

Briefly, these two core traits may be described as follows. Professional knowledge refers to an abstract body of knowledge and skills which are ideally codified into a body of principles. The knowledge and skills should be applicable to the concrete problems of living. It must be accepted by people in a society that the knowledge can solve the problems and that the problems must be given over to a particular group for solution. The profession itself should help to create, organize, and transmit the knowledge of the solutions and should be accepted as the final arbiter in any disputes over its solutions within its area of competence. Finally, a kind of "mystery" should be possessed by the

profession that is beyond the acquisition of the ordinary man (Goode, 1969:276-80).

The service ideal (or the collectivity orientation) is the norm that technical solutions should be based on the client's needs, not on the professional's nor even on society's. It is the professional, however, who decides on the client's needs. The profession demands real sacrifice from the practitioners ideally and in fact, for example, the requirement of prolonged training. People in society seem to believe that the professional accepts these ideals and actually follows them to some extent. The professional community sets up a system of rewards and punishments such that "virtue pays" (Goode, 1969: 276-80).

Both of these generating characteristics contain many dimensions and each dimension can be considered a continuum; with respect to each, a given occupation may fall somewhere toward the professional pole or not. According to Goode, we have no adequate measure for any of these subdimensions and must simply make assertions about where a given type of job may fall. Certain occupations may rank high on one dimension and low on others, so that to determine whether they definitely are or are not full professions becomes a matter of an educated guess. Some occupations are clearly professional because they rank high on all dimensions, e.g., law and medicine. The difficulty arises further down the continuum where the boundary between professions and non-professions blurs. Nursing, librarianship and teaching would rank relatively high on the service ideal but low on the professional knowledge dimension. Etzioni calls these semi-professions (Etzioni, 1969:v-vi) and Goode claims they never will be professions because their bureaucratic framework prevents it (Goode, 1969:280-81). Barber (1967:23), however, considers the elite

of these and other marginal professions to be professionals; such is not the case with the rank and file in the occupation.

Even if we could accurately rank and measure precisely where each occupation listed in the United States Census Classified Index of Occupations and Industries falls on each of the dimensions and subdimensions of professionalism, there would still be this problem of the dividing line. Where and on what basis is it drawn?

For purposes of our study, it is crucial that we do differentiate between the professions and non-professions. Crucial because many of these semi- or marginal professions are female-dominated occupations. And if data based on predominately female occupations are used to test the hypotheses, as against predominately male occupations, very different kinds of results may be obtained from one or the other.

One way to get around this issue (without really deciding it) is to see what occupations have been classified as professions by sociologists.

The first to discuss professions and categorize them was Alexander Carr-Saunders (in Toren, 1969:141-94) in the 1930's. He divided professions up into four major types: 1) the established professions: law, medicine and the church; 2) the new professions which are based on their own fundamental studies: engineering, chemistry, accounting and the natural and social sciences; 3) semi-professions based on acquisition of technical skill: nursing, pharmacy, optometry and social work; and 4) the would-be professions based on neither theoretical study nor technical skill but rather a familiarity with modern practices in business, administration and current conventions, such as, hospital managers, sales managers, work managers, etc.

William Goode (1969:280-81) describes the four great traditional professions - the person professions: law, medicine, university teaching and the clergy. Architecture is marginal to these four. The new professions which have become professions in the last generation are: dentistry, certified public accounting, clinical psychology and certain high levels of the scientific and engineering fields, such as electronic engineering, cryogenics, aeronautical engineering and so on. The following he predicts will achieve professional status over the next generation: social work, marital counseling and perhaps city planning. Finally, he includes a list of occupations that he predicts will not become professions: none of the medical branches except possibly veterinary medicine, nor nursing, osteopathy, chiropractice, pharmacy, school-teaching, librarianship, business management, public relations and advertising.

Finally, Harold Wilensky (1964:141-42) lists the established professions as law, the clergy, university teaching, military, dentistry, architecture, some areas of engineering, certified public accounting, scientific and engineering fields. Those occupations still in process of becoming professions, according to him, are: social work, correctional work, veterinary medicine, city planning and "executives." His borderline cases are school-teaching, librarianship, nursing, pharmacy and optometry.

From these lists we can observe agreement on certain occupations as professions: medicine, law, university teaching, the clergy, dentistry, architecture, accounting, scientific and engineering fields. City planning, veterinary medicine and social work are considered to be in process by Wilensky, but predicted to achieve professional status by

Goode. Although Carr-Saunders includes social work in the semi-professions, because of the early date of his study, more weight may be given to the later writers. Social work has changed considerably in the last 40 years, and may indeed now be a profession.

Clinical psychology was specifically mentioned only by Goode as being a new profession, but Carr-Saunders included the natural and social sciences in general. From his discussion, Wilensky seems to group the social sciences with the "scientific and engineering fields." Marital counseling was only mentioned by Goode as achieving professional status in the future while correctional work and "executives" were the only ones mentioned by Wilensky as being in process. Hence, these occupations will be omitted from the study for lack of consensus about their status as professions. Nursing, pharmacy, librarianship, school-teaching, and optometry are described as semi-professions (Carr-Saunders), not becoming professions (Goode), and borderline (Wilensky). Consequently, they too will be excluded from consideration as professions. The only other field mentioned was the military. This occupation will of necessity be excluded from consideration because of its discrepant rules of entrance, e.g., men are drafted, women volunteer, and jobs in the military are sex-linked by formal regulation, i.e., women are excluded from front-line combat.

For this study, then, we will look at the following established professions: medicine, law, the clergy, university teaching, dentistry, architecture, certified public accounting, social sciences, natural sciences, and engineering. The three occupations agreed to be "in process" will mark off a lower dividing line, i.e., veterinary medicine, social work, and city planning. Thus, thirteen broad professions are available from which to select professions on which hypotheses can be

tested. It should be noted that these thirteen can overlap, i.e., a university teacher could also be a lawyer, doctor, engineer, social scientist, etc. Differentiation will thus be made purely on the basis of the specific data available./

Now that these thirteen are decided upon, we may look again at the two core generating traits described by Goode (1969:276-80). If it is possible to rank these thirteen professions on these two core traits, then we could select a smaller number of professions over the range of professionalization on which to test the hypotheses.

With regard to the professional knowledge trait, professions could be judged on the abstraction of the body of knowledge, whether it is codified into a body of principles, its applicability to concrete problems of living, the relegation of the problems for solution to a particular group, the professional judgement of competence, and the professional responsibility for organizing and transmitting that knowledge. On the service ideal trait, professions would be ranked according to whether their solutions are based on the client's needs, if the client's needs are determined by the practitioners, if the practitioners undergo some sacrifice, e.g., extensive training, and if the rewards and punishments are in line with the service ideal rather than some other, e.g., the business ideal.

One caution should be noted. In comparing the scientists' profession with that of other professions, designation of the client becomes a problem. Wilensky (1964:141), however, equates the scientist's disinterested search for truth with the professional's technical service ideal and further, "where a scientific discipline has a substantial segment of its adherents fully engaged in applied work, the requisites of a profes-

sion are generally met."

In ranking the 13 professions on the two core dimensions, we can place medicine, law, the clergy and university teaching toward the most professional end, because these four tend to rank high on both the professional knowledge dimension and the service ideal dimension. They have an advanced body of abstract knowledge which is codified into a body of principles which are applicable to problems of clients. They have a socially approved area allocated to them, are their own final judges, and are held responsible for transmitting their knowledge, e.g., medical, law, theological schools and graduate schools in the different disciplines for university professors exist to carry out the transmission function.

After these top four would come architecture, dentistry, certified public accounting and engineering. This group of occupations ranks lower on the knowledge dimension than the top four because their body of knowledge is not as abstract but is more technical. They may not be as tightly controlled by those inside the profession but must accede to authority of laymen in some cases (engineering). On the service ideal dimension, this group of occupations ranks relatively high because they are providing a service to the client based on his needs as they are determined by the practitioners.

The next lower group are the scientists, natural and social, who would rank high on the knowledge dimension. Their knowledge is very abstract. Depending on the discipline, it is generally accepted that their knowledge can solve problems, if not immediate problems, then long-range. They are their own final judges and are organized to transmit their knowledge. The scientists' disinterested search for truth initially

places them high on the service ideal but the lack of extensive applied work ultimately reduces their position on the service ideal.

The last three occupations, veterinary medicine, social work, and city planning, fall below the rest on the continuum of professionalism for several reasons. Veterinary medicine would rank low on professional knowledge because people in society are not willing to grant them autonomy and professional status on the basis of treating animals. The stakes are not high enough (Goode, 1969:296). Social work ranks high on the service ideal but because their professional knowledge lacks definition and high abstraction, because they are not autonomous but work within a bureaucratic framework and are judged by non-professionals, they rank at the low end of professionalism. City planning is at the low end also because their body of knowledge also lacks definition and codification. They are given by the public neither the authority to deal with their area of problems nor the approval that they are best able to solve those problems, compared to governmental agencies and bureaus. They are judged by non-professionals, usually politicians and taxpayers. They do not have a clear-cut, professionally agreed-upon educational program, i.e., people from a variety of backgrounds may become city planners. City planners rank slightly higher on the service ideal, however, in that they are generally collectivity-oriented and decide on solutions based on needs of their client, i.e., what is best for the city.

This overall ranking is illustrated in Table I.

TABLE I
CATEGORIZATION OF OCCUPATIONS ACCORDING TO RANKING
ON THE DIMENSIONS OF PROFESSIONALISM

		Professional Knowledge Dimension			
		HI		LO	
Service Ideal Dimension	HI	medicine law the clergy university teaching A		dentistry architecture certified public accounting B engineering	[veterinary medicine] [social work] [city planning]
	LO	natural sciences social sciences C		D non-professions	

Veterinary medicine, social work and city planning would fall in Category B as all three are slightly higher on the service ideal than the knowledge dimension. But they are still in process of becoming professions and hence mark off the boundary of professions.

To simplify the study, reduce the amount of data and allow greater depth, a selection out of this list of professional occupations will be made. For contrast, I am selecting two traditional professions, two professions on the border, and three in between: medicine, university teaching, dentistry, natural science, social science, social work and veterinary medicine. Data on these seven professions will be analyzed in terms of the inconsistent status of women within their ranks.

CHAPTER IV

WOMEN IN THE PROFESSIONS

Women Professionals as Status-Inconsistent

Applying Hughes' ideas and the analysis of them to women in the professions, we find that women professionals do not hold the expected auxiliary characteristics of professionals. According to Hughes (1945: 354-55), the auxiliary characteristics associated with professions in America have to do with being white, male, Protestant, Anglo-Saxon and of a family of at least moderate social standing. This combination is prevalent in the mass media and everyday conversation. It is particularly prevalent in professional colleagues' images of themselves and of other colleagues.

The woman professional ranks low on the dimension of sex, that is, being female rather than male. She presents discrepant stimuli to others, her colleagues and the public; they do not know whether to respond to her as a woman or as a professional. If others respond to her as a professional and ignore her femaleness, this supports her self-image of being a professional and she finds this favorable. However, if Malewski's assertion is correct that people usually respond to the lower status characteristic, she will more often be faced with the situation where others respond to her femaleness, ignore her professional standing, and refuse her the prestige due her status as a professional. Since she views herself as a professional, her self-image will be impaired when she

is treated as a female. She is caught in a dilemma which may be repeated in every situation unless she is able to prevent it. Since it is impossible to raise the lower of the two discrepant characteristics, i.e., changing from female to male, she may seek to reduce somewhat the higher of the two characteristics, that of professional standing. In this way she would be bringing the two characteristics more in accord with each other - lowering the higher characteristics to be in line with the unchangeable lower characteristic. G. H. Fenchel et al. (1951) noted this tendency to coordinate status characteristics in his concept of the equilibration hypothesis. Whether it is best conceptualized as an equilibrium tendency or not, the status inconsistent does seek to minimize the impact of his inconsistent status by adopting certain kinds of behavior. In the case of the woman professional, this behavior may refer to not aspiring to full professional standing and filling peripheral needs of the profession (which reduces her higher status characteristic or other behavior patterns of avoidance, isolation and social segregation (which serve to manage or avoid situations which bring reactions from others)).

It should be pointed out that we are dealing with the woman professional in her professional role. This is where she is faced with this dilemma of presenting two incongruent stimuli. In her other roles - as wife, mother, consumer, etc. - she is not in an inconsistent status because she is performing what is normatively expected for the female role, particularly as long as she does not mention that she is a professional. But in her professional role, she comes into contact with people who hold different expectations for professional people than that of being a woman. Her colleagues and the public must decide which stimuli

to react to when faced with the situation. And she must decide how to cope with a variety of responses.

We have established so far that the female professional is in an inconsistent status just by being a woman in a male-dominated occupational structure. To categorize legitimately a woman professional as a status inconsistent, however, some further considerations must be made. First, perception of the inconsistent stimuli by others must occur simultaneously. "Others" in this case comprise two groups: her male colleagues and the public. Due to the visibility of being female and being in a professional role with male co-workers, her colleagues cannot be unaware of her discrepant characteristics. They immediately and simultaneously perceive her contradictory stimuli. And colleagues are even more susceptible to this conflict than the public, because colleagues have their own public image to uphold. Their own self-images are thus involved because of possible reactions by the public to their allowing those of inferior status to enter their profession. The public with whom she comes into contact in her professional role are usually clients or patients. Because of her visibility as a female and her performance in a professional role, the public also cannot avoid being aware of the discrepancy in these two characteristics with respect to a male-dominated profession.

The second consideration which must be made has to do with the social-psychological question of awareness. We have said the woman professional is in an inconsistent status by being a woman in a male-dominated occupation. This is perceived by others with whom she associates. Their reactions to her femaleness while she is adhering to professionalism makes her aware of this inconsistency. This awareness is reinforced by other things.

The professional world is usually a man's world where the daily routine and accommodations are geared for men and not for women. The woman professional is continually faced with this reminder that she holds an unexpected characteristic in the role. Further, images of the preferred woman's role in the mass media and from friends, husbands, and relatives continually remind her that she is engaging in a role not normatively expected of her. This is aggravated if there are children involved as in most cases their daily needs are expected to be her responsibility. So it is a fair assumption that she is aware of her incongruity.

The third consideration has to do with the importance or salience of the discrepant characteristics. Sex and professional standing are both master status-determining traits, to use Hughes' terminology, because they rate high on the three criteria of 1) visibility: there could hardly be a more visible characteristic than being a woman and as for professional standing, a professional usually makes his standing known quite readily to be able to cash in on the prestige due him; 2) salience: woman's role - "motherhood and apple pie" - are dear to the hearts of most Americans and the professions play such a vital role in solving people's problems that people are generally pretty concerned about who professionals are and how they act; and 3) prestige: the professions as a group have the highest rank on the prestige scale in the United States (Hodge, et al., 1966:324-25).

The fourth consideration has to do with Malewski's concern with divergence of the contradictory stimuli. If "divergence" means "extremes," professional standing ranks highest on the scale of occupations in the United States, while of the two sexes on the scale of sex, female ranks lower. If all other status dimension rankings are assumed equal, these

two rankings are thus found to be at opposite poles. Consequently, the woman professional is probably more uncertain as to how others will respond and her status is more insecure than would be the case if rankings of these traits were closer together.

Finally, the environment in which the woman professional moves has already been shown to be one in which the inconsistent status of the woman professional is readily apparent. Performing as a professional while exhibiting her femaleness is an acute reality both for her public and her colleagues. Both the public (clients, patients) and her colleagues expect her to be a "him." This is true in most instances. There may be some professional levels within the profession for which sex is not relevant, e.g., assistants, researchers. But generally the normative expectations for each environment should be raised for each profession, however, because the professions vary so greatly from each other.

To summarize, women in professions are in a dilemma because they present two contradictory stimuli, that of being female and that of holding professional standing. Accordingly, others do not know how to respond to her, and more often than not will respond to her femaleness first. This may be damaging to her self-image as a professional; she may have to take steps to maintain her self-image and prevent situations in which this will recur. We have established that the woman professional is a status inconsistent because: others perceive her contradictory stimuli, she is aware of her inconsistent status, there is a strong normative expectation for maleness associated with professional standing, she holds the lowest ranking on the auxiliary characteristic of sex, and in most cases, the environment in which she moves has the normative expectation

of maleness for professionals.

Behavior to Minimize the Impact of Status Inconsistency

The female professional seeks to maintain her self-image as a professional. To do this she adopts behavior which minimizes the impact of her being a woman in a profession. Hughes discussed many kinds of behavior which may be categorized under the following three categories:

1) AVOIDANCE. The public can refuse to patronize a female professional. If this cannot be done, the layman can avoid any non-professional contact with the female professional. The relationship may involve only the amount of time it takes for the professional to extend her services to the client. It may involve highly formal conversation concerning only the specific service being performed. It may involve a set place solely designed for the rendering of the service and no other. The place may also be private and out of view of the public.

Her male colleagues may also act like the client toward the female professional. That is, they may keep their relationship formal and specific, and avoid any non-professional contact with the female professional. They may particularly avoid associating with the female professional in public or where potential or actual clients may see them and judge them.

The female professional uses the avoidance principle also. Where there is a chance for difficult situations to arise with colleagues or the public because of her discrepant status, she may seek to avoid contact with them also. She may also work to keep the relationship formal and specific and avoid any non-professional contact. This may be difficult for her to accept as a professional and she may try to act

like "one of the boys" most of the time, avoiding instances where it is impossible. She may foster the idea that she is really a pal and unlike most other women. She may be jealous of her own status, which may be second-class, and seek to exclude other female professionals from the profession in order to assure her status.

2) ISOLATION. This principle is related to the first and refers to instances where the female professional is isolated from situations which may be difficult because of her inconsistent status. The female professional may choose or is allowed entrance into the profession only in areas which are out of the way of patients or the public. Thus, female professionals are often found in the libraries or laboratories away from and invisible to the public or patients. They are given the prestige of research people but are out of the way. They are "kept apart from the main streams of promotion to power and prestige," according to Hughes. They have the advantage of feeling they are professional, a part of the profession, but in this way, they do not harm the power structure of the inner fraternity. The male colleague-group still retains control by allowing the female professional in part way and only in areas which are outside of the power lines.

3) SOCIAL SEGREGATION. The third principle inferred from Hughes' article has to do with segregating the female professional. That is, the female professional is allowed into the profession only in certain areas within the profession and/or into areas which are in keeping with her role as a woman. Conversely, she may choose to enter certain areas which tend to minimize her inconsistent status because they are more in keeping with her role as a woman. In other words, she is socially segregated into certain acceptable areas and prevented from freely participa-

ting in other areas of her profession, or she segregates herself in this way. For example, the woman lawyer becomes a lawyer only to women clients. The woman physician is usually found in pediatrics treating children, or in gynecology treating female disorders. Or a female personnel manager may be hired to deal with women employees.

Essentially, then, when discussing these three categories of behavior, the focus is on two main relationships: the professional-colleague relationship and the professional-public relationship. Avoidance of the professional by the public, and of the public by the professional. Avoidance of the professional by her colleagues and of her colleagues by the professional. Isolation of the professional by her colleagues and isolation by herself. Social segregation of the professional by the public, by herself and by her colleagues. Each behavior pattern operates slightly differently but the goal of all of them remains the same, i.e., reducing the impact of status inconsistency. These patterns of behavior will now be further detailed and converted into hypotheses.

CHAPTER V

HYPOTHESES

Behavior

The kinds of hypotheses of concern here have to do with behavior, the behavior that women in professions and those with whom they associate adopt in order to reduce the impact of the inconsistent status characteristics.

It should be noted that the behavior taken to reduce the impact of status inconsistency on the part of the status inconsistent may be closely related to behavior taken on the part of those with whom he associates. In some cases these are two sides of the same coin; in other cases, they may not be related. What I am referring to, e.g., in the case of women professionals, is the case where the only opening into the profession for the woman is a position in the library. To say that she chooses the position in the library to avoid contact with the public in order to reduce the effect of status inconsistency would be misleading. It is the only alternative open to her so she has no choice. She may not be trying to minimize her inconsistent status but just trying to get into the profession. On the other hand, it may be those in the profession who are trying to minimize her status inconsistency by reducing her contact with colleagues and the public. It is difficult to differentiate between behavior adopted by the status inconsistent herself and behavior adopted by those around her when the result is the same, i.e., that of reducing

the impact of status inconsistency.

An example of a case of unrelatedness would be that women professionals tend to marry other professionals and many times ones in the same field (Stafford, 1967:317; Ginzberg, 1968:6). She may reduce her inconsistent status by marrying a colleague and close the gap between her role as wife and that of professional. This is behavior taken for the most part on her own, unrelated to and out of control of those in her profession, with the exception of the broader issue of social class.

So for each hypothesis, attention will have to be given to this difficulty of differentiating just whose behavior we are talking about. It should be remembered, though, that many times it is two sides of the same coin.

Hughes discussed the kinds of behavior adopted to reduce the impact of status inconsistency which I have subsumed under three categories of behavior. Hypotheses will be derived from these patterns of behavior. Implicit in every hypothesis, it must be remembered, is the assumption of ceteris paribus, all things being equal.

1) AVOIDANCE. This principle refers to avoiding the effects of status inconsistency of a female professional. On the very basic level, the best way for a woman to avoid the status inconsistency of being a professional in a man's world and for those in the profession to avoid the impact of status inconsistency of a colleague is for the woman not to enter the profession in the first place and for the professionals to prevent women from entering the profession. Consequently, one would expect to find small percentages of women in the professions as compared to men.

H₁: Women tend to be in the professions in smaller proportions than men.

On the next level, avoidance refers to avoiding contact with the female professional by the public and her colleagues, and if not possible, keeping the professional relationship formal and specific. The public, her colleagues and the female professional all strive to avoid situations where there is a chance of a reaction to her inconsistent status. Non-professional contact is avoided.

H₂: Women in the professions do not participate fully in their colleague-group.

2) ISOLATION. This principle refers to the female professional entering activities and being encouraged and/or allowed into activities which are isolated from situations which may be difficult because of her incongruent status. These activities refer to working in libraries or research laboratories apart from the view of patients/clients and the public.

H₃: Women in the professions tend to be in positions isolated from the public and patients/clients.

Since these kinds of positions tend to be in institutions as against private practice, and also for other reasons, we might expect to find more professional women on salary than in private practice. Other reasons include closeness to women's role of being subordinate rather than independent or assertive as in private practice.

H₄: Women in the professions tend to be salaried rather than be self-employed.

According to Hughes, women in the professions are kept apart from the mainstreams of promotion to power and prestige. That is, they are allowed into the profession only part way and where the control of the profession by the inner fraternity is not threatened. In the same manner, women in the professions choose to enter areas which are apart from power

and prestige in order not to threaten the power structure and thereby jeopardize her position.

H₅: Women in the professions tend to be in career lines apart from the mainstreams of promotion to power and prestige.

Related to hypothesis number five would be an examination of women in the same career lines as men. In this case they would still tend to be kept apart from the power structure - the elite levels in the profession.

H₆: If in the same career lines as men, women tend to fill the lower echelons of a profession while the men advance.

3) SOCIAL SEGREGATION. The third principle has to do with the woman professional specializing in certain areas relating to her female role and those in the profession segregating her into certain approved areas away from the rest of the profession.

H₇: Women in the professions tend to specialize in those areas relating to the normatively accepted women's role.

H₈: Women in the professions which have clients or patients tend to deal with clients or patients of equal or lower status.

CHAPTER VI

HYPOTHESES TESTING

Data

The eight hypotheses concerning behavior of women professionals and of those with whom they associate will be tested on data from each of the seven professions discussed in Chapter III. The data are taken from a variety of sources through library research. There is very little information on the professions by sex, income, specific positions and avenues of promotion. It seems it is not of particular interest to each profession to focus on the women within its ranks. Consequently, the data used in this study can at best reflect tendencies within the professions.

Because the data were taken from many sources, they vary in accuracy in reflecting the entire profession and in consistency in comparing one variable from one source of data with another variable measured on another source. For example, statistics on the medical profession in Medical Economics include only private practitioners; they are not broken down by sex. The study on physicians in public health by Kosa and Coker (1965) focuses on only a sample of those who had at one point worked for public health. The Census describes only broad categories of "physicians and surgeons," "salaried" or "self-employed" but does break them down by sex. Statistics on women in the professions by the women's medical organization - the American Medical Women's Association - show the distribution of all women physicians, type of practice, etc. (based

on figures from the AMA), but do not have comparable figures for men. From this picture, the difficulty of contrasting these diverse kinds of data is demonstrated. For each profession, there are similar difficulties to a lesser or greater degree.

However, the diversity of the data is also an asset. If by piecing together data from many sources and ending up with a fairly consistent picture of women's position within all these professions, the conclusions may be given more weight. The possibilities of ending up with many diverse conclusions is great using this method; so if they all point to the same tendency, indeed there must be something there. A good possibility also exists that other investigators looking at similar kinds of questions will come up with the same picture.

Data were obtained from the following sources: the United States Census of the Population; the directories of the professions put out by the professional associations, including rosters of their officials; National Education Association publications concerning salaries in higher education; Women's Bureau publications, in particular the Handbook on Women Workers for different years; studies in journals and books on the position of women within specific professions and on the professions; American Science Manpower, which is a summary of the statistics gathered in the National Register of Scientific and Technical Personnel.

Data were gathered on the seven professions: medicine, university teaching, dentistry, natural and social sciences, veterinary medicine, and social work. The data are presented in the form of tables with the specific source listed below the table. In some cases, comparable data were not available so data on different years were presented simply for contrast, not as an accurate statistical representation for any one year.

Hypotheses Concerning Behavior

A description of how each of the eight hypotheses was tested and a presentation of the findings in the form of tables and comments follows. In the next chapter a thorough discussion of the results will be given.

H_1 : Women tend to be in the professions in smaller proportions than men.

Census data concerning detailed occupations, by sex, is presented in Table II. Since census data tend to show a general overview of the professional picture (professionals are categorized with technical and kindred workers and everyone vaguely related to a profession could fall into that category), other data may be helpful.

The 1969 Handbook on Women Workers (Women's Bureau, 1969) shows that women represented:

- 7% of the physicians in 1968
- 18% of the faculty in colleges and universities in 1965-66
- 22% of the faculty and other professional staff in colleges and universities in 1965-66
- 8% of the scientists in 1966 listed in the National Scientists Register (includes social and natural scientists)

The 1962 Handbook on Women Workers lists women as 59% of all social welfare workers.

The Office of Education report of degrees conferred in the United States lists 3.8 per cent of all graduates receiving Doctor of Veterinary Medicine degrees as women in 1963-64 (Giuliani and Centra, 1968).

H_2 : Women in the professions do not participate fully in their colleague-group.

If women participated fully in their colleague-group, one would expect to find their names on the membership roster and list of officials of the professional organizations associated with the professions in the

TABLE II

PROFESSIONAL, TECHNICAL, KINDRED WORKERS
PER CENT DISTRIBUTION OF
MALES AND FEMALES
1960

Occupation	Total	Male % Total	Female % Total
College Presidents, Professors, Instructors (nec)	178,676	78.0	21.9
Dentists	83,198	97.7	2.3
Natural Scientists	151,130	90.0	10.0
Agricultural Scientists	7,987	94.8	5.2
Biological Scientists	14,057	73.1	26.9
Chemists	84,349	91.2	8.8
Geologists and Geographers	18,931	97.7	2.3
Mathematicians	7,685	73.4	26.6
Physicists	14,014	95.7	4.3
Misc. Natural Scientists	4,107	90.3	9.7
Physicians and Surgeons	229,590	93.2	6.8
Social and Welfare Workers, excluding Group	97,911	37.2	62.8
Social Scientists	57,155	74.8	25.2
Economists	19,348	85.4	14.6
Psychologists	12,126	68.8	31.2
Statisticians and Actuaries	22,134	69.3	30.7
Misc. Social Scientists	3,547	72.9	27.1
Veterinarians	14,906	97.9	2.1
Total "Female" professions: nurses, teachers, librarians, dietitians, social workers	2,332,371	20.8	79.2
TOTAL: all professional, tech- nical and kindred workers	7,335,699	61.9	38.1

nec = not elsewhere classified. U. S. Bureau of the Census, Sub-
ject Reports.

Source: United States Census of Population, 1960, Occupational
Characteristics, PC (2)-7A (Washington, D. C.: U.S. GPO,
1963), Table 201, p. 1-923.

same proportions as women occur in the profession. However, the main professional organizations are difficult to determine (particularly in the sciences and university teaching); statistical information by sex is not included in the directories of the professional associations nor elsewhere; the prevalence of the use of initials prevents independent counting the number of women in the directory. For these reasons, this hypothesis will have to be tested another way.

Listing of officers is included in some directories and journal publications so the percentage of female officers can be examined.

1) Physicians. Of the 9 officers and 15 trustees of the American Medical Association in 1966-67, no female names were listed, and 2 officers and 1 trustee were listed by initials only. If we give one of those initialed names to women, the percentage breakdown would be 96% male and 4% female.

The second largest medical association is the American College of Surgeons. Of its officers and administrators, the number of women are shown in Table III.

2) University Professors. Women represented 22 per cent of the faculty and staff in universities and colleges in 1965-66.

3) Dentists. Women represented 2.3 per cent of the dentists in 1960.

4) Natural Scientists. Women represented 6.7 per cent of the natural scientists in 1966 listed in the National Register.

5) Social Scientists. Women represented 12.8 per cent of the social scientists listed in the National Register in 1966.

6) Veterinarians. The percentage of women as officers of the national and local American Veterinary Medical Associations could not be computed because of the predominate use of initials.

TABLE III

OFFICERS AND ADMINISTRATORS OF THE AMERICAN
COLLEGE OF SURGEONS, BY SEX, 1967-68

Title	Number	Male	Female
Officers, 1967-68	5	5	0
Officers Elect, 1967-68	3	3	0
Administrative Staff	8	8	0
Administrative Associates	3	3	0
Board of Regents	21	21	0
Advisory Council	11 ^a	11	0
Board of Governors	<u>199</u>	<u>198</u>	<u>1</u> ^b
Total	250	249	1
In Per Cent	100.0	99.6	.4

^aInitials of one person.

^bName is Felda Hightower (assume female).

Source: American College of Surgeons, 1968 Directory (Chicago: Lakeside Press, 1968).

TABLE IV

OFFICERS OF THE AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS,
1969, AND OF THE AMERICAN ASSOCIATION
OF JUNIOR COLLEGES, 1970

	Total	Male	Female
<u>American Association of University Professors</u>			
Officers	6	6	0
Council	<u>30</u>	<u>28</u>	<u>2</u>
Total	36	34	2
In Per Cent	100.0	94.5	5.5
<u>American Association of Junior Colleges</u>			
Officers	3	3	0
Board	<u>10</u>	<u>9</u>	<u>1</u>
Total	13	12	1
In Per Cent	100.0	92.3	7.7

Source: AAUP, American Association of University Professors Bulletin, January, 1970.
AAJC, Junior College Journal, 1970.

TABLE V
OFFICERS OF THE AMERICAN DENTAL ASSOCIATION,
BY SEX, 1968

Title	Total	Male	Female
<u>American Dental Association</u>			
Officers	9	9	0
Trustees	14	14	0
Assistant Secretaries	5	5	0
17 Council Chairmen	17	17	0
6 Bureaus	6	6	0
<u>50 State Dental Associations</u>			
All Officers	<u>270^a</u>	<u>268^b</u>	<u>2^b</u>
Total	321	319	2
In Per Cent	100.0	99.4	.6

^aApproximately.

^bThree neutral names, so female is credited with one more.

Source: ADA, 1968 American Dental Directory, pp. R47, R50-R57.

TABLE VI
OFFICERS OF NATURAL SCIENTIFIC ASSOCIATIONS,
BY SEX

Association and Title	Total	Male	Female
<u>Sigma Xi (Scientific Honorary)</u>			
Officers	7	7	0
In Per Cent	100.0	100.0	0.0
<u>American Meterological Society</u>			
Officers	4	4	0
Council	17	17	0
Total	21	21	0
In Per Cent	100.0	100.0	0.0
<u>Society for the Study of Evolution</u>			
Officers	11	11	0
Council	6	6	0
Total	17	17	0
In Per Cent	100.0	100.0	0.0
<u>Geological Society of America</u>			
Officers	4 ^a	3	0
Councilors	13 ^a	12	0
Total	17	16 ^a	1 ^a
In Per Cent	100.0	94.2	5.8
<u>American Forestry Association</u>			
Officers	9	8	1
In Per Cent	100.0	88.9	11.1
<u>American Mathematical Society</u>			
Officers	3 ^a	2	0
Lecturers	2 ^a	1	0
Total	5	4	1 ^a
In Per Cent	100.0	80.0	20.0

^aIncludes initials of one person, credit male and female alternatively.

Sources: American Scientist, Vol. 58, No. 2, Mar-Apr, 1970.
Bulletin of the American Meteorological Society, Vol. 51, No. 2, Feb., 1970.
Evolution - International Journal of Organic Evolution, Vol. 23, No. 4, Dec., 1969.
Geological Society of America Bulletin, Vol. 80, No. 11, Nov., 1969.
American Forests, Vol. 75, No. 1, Jan., 1969.
Bulletin of the AMS, Vol. 75, No. 6, Nov., 1969.

TABLE VII
OFFICERS OF THE SOCIAL SCIENTIFIC ASSOCIATIONS,
BY SEX

Association and Title	Total	Male	Female
<u>American Sociological Association</u>			
Officers	7	7	0
Members at Large	12	11	1
Total	19	18	1
In Per Cent	100.0	94.7	5.3
<u>American Statistical Association</u>			
Board of Directors	12 ^a	10	1
Council Members	32 ^a	29	0
Total	44	41 ^a	3 ^a
In Per Cent	100.0	93.2	6.8
<u>American Economics Association</u>			
Officers	5	5	0
Executive Committee	6	5	1
Total	11	10	1
In Per Cent	100.0	90.9	9.1
<u>American Psychological Association</u>			
Officers	6	6	0
Board of Directors	6	4	2
Total	12	10	2
In Per Cent	100.0	83.3	16.7
<u>American Anthropological Association</u>			
Officers and Board Members	11	9	2
In Per Cent	100.0	81.9	18.1

^aIncludes initials, credit male and female alternately.

Sources: ASA, American Sociological Review, Feb., 1970.
Journal of the American Statistical Association, Vol. 64, No. 326, June, 1969.
The American Economic Review, Vol. LIX, No. 2, May, 1969.
American Psychologist, Vol. 25, No. 2, Feb., 1970, p. 116.
American Anthropologist, Vol. 70, No. 4, August, 1968.

7) Social Workers. Data on officers, by sex, of the professional organization of social workers were not obtainable.

H₃: Women in the professions tend to be in positions isolated from the public and patients/clients.

In order to test this hypothesis, detailed data are necessary on the actual positions held by professionals within each place of employment, the setting of their job and sex. Such information is not available. Data concerning type of employer, primary work activity are available for many professions but these are gross categorizations which do not reveal the location of their activity nor their degree of isolation. So from now on this hypothesis will be omitted from the study. It would be a relevant question for future research on newly gathered data. However, there are no data available to test it at this time.

H₄: Women in the professions tend to be salaried rather than be self-employed.

Within the seven professions, only in two do the practitioners tend to be self-employed, medicine and dentistry. Census figures give a general comparison between salaried and non-salaried within these two professions.

A difficulty arises here in that group practice blurs the lines between self-employed and being on salary. As group practitioners, they could consider themselves either on salary as being paid by the partnership or being self-employed as being a partner and, therefore, paying himself. This difficulty would arise more often in the case of men on salary as opposed to women. Women might be less frequently in group practice than men for the reason that collegueship is so strong in a group practice. The members of a group practice would be more concerned about their image to the public; would have more control over whom they

TABLE VIII

PER CENT DISTRIBUTION OF SALARIED AND
SELF-EMPLOYED DENTISTS AND
PHYSICIANS, BY SEX, 1960

Occupation	Total Number	Male	Female
Dentists:			
Salaried	8,326	8.6	53.4
Self-Employed	<u>78,784</u>	<u>91.4</u>	<u>46.6</u>
Total	87,110	100.0	100.0
Physicians & Surgeons:			
Salaried	80,881	33.3	61.0
Self-Employed	<u>149,425</u>	<u>66.7</u>	<u>39.0</u>
Total	230,307	100.0	100.0

Source: United States Census of Population, Characteristics of Professional Workers, 1960, Table 1 (PC(2)-7E), 1963, p. 1-2.

let into their group; would be more aware because they work so closely that a new kind of person - a woman - would not fit in and could not be counted on to act like a male colleague. From this, one could infer that women listed in the data as being on salary might be in an institutional setting rather than group practice.

In a study of 525 physicians who once worked in the public health field, John Kosa and Robert Coker, Jr. (1965:298) report that at the time of the survey, 73% of the females and 56% of the males worked in salaried positions. In addition women spent on the average about seven-tenths of their total full-time work career in salaried positions in contrast to four-tenths for the men.

Louis Reed (1968:126), in a study on physicians' and dentists' incomes, reported the distribution (Table IX) of self-employed and salaried physicians, dentists and veterinarians based on 1960 census data.

TABLE IX
PER CENT DISTRIBUTION OF SALARIED AND
SELF-EMPLOYED PHYSICIANS, DENTISTS
AND VETERINARIANS, BY SEX,
1960

Occupation	Men	Women
Physicians:		
Salaried	33.2	60.9
Self-Employed	66.8	38.3
Unpaid Family Worker	. . . ^a	.8
Total	100.0	100.0
Dentists:		
Salaried	8.5	54.0
Self-Employed	91.5	42.7
Unpaid Family Worker	.1	3.3
Total	100.1	100.0
Veterinarians:		
Salaried	29.3	35.6
Self-Employed	70.7	42.8
Unpaid Family Worker	-	21.6
Total	100.0	100.0

^a Less than 0.05%.

Source: Louis Reed, Studies of the Incomes of Physicians and Dentists, U. S. Dept. of Health, Education and Welfare, Social Security Administration (Washington, D. C.: 1968), p. 126.

- H₅: Women in the professions tend to be in career lines apart from the main streams of promotion to power and prestige.
- H₆: If in the same career lines as men, women in the professions tend to fill the lower echelons of a profession while the men advance.

These two hypotheses will be tested on the same data for the reason that they deal with two sides of the same question and for the reason that the focus is on the top positions in each profession. A determination will be made concerning if women are in the same career lines as men or separate career lines on the basis of women's chances of reaching these top positions from the positions they generally occupy in the field. If women are in the same career lines as men, a determination will be made concerning chances of promotion to the higher positions on the basis of the percentage of women in those higher levels compared to their proportion in the field.

Top positions will be determined by using indices of highest incomes, prestige specialties, officers of professional associations, top rank in professions which have set levels of promotion, types of employment and primary work activity.

1) Physicians. The top positions of power and prestige in medicine are difficult to determine because there are many different ways of obtaining power and prestige in the profession and no single route. From the literature I would categorize top positions into 1) those making highest incomes, 2) those in prestige specialties, 3) officers of the American Medical Association, 4) heads of medical schools and 5) chiefs of staff of the best hospitals. Data on women in only the first three categories are obtainable. Distribution of women among faculties of medical schools is included, however.

TABLE X

MEDICAL SPECIALTIES, BY MEDIAN INCOMES, PRESTIGE,
PER CENT WOMEN AND PER CENT PHYSICIANS

Specialty (1)	Median Income 1958 (2)	Prestige Rank 1958 (3)	Per Cent Women 1965 (4)	Per Cent Physicians 1962 (5)
Urology	\$29,000	-	.2	2.8
Surgery	27,900	1	.9	20.8
Obstetrics/Gyn.	27,900	4	6.2	9.0
Ophthalmology	24,800	7	3.3	8.4
Dermatology	24,800	12	6.6	2.0
Internal Medicine	22,300	2	4.7	22.0
Pediatrics	20,700	7	19.3	8.1
All Specialists	24,800			100.0*

*Includes 26.9% in other specialties not listed in source for Cols. 1 and 2.

- Sources: (1-2) Seymour E. Harris, The Economics of American Medicine (New York: Macmillan Co., 1964), p. 156.
- (3) Maryland State Planning Commission, Medical Education and Research Needs in Maryland (Baltimore: State Planning Department, 1962), p. 82.
- (4) American Medical Women's Association, The Fuller Utilization of the Woman Physician (Washington, D. C.: Dept. of Labor, 1968), p. 73.
- (5) U. S. Dept. of HEW, Health Manpower Sourcebook, Section 14, "Medical Specialists" (Washington, D.C., 1962), p. 230-33.

TABLE XI
PRIVATE MEDICAL PRACTITIONERS, BY FIELD,
PER CENT WOMEN
1965

Field	Median Income (1)	Per Cent Women (2)
All Surgical Specialties	\$32,950	3.5*
General Surgery	31,540	.9
All Medical Specialties	29,050	6.9
Obstetrics/Gynecology	28,400	6.2
Internal Medicine	25,580	4.7
Pediatrics	24,490	19.3
General Practice	24,420	5.2
All M. D.'s	28,380	6.1

*Anesthesiology accounts for a large % of this.

Source: (1) Medical Economics, December 13, 1965.

(2) The Fuller Utilization of the Woman Physician, p. 73,
except for All Medical Specialties, my computations.
This includes all women physicians, not only private
practitioners.

TABLE XII

PER CENT DISTRIBUTION OF INCOME
FOR PHYSICIANS, BY SEX
1959

Total	Men	Women
Less than \$1,000 to \$4,999	19.5	42.5
\$5,000 to \$9,999	14.6	29.0
\$10,000 to \$14,999	15.3	13.4
\$15,000 or more	<u>50.7</u>	<u>14.9</u>
Total	100.0	100.0
Median Income, 1964	\$25,879	\$16,132

Source: Distribution: Reed, Incomes of Physicians and Dentists, p. 132.

Median Income: Carol Lopate, Women in Medicine (Baltimore: Johns Press, 1968), p. 185.

TABLE XIII

PER CENT DISTRIBUTION CLASS OF EMPLOYMENT
OF PHYSICIANS, BY SEX
1960

Total	Men	Women
Wage or Salary: Private	19.4	30.8
Government	13.8	30.1
Self-Employed	66.8	38.3
Unpaid Family Worker	<u>-</u>	<u>.8</u>
Total	100.0	100.0

Source: Reed, Incomes of Physicians and Dentists, p. 126.

TABLE XIV

TYPE OF PRACTICE OF WOMEN PHYSICIANS, WOMEN AS PER CENT
OF TOTAL PHYSICIANS, PER CENT DISTRIBUTION
OF WOMEN PHYSICIANS AND ALL PHYSICIANS

Type of Practice	No. of Women 1965	Women as % of Total 1965	% Distr. of Women Physi- cians, 1965	% Distr. of Physicians, 1962
Private Practice	8,119	4.5	47.9	67.0
Training Programs	4,036	9.3	23.8	15.0
Full-Time Hospital Svc.	2,236	8.0	13.2	} 15.0
Full-Time Med. School Fac.	699	7.8	4.1	
Preventive Med., Admin- istration, Research	<u>1,864</u>	<u>11.5</u>	<u>11.0</u>	
Total	16,954	6.1	100.0	100.0

Source: The Fuller Utilization of Woman Physician, p. 66, my
computations, and Health Manpower Sourcebook, Section 14,
p. 230.

TABLE XV

MEMBERS OF 25 MEDICAL SPECIALTY BOARDS, 1968

Title	Total	Male	Female
Officers	74	74	0
Board Members	242 ^a	241	1
Other	<u>52^b</u>	<u>50</u>	<u>2</u>
Total	368	365	3
In Per Cent	100.0	99.2	.8

^a2 board members listed as initials, credit 1 female.

^b1 other listed by initials.

Source: Marquis Who's Who, Inc., Directory of Medical Specialists,
Vol. XIII (St. Louis: Von Hoffmann Press, Inc., 1968).

TABLE XVI

FACULTY OF 78 UNITED STATES MEDICAL SCHOOLS,
BY RANK AND SEX, 1965-66

Title	Total	Male		Female	
		Number	%/Total	Number	%/Total
Department Chairman	1,047	1,034	98.8	13	1.2
Professor	2,659	2,554	96.1	105	3.9
Associate Professor	3,855	3,499	91.8	356	9.2
Assistant Professor	5,467	4,774	87.3	693	12.7
Senior Instructor	367	263	71.7	104	28.3
Instructor	2,902	2,132	73.5	770	26.5
Other of Unknown	<u>337</u>	<u>266</u>	<u>78.9</u>	<u>71</u>	<u>21.1</u>
Total	16,634	14,522	87.3	2,112	12.7

Source: Lopate, Women in Medicine, p. 199.

2) University Professors. The top positions of university professors are 1) the top ranks of professors, 2) top administrators, 3) top ranks at top universities, 4) deans of professional schools, and 5) officers of university professors' associations.

Women officers of the American Association of University Professors (Table IV) represent 5.5% of the total, and approximately 20% of the total faculty members. Women as officers of the American Association of Junior Colleges (Table V) account for 7.7% of the total while they represent 32.0% of the total faculty.

TABLE XVII

WOMEN PROFESSORS AS PER CENT OF TOTAL FACULTY BY TYPE
OF INSTITUTION, MEDIAN INCOME AND RANK

Type of Institution	Women as % of Total Faculty 1954-55 (1)	Median Income of Fac. 1965-66 (2)	% Distribution of Faculty among Academic Ranks, 1963-64 (3)									
			All Ranks		Professors		Assoc. Prof.		Asst. Prof.		Instructors	
			M	F	M	F	M	F	M	F	M	F
All Institutions	21.8	\$8,583	80.5	19.5	90.3	9.7	84.0	16.0	80.7	19.3	69.9	30.1
Teachers Colleges	36.8	no data	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Small Private Coll.	33.5	6,845	58.2	41.8	69.5	30.5	56.9	43.1	56.7	43.3	47.9	52.1
Public Colleges	29.5	8,750	76.0	24.0	85.4	14.6	78.7	21.3	74.2	25.8	64.7	35.3
Medium-size Private Colleges	25.6	7,480	66.8	33.2	74.0	26.0	68.7	31.3	67.0	33.0	57.3	42.7
Large Private Coll.	20.4	8,214	79.9	20.1	86.7	13.3	81.8	18.2	79.8	20.2	70.6	29.4
Public Universities	13.7	10,053	83.9	16.1	93.3	6.7	87.4	12.6	83.6	16.4	71.4	28.6
Private Universities	13.7	10,157	87.7	12.3	95.1	4.9	89.7	10.3	87.0	13.0	72.9	27.1

nd: no data.

- Sources: (1) John B. Parrish, "Women in Top Level Teaching and Research," AAUW Journal, January, 1962, 99-107.
 (2) NEA Research Division, Salaries in Higher Education, 1967-68, p. 11.
 (3) NEA, Wanted - More Women in Educational Leadership, p. 14, my computations.

TABLE XVIII

MEAN SALARIES OF FACULTY, BY ACADEMIC RANK,
PER CENT WOMEN IN 18 LEADING UNIVERSITIES

Academic Rank	(1) 1966-67		(2) 18 Top Univer., 1960			(3) 1963-64
	Univer- sities Mean Salary	Other 4-yr. Mean Salary	18 Univ. Women as % Total	8 Lgst. Endowm. Women as % Total	10 Lgst. Enroll. Women as % Total	All Instructors Women as % Total
Professor	\$17,376	\$14,280	3.7	2.6	4.3	9.7
Assoc. Prof.	13,312	11,436	9.3	7.5	10.1	16.0
Asst. Prof.	10,952	9,523	11.4	8.5	12.7	19.3
Instructors	8,452	7,572	16.5	9.8	20.4	30.1
All Ranks	-	-	9.9	6.6	11.1	19.5

- Source: (1) National Center for Educational Statistics, Higher Education Salaries, 1966-67, p. 10.
 (2) Parrish, "Women in Top Level Teaching and Research," p. 102.
 (3) NEA, Wanted - Women in Educational Leadership, p. 14, my computations.

TABLE XIX

MEDIAN SALARIES OF COLLEGE PRESIDENTS AND DEANS,
BY SEX, AND PER CENT DISTRIBUTION OF
INCOME, BY SEX, 1959

Income	Male	Female
Less than \$1,000 to \$4,999	12.2	32.6
\$5,000 to \$9,999	39.2	52.2
\$10,000 to \$14,999	29.5	13.8
\$15,000 or more	19.2	1.4
Total	100.1	100.0
Median Salaries:	\$9,704.00	\$6,009.00

Source: Louis Reed, p. 129, 132.

TABLE XX

MEAN AND MEDIAN SALARIES OF SELECTED ADMINISTRATIVE PERSONNEL
IN FOUR-YEAR AND TWO-YEAR INSTITUTIONS, BY CONTROL

Administrative Position	Mean Salaries 1966-67 4-Year Institutions		Median Salaries 1967-68 2-Year Institutions	
	Public Control	Private Control	Public Control	Private Control
President	\$23,988	\$19,771	\$19,677	\$16,438
Academic Dean	19,461	15,141	15,250	11,688
Director of Planning	15,842	15,245		
Dean of Students	15,553	11,003	13,388	9,313
Director of Instructional Studies	14,555	13,978		
Director of Development	13,787	11,977		
Director of Student Health ^c	13,659	8,316		
Director of Admissions	12,718	9,764	11,304 ^a	8,487 ^a
Director of Athletics	11,800 ^b		10,786	8,563
Dean of Men	11,786	8,979	11,708	7,375
Registrar ^c	11,771	8,678	10,347	7,607
Director of Public Relations	11,543	9,177	10,222	8,875
Dean of Women ^c	11,338	8,011	10,250	7,813
Head Librarian ^c	11,020 ^b		10,439	7,750
Director of Non-Academic Personnel	11,013	10,403		
Director of Food Services ^c	10,433	8,408		

^amean salaries for year 1966-67.

^bapproximate median salaries, computed on basis of 1965-66 and 1967-68 median salaries.

^cgood chances of being a woman in this position.

Source: National Center, Higher Education Salaries, 1966-67, p. 8.
NEA, Salaries in Higher Education, 1967-68, pp. 42, 85-86.

TABLE XXI
 MEDIAN SALARIES OF PROFESSIONAL SCHOOL POSITIONS,
 1967-68

Field of School	Median Salary
Medicine.	\$30,321
Dentistry	26,125
Law	24,458
Veterinary Medicine	24,250
Social Welfare.	23,000
Engineering	22,472
Agriculture	21,650
Pharmacy.	21,125
Fine Arts	20,429
Journalism.	19,083
Home Economics.	18,417
Music	17,583
Physical Education.	17,500
Nursing	16,550

Source: NEA, Salaries in Higher Education, 1967-68, p. 46.

TABLE XXII

WOMEN AS PER CENT OF FACULTY AND
OTHER PROFESSIONAL STAFF,
1959

Type of Position	Women as Per Cent of Total in Positions
Professional Staff for General Administration ^{ab}	21.2
Professional Staff for Student Personnel Services.	44.4
Faculty for Resident Instruction in Degree-Credit Courses.	19.4
Faculty for Resident Instruction in Other Than Degree-Credit Courses	22.8
Extension Staff	25.0
Other Faculty	22.6
Professional Library Staff.	67.2
Professional Staff for Organ- ized Research	11.4
Elementary or Secondary Education	59.3

^a"Women constituted over 1/4th of the administrators in colleges and universities but were concentrated in women's colleges, according to a study made by the National Council of Administrative Women in Education in 1952. Women held about 3/4ths of the administrative positions in women's colleges and 1/5th in co-educational colleges. Positions in which 2/3rds or more of the persons were women included dean of women, director of food service, director of residence, and head librarian. Among other college administrative positions, women were from 1/3rd to 1/2 of the registrars, bursars, auditors or accountants, and directors of student guidance, health, student activities, practice teaching, alumni contact, and student personnel. Over 9/10ths of the women's colleges and about 2/3rds of the co-educational colleges had women members on their governing boards. However, women were less than 1/10th of all board members in co-educational colleges having any women on the board, and just over 1/3rd of those in women's colleges" (1962 Handbook on Women Workers, p. 20).

^bMore recent statistics show that in 1964, among presidents of 4-year colleges and universities, 117 out of 1495 were women (8%) but all but 8 were heads of Catholic women's colleges. Further among presidents of 2-year colleges in 1964, 62 out of 644 were women (10%) but all but 11 were also heads of Catholic women's colleges.

Source: Jessie Bernard, Academic Women (Pennsylvania: Pennsylvania State University Press, 1964), p. 38-39.
NEA, Wanted - More Women in Educational Leadership, p. iv.

3) Dentists. The top positions in dentistry I am assuming from the literature are similar to those of physicians. The main differences are that dentists do not enter specialties as frequently as physicians and hospital association is not as frequent among dentists as physicians. As a group, dentists tend to be in general practice much more than physicians, 89% for dentists in 1958 (Hollinshead, 1961:148) versus 28.5% for physicians in 1960 (Rayack, 1967:42). Data on highest incomes, prestige specialties, officers of the American Dental Association will now be examined.

TABLE XXIII

MEDIAN INCOMES OF DENTISTS BY TYPE OF PRACTICE
AND PER CENT DISTRIBUTION, 1958

Type of Practice	All Dentists		Non-Salaried	% Distr. of Dentists	% Distr. of Women Dentists
	Median Income	Rank	Median Income		
General Practice	\$12,664	5	\$13,005	89.5	58
Specialties	17,250	-	18,983	10.5	31
Orthodontics	20,975	1	23,975	(3.9)	(7)
Oral Surgery	17,350	2	17,850	(2.4)	(0)
Periodontics	16,300	3	.. ^a	(1.0)	(4)
Pedodontics	14,200	4	16,100	(1.5)	(14)
Other	12,500	6	13,600	(1.7)	(6)
Teaching	-	-	-	-	6
Other	-	-	-	-	5

^aToo few replies.

Source: Byron S. Hollinshead, The Survey of Dentistry (Wash., D. C.: American Council on Education, 1961), p. 143, 148, 546.

TABLE XXIV
PER CENT DISTRIBUTION OF MEDIAN INCOMES OF
DENTISTS BY SEX, 1959

Median Income	Per Cent Distribution	
	Men	Women
Less than \$1,000 to \$4,999	12.5	59.2
\$5,000 to \$9,999	25.6	24.8
\$10,000 to \$14,999	25.0	10.3
\$15,000 or more	<u>37.0</u>	<u>5.7</u>
Total	100.1	100.0
Median Incomes:	\$11,858	\$3,768

Source: Reed, p. 129, 132.

TABLE XXV

PRESTIGE OF TYPE OF PRACTICE AND
SPECIALTIES OF DENTISTS,
1958

Rank Order of Practice*	Rank Order of Specialty**	Rank by % Distr. of Total Dentists	Rank by % Distr. of Women
1 Private Practice	1 Oral surgery	2	-
2 Hospital Staff	2 Orthodontics	1	2
3 Dental Teacher	3 Pedodontics	3	1
4 Group Practice	4 Prosthodontics	5	5
5 Armed Forces	5 Periodontics	4	4
6 Research Worker	6 Oral Pathology	-	-
7 Public School System	7 Dental Public Health	-	3
8 U. S. Public Health Service			
9 State/Local Health Department			
10 Factory or Plant			

*As ranked by students.

**As ranked by faculty.

Source: Hollinshead, p. 546.

TABLE XXVI

TYPE OF EMPLOYMENT OF DENTISTS
BY SEX, 1960

Type of Employment	Men	Women
Wage or Salary: Private	5.5	44.1
Government	3.0	9.9
Self-Employed	91.5	42.7
Unpaid Family Worker	.1	3.3
Total	100.0	100.0

Source: Reed, p. 126.

Of the officers of the American Dental Association, .6% were female in 1968, compared to approximately 2.3% women in the total field.

4) Natural and Social Scientists. The natural and social scientists will be examined together. Top positions of scientists are determined by highest incomes, by type of specialty, by type of employer, and by primary work activity. Data on sex for the top positions, by specific title, e.g., heads of research departments, higher levels in non-profit organizations, etc., are not obtainable. So top positions will be inferred, however, from the other indices mentioned above.

TABLE XXVII

MEDIAN ANNUAL SALARY OF ALL SCIENTISTS, WOMEN SCIENTISTS,
BY FIELD AND TYPE OF EMPLOYER, 1966

Field	Total	Women Scientists	Type of Employer						
			Educ. Inst.	Fed. Gov.	Other Gov.	Nonprof. Organ.	Ind. & Bus.	Self- Empl.	Other
Chemistry	\$12,000	8,100	11,000	12,000	9,700	12,000	12,800	15,000	11,500
Earth Sciences	11,400	9,000	11,000	11,800	9,500	12,000	12,000	13,200	11,500
Meteorology	11,700	9,600	12,000	11,700	10,100	14,000	12,000	-	-
Physics	12,500	9,000	11,000	12,900	9,300	14,400	14,600	20,000	10,000
Mathematics	12,000	9,100	11,000	12,900	10,400	14,800	13,500	20,500	11,300
Agricultural Science	10,000	8,500	12,000	10,000	8,700	12,000	10,000	11,000	-
Biol. Sciences	12,000	9,200	13,100	12,500	10,400	14,000	13,900	20,000	11,000
Psychology	11,500	10,000	12,000	13,400	10,400	11,500	15,100	20,000	11,500
Statistics	12,800	10,500	13,000	14,300	10,800	13,800	13,000	-	-
Economics	13,100	10,300	13,000	14,700	13,000	16,200	15,300	18,000	15,000
Sociology	11,300	9,600	12,500	14,700	11,500	14,000	15,000	-	14,000
Anthropology	11,500	9,600	13,000	15,800	-	-	-	-	10,600
Linguistics	10,000	8,600	10,500	12,000	-	6,000	13,800	-	-
Other	12,000	-	10,600	13,400	10,700	14,500	13,000	17,500	10,900
All Fields	12,000	9,000	12,000	12,100	9,900	13,000	13,000	17,000	11,500

Source: American Science Manpower 1966, pp. 52, 91-92.

TABLE XXVIII

MEDIAN ANNUAL SALARIES OF SCIENTISTS, PRIMARY WORK ACTIVITY
AND TYPE OF EMPLOYER, 1966

Primary Work Activity	Total	Type of Employer							
		Educ. Inst.	Fed. Gov.	Other Gov.	Nonprof. Organ.	Ind. & Bus.	Self- Empl.	Other	No Report
All Fields	12,000	12,000	12,100	9,900	13,000	13,000	17,000	11,500	12,000
Research & Development ^a	12,000	11,700	11,700	9,800	12,500	12,500	15,000	10,600	12,000
Basic Research	12,000	11,400	12,000	10,000	12,000	13,400	-	10,500	12,000
Applied Research	12,100	12,000	11,700	9,600	13,000	12,600	15,000	11,500	13,300
Management or Admin. ^b	15,600	16,600	14,200	10,800	16,800	16,500	15,000	14,000	16,200
Mngmt. or Adm. of R & D	16,800	16,200	16,200	12,000	18,200	17,000	17,000	15,700	17,500
Teaching	9,800	11,500	11,700	9,800	15,000	11,500	-	8,400	10,400
Production & Inspection	10,500	9,000	9,900	8,400	11,100	10,800	15,000	9,800	10,000
Other	11,500	11,000	11,000	9,000	10,900	12,000	18,000	12,000	12,000

^aIncludes development and design.

^bIncludes management and administration, other than Research and Development.

Source: American Science Manpower 1966, p. 96.

TABLE XXIX

MEDIAN ANNUAL SALARY OF SCIENTISTS BY TYPE OF
EMPLOYER AND PER CENT DISTRIBUTION,
1966

Type of Employer	Median Salary	% Distr. Scientists	% Distr. Women Scientists
Educational Institutions	\$12,000	36	48
Federal Government	12,100	10	8
Other Government	9,900	3	5
Nonprofit Organizations	13,000	4	6
Industry and Business	13,000	35	13
Self-Employed	17,000	2	2
Other		6	2
All employers	\$12,000	100	100

Source: American Science Manpower, p. 43.

TABLE XXX

MEDIAN SALARY OF SCIENTISTS BY PRIMARY WORK
ACTIVITY AND PER CENT DISTRIBUTION,
1966

Primary Work Activity	Median Salary	% Distr. Scientists	% Distr. Women
Research and Development	\$12,000	33	30
Basic Research	(12,000)	(16)	(16)
Applied Research	(12,100)	(13)	(12)
Management or Administration	15,600	21	7
Mngmt. or Adm. of R & D	(16,800)	(10)	(3)
Teaching	11,500	18	26
Production and Inspection	10,500	7	4
Other		11	19
All Activities	\$12,000	100	100

Source: American Science Manpower, p. 44.

5) Veterinarians. Top positions of veterinarians are determined by highest incomes and prestige specialties. The sex of officers of the American Veterinary Medical Association could not be determined because of the prevalence of using initials in the directory.

TABLE XXXI

PER CENT DISTRIBUTION OF VETERINARIANS
BY INCOME AND SEX, AND
MEDIAN INCOMES, 1959

Income	Male	Female
Less than \$1,000 to \$4,999	18.7	43.2
\$5,000 to \$9,999	37.6	56.9
\$10,000 to \$14,999	25.3	0
\$15,000 or more	18.3	0
Total	100.0	100.0
Median Incomes:	\$8,882	\$5,500

Source: Reed, p. 129, 132.

TABLE XXXII

PER CENT DISTRIBUTION OF VETERINARIANS
BY CLASS OF EMPLOYMENT AND SEX, 1960

Class of Employment	Male	Female
Wage or Salary: Private	16.7	21.2
Government	12.6	14.4
Self-Employed	70.7	42.8
Unpaid Family Worker	0	21.6
Total	100.0	100.0

Source: Reed, p. 126.

TABLE XXXIII

PER CENT DISTRIBUTION OF MSU VETERINARY GRADUATES
BY SPECIALTY AND SEX, 1939-1965

Specialty	Men (n=953)		Women (n=50)	
	1939-52	1953-65	1939-52	1953-65
Large animal (including equine)	4	7	0	0
Small animal	25	35	33	66
Mixed (large and small)	31	28	5	10
Regularoty Vet. Med.	10	7	5	3
Research and Training	9	8	5	14
Mngmt., Sales and Svc.	4	2	0	0
Laboratory animal	1	1	9	0
Other (specific type of specialty)	13	13	0	3
Retired	1	0	0	0
Employed outside vet.	1	1	0	0
Not practicing at present	0	0	38	3
No response	<u>1</u>	<u>1</u>	<u>5</u>	<u>0</u>
Total	100	100	100	100

Source: Betty Giuliani and John Centra, "The Woman Veterinarian," p. 973.

6) Social Workers. The top positions among social workers are the top ranks within their system. Data on any higher levels among social workers were not obtainable. Table XXXIV shows the distribution of men and women among the levels of social work and their median incomes. Information on age is included in this analysis to show that not only are men predominating in the executive positions, but also that they are doing so at younger ages than women.

TABLE XXXIV
SOCIAL WORKERS, EXCLUDING
RECREATION WORKERS
1960

Position	Median Incomes		% Distr.		% Total		Median Age	
	M	F	M	F	M	F	M	F
Direct-Service Position	\$5,060	\$4,590	53	68	35	65	-	-
Case Worker	-	-	(41)	(59)	-	-	35	43
Group Worker	-	-	(7)	(5)	-	-	32	36
Other Worker	-	-	(5)	(3)	-	-	38	46
Supervisory Position	6,520	6,050	9	9	40	60	41	48
Executive Position	7,270	5,440	29	15	58	42	44	51
Other Position	6,310	6,300	8	8	42	58	43	49
All Positions	\$5,760	\$4,940	100	100	43	57	-	-

Source: Salaries and Conditions of Social Workers in 1960, p. 24, 80.
1962 Handbook on Women Workers, p. 92, for median incomes.

H₇: Women in the professions tend to specialize in those areas relating to the normatively accepted woman's role.

H₈: Women in the professions which have clients or patients tend to deal with clients or patients of equal or lower status.

Women's prescribed role in the United States refers to that of being a mother, nurturing children, being a wife and helping her husband. If she must work, she is encouraged to pursue teaching, librarianship, nursing, secretarial work and service work, which are related to her nurturing, caring, helping (all people-oriented) and subordinate roles of wife and mother. If a woman enters a profession, one would expect to find her in these kinds of positions within the profession more often than in other kinds of positions and more often than men, according to hypothesis number 7. She would be expected to deal with those of equal or inferior status, such as women and children rather than men. Hypothesis number 8 will be examined in relation to women and children patients/clients.

These two hypotheses are grouped together because they will be examined, using the same data - data referring to specialization within the professions, type of employment and kind of activity.

1) Physicians. For the type of employment for women physicians compared to men physicians, see Table XIII, p. 51.

TABLE XXXV

MEDICAL SPECIALTIES OF WOMEN PHYSICIANS
1965

Specialty	% Distri. Women Physicians	Women as % of Total Physicians in Specialties
General Practice	25.4	5.2
Pediatrics	17.9	19.3
Psychiatry	11.9	11.7
Internal Medicine	10.6	4.7
Anesthesiology	7.2	14.2
Obstetrics and Gynecology	6.2	6.2
Pathology	5.0	9.9
Radiology	2.3	4.1
Public Health and Prev. Medicine	2.2	16.0
Ophthalmology	1.7	3.3
General Surgery	1.5	.9
Administrative Medicine	1.4	6.0
Dermatology	1.3	6.6
Child Psychiatry	1.0	21.3
Other (12 specialties, all less than 1.0%)	4.4	-
Total	100.0	6.1

Source: AMWA, The Fuller Utilization of the Woman Physician,
p. 73.

A study of the female physician in public health by Kosa and Coker (1965:300) based on a sample of 525 physicians who at one point worked in public health, contrasts the per cent of the physicians who were currently working in three specialties. The results are shown in the next table.

TABLX XXXVI

PER CENT PHYSICIANS IN SELECTED
SPECIALTIES, BY SEX

Specialty	Male	Female
Pediatrics	7	23
Public Health and Preventive Med.	22	39
Psychiatry	7	18
All other fields	64	20
Total	100	100

Source: Kosa and Coker, p. 300.

For type of practice of physicians by sex, see Table XIV, p. 52.

2) University Professors.

TABLE XXXVII

WOMEN AS PER CENT OF TOTAL FULL-TIME TEACHERS,
BY SPECIFIC TEACHING FIELD, 1954-55

Field	% Total	Field	% Total
Agriculture	4.1	Home Economics	96.4
Biological Sciences	14.9	Industrial Arts	6.9
Physiology	28.0	Journalism	8.2
Business & Commerce	20.2	Law	1.7
Education	36.9	Library Science	71.5
Engineering	.5	Mathematics	14.2
English	28.7	Philosophy	4.9
Fine Arts	26.1	Physical and Health Ed.	38.5
Foreign Languages	27.8	Physical Sciences	6.0
Geography	15.8	Psychology	13.4
Health Services	46.9	Religion	7.4
Nursing	98.4	Social Sciences	10.7
Public Health	45.4	Others	38.9
		All Fields	22.0

Source: NEA, Teacher Supply and Demand, 1954-55, p. 44.

TABLE XXXVIII

PER CENT DISTRIBUTION OF WOMEN FACULTY MEMBERS IN 20
LEADING UNIVERSITIES, BY DISCIPLINE, 1960

Discipline	% Distribution of Women	
	10 Hi. Endowment Universities N = 350	10 Hi. Enrollment Universities N = 934
All Disciplines	100.0	100.0
Physical Sciences	3.4	1.9
Astronomy	0.3	0.2
Chemistry	1.7	0.9
Geology	0.3	0.1
Physics	1.1	0.7
Biological Sciences	10.9	5.9
Anatomy	2.6	1.3
Bacteriology	1.7	0.6
Biochemistry	2.0	0.2
Botany	0.6	0.7
Physiology	1.4	1.0
Zoology	0.6	0.7
Social Sciences	9.7	5.4
Anthropology	0.9	0.1
Economics	2.6	1.9
History	3.1	1.6
Political Science	1.4	6.6
Sociology	1.7	1.1
Humanities	19.4	19.0
English and Literature	5.1	6.1
Foreign Language and Literature	8.3	5.1
Fine and Applied Arts	3.4	1.8
Music	2.0	5.4
Philosophy	0.6	0.5
Selected Other Fields		
Education	27.1	25.3
Engineering	0.3	0.3
Geography	0.0	0.2
Home Economics	20.6	33.2
Law	0.6	0.2
Library Science	2.6	2.0
Mathematics	2.3	4.2
Psychology	3.1	2.5

Source: Parrish, p. 107.

3) Dentists. As was mentioned earlier, general practice is more predominant among dentists than physicians. The specialties are not as significant a part of dentistry as medicine. However, women dentists specialize more than men, proportionately. See Table XXVI, p. 61, for type of employment of dentists, and Table XXIII, p. 59, for type of practice and specialties.

4) Natural and Social Scientists.

TABLE XXXIX

PER CENT DISTRIBUTION OF SCIENTISTS
BY FIELD AND SEX,
1966

Field	Men	Women	Women as % Total
Chemistry	27	25	8
Earth Sciences	8	3	3
Meteorology	3	1	2
Physics	13	5	3
Mathematics	9	12	10
Agricultural Sciences	4	.2	.4
Biological Sciences	12	16	11
Psychology	7	21	22
Statistics	1	2	10
Economics	6	3	4
Sociology	1	3	16
Anthropology	-	1	19
Linguistics	-	1	21
Other	7	7	8
Total, All Fields	100	100	8

Source: American Science Manpower 1966.

TABLE XL

PER CENT DISTRIBUTION OF SCIENTISTS BY FIELD,
SEX AND TYPE OF EMPLOYER
1966

Type of Employer	% Distr. of Total	% Distr. of Men	% Distr. of Women
All Types	100.0	100.0	100.0
Educational Institutions	36.0	34.9	47.9
Federal Government	10.2	10.4	7.8
Other Government	3.4	3.3	5.0
Military	2.4	2.6	.3
Non-profit Organizations	4.0	3.8	6.5
Industry and Business	34.6	36.5	13.2
Self-Employed	2.0	2.0	2.2
Other	.5	.5	1.0
Not Employed	6.1	5.3	14.9
No Report	.7	.7	1.2

Source: American Science Manpower 1966, pp. 79-81, 200, my computation.

TABLE XLI

PER CENT DISTRIBUTION OF SCIENTISTS BY FIELD,
SEX AND PRIMARY WORK ACTIVITY
1966

Primary Work Activity	% Distr. of Total	% Distr. of Men	% Distr. of Women
All Activities	100.0	100.0	100.0
Research and Development	33.3	33.6	30.0
Basic Research	(15.8)	(15.7)	(16.3)
Applied Research	(12.8)	(12.9)	(11.7)
Management or Administration	20.6	21.8	6.7
Mngmt. or Adm. of R & D	(10.1)	(10.7)	(2.7)
Teaching	18.4	17.7	26.2
Production and Inspection	6.8	7.0	3.7
Other	11.0	10.8	13.6
Not Employed	6.1	5.3	14.9
No Report	3.9	3.8	4.8

Source: American Science Manpower 1966, pp. 85-87, 201, my computation.

TABLE XLII

PER CENT DISTRIBUTION OF WOMEN SCIENTISTS
BY FIELD AND TYPE OF EMPLOYER
1966

Field	Total Women		Type of Employer									
	No.	%	Educ. Inst.	Fed. Gov.	Other Gov.	Military	Nonprof. Organ.	Ind. & Bus.	Self-Empl.	Other	Not Empl.	No Report
All Fields	20,164	100.0	47.9	7.8	5.0	.3	6.5	13.2	2.2	1.0	14.9	1.2
Chemistry	4,995	100.0	35.6	8.5	1.9	.2	6.0	24.5	.4	.6	21.4	1.0
Earth Sciences	654	100.0	42.2	16.2	5.4	.8	2.3	9.5	3.8	.3	18.8	.8
Meteorology	129	100.0	25.6	30.2	3.1	17.8	5.4	6.2	-	-	11.6	-
Physics	981	100.0	49.8	8.6	.4	-	3.6	12.8	.7	.3	22.7	1.0
Mathematics	2,395	100.0	51.4	7.1	1.4	.2	3.3	22.0	.8	.6	12.6	.7
Agric. Sciences	50	100.0	48.0	14.0	18.0	-	-	4.0	6.0	-	10.0	-
Biol. Sciences	3,347	100.0	58.2	8.3	4.0	.4	8.4	5.9	1.1	.6	12.0	1.2
Psychology	4,233	100.0	48.5	4.4	13.4	.2	10.6	1.9	7.0	2.0	10.0	1.8
Statistics	307	100.0	30.0	26.7	7.5	-	4.9	19.5	1.0	1.0	9.1	.3
Economics	571	100.0	43.4	18.0	7.4	-	3.5	12.3	1.1	.4	12.8	1.2
Sociology	581	100.0	71.8	4.5	4.3	-	4.1	1.0	1.4	2.2	8.4	2.2
Anthropology	171	100.0	73.7	1.8	1.8	-	3.5	-	2.9	5.3	9.9	1.2
Linguistics	267	100.0	60.7	3.4	1.1	-	9.0	3.4	.7	.4	19.5	1.9
Other	1,483	100.0	-	-	-	-	-	-	-	-	-	-

Source: American Science Manpower 1966, from Table A-61, p. 200.

TABLE XLII. A

PER CENT DISTRIBUTION OF ALL SCIENTISTS
BY FIELD AND TYPE OF EMPLOYER
1966

Field	Total Scientists			Type of Employer									
	Number	% Women	% Total	Educ. Inst.	Fed. Gov.	Other Gov.	Military	Nonprof. Organ.	Ind. & Bus.	Self-Empl.	Other	Not Empl.	No Report
All Fields	242,763	8	100.0	36.0	10.2	3.4	2.4	4.0	34.6	2.0	.5	6.1	.7
Chemistry	65,917	8	100.0	22.4	6.0	1.3	1.0	2.9	56.2	.8	.5	8.1	.7
Earth Sciences	19,749	3	100.0	23.7	13.5	4.5	1.3	1.2	41.7	7.7	.3	5.7	.5
Meteorology	6,283	2	100.0	12.9	29.2	1.8	37.4	3.1	10.5	.3	.4	3.9	.4
Physics	29,130	3	100.0	45.1	10.8	.4	2.0	3.5	28.4	.4	.2	8.7	.6
Mathematics	22,806	10	100.0	40.8	6.2	1.2	2.0	4.7	39.0	.6	.5	4.4	.5
Agric. Sciences	10,038	.4	100.0	25.4	36.8	16.7	.5	1.1	15.2	1.9	.2	1.9	.4
Biol. Sciences	29,633	11	100.0	56.2	11.1	3.6	2.7	7.4	10.7	2.3	.5	4.5	1.0
Psychology	19,027	22	100.0	51.5	7.2	11.6	1.1	9.0	7.1	5.9	1.4	3.9	1.3
Statistics	3,042	10	100.0	30.8	20.2	4.1	1.4	4.9	33.3	.8	.8	3.3	.5
Economics	13,150	4	100.0	42.6	10.3	3.7	.7	3.5	31.0	1.7	.3	5.5	.7
Sociology	3,640	16	100.0	75.5	4.5	3.9	.3	5.8	2.4	.7	1.4	3.7	1.9
Anthropology	919	19	100.0	78.5	4.5	1.5	.1	3.6	.2	.7	5.9	4.5	.7
Linguistics	1,269	21	100.0	70.1	4.6	1.4	.3	6.6	3.4	.3	.6	11.5	1.2
Other	18,160	8	100.0	26.0	5.8	1.8	2.0	2.5	52.9	1.7	.7	6.0	.6

Source: American Science Manpower 1966, from Table A-12, pp. 79-81.

TABLE XLIII

PER CENT DISTRIBUTION OF WOMEN SCIENTISTS
BY FIELD AND PRIMARY WORK ACTIVITY
1966

Field	Total Women		Primary Work Activity									
			Res. and Dev.			Mngmt. & Admin.		Teach- ing	Prod. & Insp.	Other	Not Empl.	No Report
	No.	%	Total ^a	Basic Res.	Appl. Res.	Total ^b	of R & D					
All Fields	20,164	100.0	30.0	16.3	11.7	6.7	2.7	26.2	3.7	13.6	14.9	4.8
Chemistry	4,995	100.0	40.2	27.4	10.4	3.8	1.7	14.3	8.3	5.7	21.4	6.2
Earth Sci.	654	100.0	23.2	14.7	8.3	5.4	2.4	28.1	.9	19.1	18.8	4.4
Meteorology	129	100.0	34.1	20.9	13.2	7.8	2.3	8.5	-	34.1	11.6	3.9
Physics	981	100.0	35.8	23.1	10.6	3.0	1.7	29.4	1.2	4.2	22.7	3.8
Mathematics	2,395	100.0	24.1	4.6	11.0	5.4	2.5	41.0	6.9	6.8	12.6	3.3
Agric. Sci.	50	100.0	16.0	6.0	10.0	16.0	6.0	12.0	36.0	8.0	10.0	2.0
Biol. Sci.,	3,347	100.0	39.0	29.4	9.4	6.1	2.5	29.0	2.2	6.7	12.0	5.0
Psychology	4,233	100.0	25.2	5.4	19.6	10.2	2.8	17.2	-	33.3	10.0	4.0
Statistics	307	100.0	37.8	7.5	24.1	12.4	8.8	16.6	9.5	10.7	9.1	3.9
Economics	571	100.0	23.8	8.9	14.2	15.1	8.6	31.7	1.8	10.9	12.8	4.0
Sociology	581	100.0	21.3	14.1	7.2	12.4	7.6	48.7	-	4.1	8.4	5.0
Anthropology	171	100.0	22.2	21.1	1.2	4.7	4.1	52.0	-	6.4	9.9	4.7
Linguistics	267	100.0	16.9	10.9	6.0	5.6	2.6	45.3	-	9.0	19.5	3.7
Other	1,483	100.0	5.1	1.5	7.2	6.7	2.2	44.9	16.9	20.0	15.6	6.0

^aIncludes Development and Design.

^bIncludes Management and Administration, other than R & D.

Source: American Science Manpower 1966, from Table A-62, p. 201

TABLE XLIII A

PER CENT DISTRIBUTION OF ALL SCIENTISTS
BY FIELD AND PRIMARY WORK ACTIVITY
1966

Field	Total Scientists			Prime Work Activity									
	Number	% Women	% Total	Res. and Dev.			Mngmt. & Admin.		Teaching	Prod. & Insp.	Other	Not Empl.	No Report
				Total ^a	Basic Res.	Appl. Res.	Total ^b	of R & D					
All Fields	242,763	8	100.0	33.3	15.8	12.8	20.6	10.1	18.4	6.8	11.0	6.1	3.9
Chemistry	65,917	8	100.0	41.1	19.4	14.2	19.7	12.5	9.1	13.4	3.6	8.1	5.0
Earth Sci.	19,749	3	100.0	18.8	10.3	8.4	17.6	6.0	15.8	2.8	35.7	5.7	3.6
Meteorology	6,283	2	100.0	20.5	10.4	9.7	25.3	7.5	4.9	1.2	40.6	3.9	3.7
Physics	29,130	3	100.0	50.0	28.6	15.7	14.3	10.5	20.3	.8	2.9	8.7	3.1
Mathematics	22,806	10	100.0	31.1	.9	12.4	19.3	9.8	27.6	7.4	7.8	4.4	2.3
Agric. Sci.	10,038	.4	100.0	25.1	6.8	16.9	49.9	10.8	8.0	3.1	7.9	1.9	4.1
Biol. Sci.	29,633	11	100.0	41.0	27.9	12.6	16.3	9.2	24.5	1.8	7.5	4.5	4.4
Psychology	19,027	22	100.0	23.8	8.4	14.8	18.5	6.1	22.0	.1	28.7	3.9	3.0
Statistics	3,042	10	100.0	29.0	6.5	18.6	24.1	12.0	18.4	12.6	10.2	3.3	2.5
Economics	13,150	4	100.0	17.3	4.9	11.3	28.5	9.9	28.3	8.5	8.3	5.5	3.5
Sociology	3,640	16	100.0	26.8	13.1	8.6	17.5	9.1	48.9	.3	4.0	3.7	3.7
Anthropology	919	19	100.0	22.1	20.1	2.0	11.9	7.5	52.1	-	5.2	4.5	4.2
Linguistics	1,269	21	100.0	18.4	12.0	6.3	12.2	3.5	49.5	-	5.7	11.5	4.7
Other	18,160	8	100.0	19.0	2.0	7.4	25.3	11.9	19.9	14.8	10.7	6.0	4.3

^aIncludes Development and Design.

^bIncludes Management and Administration, other than R & D.

Source: American Science Manpower 1966, from Table A-14, pp. 85-87.

5) Veterinarians. Specialization of women veterinarians centers around small animals, research and teaching, according to Giuliani and Centra (1968:975). For their list of specialties and the distribution, see Table XXXIII, p. 67.

TABLE XLIV

PER CENT DISTRIBUTION OF VETERINARIANS
BY TYPE OF EMPLOYMENT AND SEX,
1960

Type of Employment	Male	Female
Wage or Salary: Private	16.7	21.2
Government	12.6	14.4
Self-Employed	70.7	42.8
Unpaid Family Worker	<u>0</u>	<u>21.6</u>
Total	100.0	100.0

Source: Reed, p. 126.

6) Social Workers.

TABLE XLV

PER CENT DISTRIBUTION OF SOCIAL WORKERS
IN DIRECT SERVICE POSITIONS,
EXCLUDING RECREATION,
1960

Field	Total	Men	Women
Caseworkers	<u>84</u>	<u>77</u>	<u>87</u>
Family Service	(48)	(45)	(50)
Child Welfare	(20)	(20)	(20)
Psychiatric Social Worker	(8)	(8)	(7)
Medical Social Worker	(4)	(2)	(6)
School Social Worker	(3)	(2)	(4)
Group Workers	10	14	7
Other Workers	<u>7</u>	<u>9</u>	<u>5</u>
Recreation	. . ^a	. . ^a	. . ^a
Community Organization	(3)	(4)	(2)
Other	<u>(3)</u>	<u>(4)</u>	<u>(3)</u>
Total	100.0	100	100

^a Less than 0.5%.

Source: Salaries and Conditions of Social Workers in 1960.

CHAPTER VII

DISCUSSION

H₁: Women tend to be in the professions in smaller proportions than men.

From the data it is safe to say women are represented in the professions in smaller proportions than men, except for social work, which is in process of changing to professional standing and may be in process of reversing the proportion of men to women. In Table II, p. 38, data from the 1960 Census show that women represent from 2.1% to 25.2% of those in the six top professions with which we are concerned. In the seventh, social work, they predominate with 62.8% of the total (57% of the total, if group workers are included). Social work is one of those considered "in process" of becoming a profession and it is interesting to note that it may also be "in process" of becoming a male-dominated profession. In the decade between 1950 and 1960 men in social work have increased by 84% in all positions, while women have increased 23%. Men have been encouraged to enter social work, have been promoted at an earlier age than women, and make more money than women at the same level.

One of the reasons women are in smaller percentages in the professions than men may be that they are avoiding the impact of having an inconsistent status. The Census data show that 66% of the women in "Professional, Technical and Kindred Workers" are in the five traditional "female" occupations of nursing, teaching, dietetics, librarianship and social work. Women account for 79% of those working in these combined

fields. Men predominate in all other professional and semi-professional fields.

H₂: Women in the professions do not participate fully in the colleague-group.

No data could be located to show the percentage of women in the professions contrasted with their participation rate in professional organizations. There are some indications in the literature that professionals attempt to restrict participation by women, using a 5% quota system for women in medical schools, and in using stricter selection criteria for women applicants to medical school than for men (Kosa and Coker, 1965:295).

In examining women as officers of professional organizations, for physicians, women were represented as approximately 4% of the officers of the American Medical Association in 1966-67, and .4% of the officials of the American College of Surgeons in 1968. The one female listed there was in the lowest echelon of officers, i.e., the board of governors. For professors, women represented 5.5% of officials in the American Association of University Professors (AAUP) in 1969 with the two women on the council rather than as officers. In the American Association of Junior Colleges (AAJC) one woman on the board represented 7.7% of the top positions in 1970. These figures contrast with women representing approximately 22% of faculty members in colleges and universities.

In the American Dental Association, one woman was treasurer of a local association and the most they can represent is .6%, which contrasts with women representing 2.3% of all dentists.

For the professional associations of the natural scientists, a few of the many associations were examined (see Table VI, p. 43). Women

were not represented among Sigma Xi officers, compared to women's 8% representation of all scientists. In the one biology association, Society for the Study of Evolution, no women were officers while they do account for 11% of all biologists. No women officers in the American Meteorological Society were found, compared to their 2% representation in that field. No female names appeared in the American Mathematical Society or the Geological Society of America, but because of names with initials, they could represent 20.0% and 5.8% of the officers, respectively. These figures are greater than women's 10% and 3% of those in mathematics and earth sciences. In the American Forestry Association, one female name appeared on the list of officers, which represents 11.1% of the officers. Women are found in very small numbers in agricultural sciences and I do not have the breakdown for forestry, specifically. It appears that women in forestry may participate quite fully in their colleague-group.

For the social scientists (Table VII, p. 44), women were represented on the lists of officers of professional associations in greater numbers than in the natural sciences but were not in greater proportion to their representation in each field. One woman sociologist accounted for 5.3% of the officers in contrast to women's 16% representation in the field. Two women on the board of directors of the American Psychological Association accounted for 16.7% of the officers compared to their 22% in psychology. The most women could represent among officers of the American Anthropological Society and the American Statistical Association is 18.1% and 6.8% respectively. Women anthropologists represent 19% of all anthropologists and women statisticians represent 10% of those in statistics. Finally, the American Economics Association listed

one woman on the executive committee, which accounts for 9.1% of all the officers, compared with women as 4% of all economists. As with forestry and maybe mathematics and geology, women economists may participate fully in their colleague-group, as tested by women attaining the top positions of the professional organizations.

The veterinary medical association used initials and could not be included in this discussion. And a list of officers could not be obtained on the professional organization of social workers.

So it appears that the tendency is for those in the professional associations to elect men rather than women in most cases as their officers and as members of councils and boards. Exceptions were found, however, in forestry and economics, and maybe in mathematics and geology, where women attained top positions within the professional association in greater proportion than their representation in the field.

H₃: Women in the professions tend to be in positions isolated from the public and patients/clients, where relevant.

This hypothesis could not be tested on the available data.

H₄: Women in the professions tend to be salaried rather than self-employed, where there is a choice.

This hypothesis is borne out for physicians and dentists; considerably more women than men in these occupations tend to be on salary than to be self-employed. Even women veterinarians show this tendency. Tables VIII and IX, pp. 46-47, show these differences based on 1960 census data.

There are many reasons why this tendency appears to be so strong. One is the attempt to reduce the impact of being a woman in a man's profession. Other reasons concern shorter working hours, less demands on

outside time, less interest on the part of women in making high incomes, and closeness of salaried positions, rather than independent practice, to women's traditional role of being subordinate and dependent.

H₅: Women in the professions tend to be in career lines apart from the mainstreams of promotion to power and prestige.

H₆: If in the same career lines as men, women in the professions tend to fill the lower echelons while the men advance.

An accurate breakdown of the medical specialties most preferred and bringing in the highest income is not available, so this hypothesis is tested on what I could find. The specialties with the highest median income in medicine seem to be surgery, urology, surgical specialties and obstetrics/gynecology (from Tables X and XI, pp. 49-50). Women physicians tend to be considerably under-represented in these specialties (.9%, .2%, 3.5%, respectively) except for 6.2% in obstetrics/gynecology. Women physicians are over-represented (meaning in greater proportion than their 6.1% average for the profession) in pediatrics, anesthesiology, psychiatry, child psychiatry and public health and preventive medicine (Table XXXV, p. 70).

Aside from specialties, women tend to go into general practice, which is listed as having the lowest median income of the private practitioners in Table XI, p. 50. Women physicians are also found in larger proportion than average in medical training programs, medical school faculties and preventive medicine, administration and research (Table XIV, p. 52). They represent 4% of the officers in the AMA and .4% in the ACS.

Finally, women represent 12.7% of the faculty of medical schools but only 1.2% of the total number of department chairmen and 3.9% of the full professors in medical schools.

The woman physician tends to be on salary considerably more time than the male physician (Table XIII, p. 51) and makes considerably less (Table XII, p. 51). By not being in the specialties with the highest income and prestige and being on salary more often, women may tend to be in career lines apart from promotion to power and prestige. On the other hand, the woman physician is over-represented on faculties (same career lines as men) and fills the lower echelons in academic ranking.

Women university professors represent 21.8% of all faculty in all institutions. They are over-represented in teachers' colleges (36.8%) and under-represented in both the public and private universities (13.7%) as shown in Table XVII, p. 54. They are over-represented among instructors and under-represented as full professors. There appears to be an inverse relationship between academic ranking and percentage of women among faculty and between median income of faculty and percentage of women among faculty. In other words, women university professors tend to fill the lower echelons in academia. In the 18 leading universities, women's proportion is even smaller, 3.7% of the professors, 16.5% of the instructors. This is considerably lower than their overall 22% average. Also, women college presidents and deans have a median income less than that of men, \$6,009 to \$9,704 in 1959 (Table XIX, p. 55). Median incomes for administrative positions likely to be held by women, e.g., head librarians, deans of women, director of food services, constitute the lower levels for median incomes of administrative positions (Table XX, p. 56). Median incomes of deans of separately organized professional schools ranked from highest to lowest show those deans likely to be women ranked at the lowest end (Table XXI, p. 57). Finally, women represented a small number of officers of the professional associations

but it is difficult to know how powerful and prestigious (or even large) these are, even though the ones considered may be the main professional associations.

The position of women university professors tends to support both hypotheses numbers 5 and 6. Women university professors are in career lines apart, to the extent that they are concentrated in fields whose top positions are neither powerful, prestigious, nor bring high incomes, e.g., education, home economics, nursing, librarianship. However, in other fields women professors tend to be in the lower echelons within the academic ranking, filling instructorships and teaching in colleges with lower prestige.

Solid statistics on dentists were not obtainable so these results are more tentative than others. It is interesting that women tend to specialize more than men in dentistry. Specialties bring the higher median incomes, but yet women's median incomes are considerably less than for men dentists (\$11,858 for men compared to \$3,768 for women in 1959, as shown in Table XXIV, p. 60). The spread of incomes is also lower for women. Approximately 84% of the women dentists made less than \$10,000, whereas 62% of the men made over \$10,000 in 1959. Orthodontia brings the highest income with oral surgery second (out of six approved specialties). Women dentists were represented in largest numbers in pedodontics (43% of the female specialists), next in orthodontics (7%). However, women tend to be salaried considerably more often than men (54% women on salary versus 8.5% men on salary in 1959) and work shorter hours. These conditions would tend to bring down their incomes. Women were also found in dental teaching, which brings one of the lowest salaries in the field. Concerning prestige, one ranking was given by a

dental faculty of a college (Table XXV, p. 61) in which private practice and hospital staff were the top two preferred types of practices. Dental teaching was third. Among preferred specialties, dental students in one survey ranked oral surgery first, with orthodontics second (Table XXV, p. 61). There were no women dentists listed as oral surgeons in 1958; 7% of such women were in orthodontics.

From this discussion, then, top positions in dentistry are specialists in private practice. Dental teaching is given prestige but no money, relatively speaking. Women dentists tend to be salaried, both as specialists and as general practitioners. They tend not to be officials in the ADA (.6% in 1968). The data is not sufficiently detailed enough, however, to differentiate between women dentists who are in different career lines from those in lower echelons. To the extent that women are salaried, they are likely to be in separate career lines. To the extent that they specialize more but bring in lower median incomes, they may be said to be filling lower echelons. H_6 is also supported by the fact that female dentists tend to work part-time, thus filling the peripheral needs of the profession.

The only data available on the natural and social scientists is taken from the National Register, whose categories do not indicate the very top positions. To summarize the detailed tables on the scientists here, highest level positions are likely to be determined by median incomes. The top three in each category thus will be listed, with the percentage of women in each of those categories:

Field w/highest median
income, % women

1 Economics	4%
2 Statistics	10
3 Physics	3

Work activity w/highest
median income, % women

1 Mngmt. of R&D	2.3%
2 Mngmt. of Admin.	2.7
3 R & D Applied	7.6

Employer w/highest
median income, % women

1 Self-Employed	9.0%
2 Industry & Bus.	3.2
3 Non-Profit Org.	13.4

Ph.D.'s w/highest
median income, % women

1 Meteorology	2.0%
2 Physics	2.1
3 Chemistry	5.0

From the percentages in these four areas, women do not tend to be in the higher levels of science to any great extent. Women scientists tend to go into teaching and research (accounting for 56% of the women scientists). Women tend to go into chemistry, psychology, biology and mathematics (accounting for 74% of the women scientists). Women scientists represent a greater proportion than their 8% average for all fields, in psychology, linguistics, anthropology and sociology, biological sciences, mathematics and statistics. From data on their median incomes (Table XXVII, p. 63) women tend to make, on the average, \$3,000 less than the average for all scientists. It appears that women scientists cluster around certain types of activities (teaching and research) and one employer (educational institutions), but are spread throughout several of the natural and social sciences. In most cases, women do not tend to reach the top positions in professional organizations.

In relation to whether women are in the same career lines as men in science, it seems that, regardless of the field, women occupy certain types of positions which bring in less income, and do not have the opportunity in those positions to reach the higher income levels. Therefore, they may be considered in separate career lines from men. However, on

the basis of entering many scientific fields instead of a few and bringing in lower median incomes within each field, they may only be considered to be in lower echelons of each of the different fields.

For veterinarians, positions bring the highest incomes, as determined by Giuliana and Centra (1968:973), are in commercial sales and service, and in equines. According to this study, women do not tend to enter these areas (Table XXXIII, p. 67). Concerning type of employment, women veterinarians tend to be salaried and not working (52.2%), compared to men (29.3%) (Table XXXII, p. 66), tend to work part-time (38%) compared to men (14%), and consequently, bring in a lower median income (\$5,500) compared to men (\$8,882) (Table XXXI, p. 66). A more detailed breakdown of specialties, median incomes and distribution by sex could not be obtained and this one study is a comparatively small sample. But from Giuliana and Centra's study, it seems that women are concentrated in a few areas - small animals, research and teaching - whereas men are more spread out. Consequently, career lines for women veterinarians are likely to be limited and they would tend to be apart from promotion to power and prestige. For those women who are in the same specialties as men - mixed, regulatory - it is not known whether or not they fill the lower echelons.

The career lines of men and women in social work seem to be similar, in that the ranking system is standardized. Top positions outside of the system would probably include heads of schools of social work. However, no data on that is available by sex. Table XXXIV, p. 68, shows the distribution of people among the ranks of social work. Although men are a minority, at one point they represent a majority - 58% of the executive positions (top) are filled by men. Women fill more of the lowest positions (65%) - direct service positions, case workers - than men (35%).

At the same levels, men earn a higher median income than women, with an overall median income of \$5,760 to \$4,940 for female social workers. The biggest discrepancy between median income is on the executive position level (the level where they are the majority), where men make an average of \$830 more than women. The areas of specialization are not that detailed nor different from each other to show whether men and women social workers tend to be in different career lines, in support of H_5 . However, H_6 is supported in that women fill the lower echelons to a certain extent, make less money and hold fewer top positions. These data reflect that the men tend to advance over the women.

H_7 : Women in the professions tend to specialize in those areas relating to the normatively accepted women's role.

H_8 : Women in the professions which have clients or patients tend to deal with clients or patients of equal or lower status.

Specialization of women professionals reveals that women do try to enter and are allowed into areas which are more compatible with the female role. We have already seen in the discussion on career lines that women tend to be in few of the many available areas, tend to fill the lower echelons, and tend to be on salary. In discussing these three hypotheses, these findings will be taken into consideration.

1) Physicians. Concerning women's role, Table XXXV, p. 70, shows women physicians specializing, aside from in the areas of general practice, but mainly in psychiatry and child psychiatry, pediatrics, public health and general preventive medicine, and anesthesiology. Helping people with their problems and caring for children are directly in accord with the social role as wife and mother. Specializing in the public health field,

according to Kosa and Coker (1968:302-304), appeals mainly to those who want to avoid the "entrepreneurial competitiveness" that prevails in private practice, for men as well as women. For the woman physician, working in public health means working on an assured income basis, with regular hours, a manageable work load, and possibly with colleagues whose values are similar to hers (more people-oriented than money-oriented). Thus, here she can easily regulate her role and duties at home with such a job.

For the specialty of anesthesiology, although a highly skilled job, it seems to be closely related to the nursing occupation where helping the surgeon is the main task. The proportion of women physicians in obstetrics/gynecology, which is the same as the overall average in medicine, is surprising. From the initial discussion of social segregation, it seemed likely that women physicians would tend to specialize in female disorders and obstetrics. However, why women would not tend to go into this specialty in larger numbers can only be guessed; it may reflect the public's prejudice and women's own prejudice against women handling really serious problems. Other than obstetrics/gynecology, the specialties relating closest to women's role are the ones women physicians go into more frequently.

Concerning type of practice, women physicians tend to be on salary more than men (Table III, p. 40), which is in accord with the dependent and subordinate role expected of women. Women physicians tend not to be in surgery, which demands a very dominant, aggressive type of role (Table X, p. 49). Therefore, the medical profession tends to support H_7 by allowing women into areas and women physicians choosing areas which are in accord with their female role in our society.

H₈, concerning clients of inferior or equal status as tested on those with women and children clients, is relevant for the medical profession. Of the 30 specialties, three are related to women and children, and women physicians have a higher percentage in two of these than in any other specialty (child psychiatry and pediatrics). Obstetrics/gynecology does not tend to support this hypothesis. It is clear, however, that women physicians predominately go into a few of the many specialties. If it is not closely associated with the woman's traditional role, one alternative interpretation is that her male colleagues designate certain areas of specialization as approved for women. Kosa and Coker (1968:300) show that a woman's medical career choices change over time to fit the allowable alternatives. If this is true, women may tend to select those she is encouraged to choose. Data were not presented to test this notion.

2) University Professors. It was found that most women who work on the higher levels in the economy work in traditionally "female" occupations. It follows that women professors would tend to concentrate in teaching areas associated with those female occupations - nursing, education, social work, dietetics, library science. In fact, these areas account for over half of all women on faculties (Table XXXVII, p. 71). The woman's role is closely associated with these areas logically, and women professors might tend to teach in them in greater proportion.

Women faculty members in all colleges and universities in 1954-55 represented greater than a majority in nursing, home economics, and library science. Next greatest percentages were found in public health, physical and health education, education, foreign languages, English, music, speech and drama, and physiology. The remaining fields were dis-

tributed in smaller percentages than the 22% average for all fields (Table XXXVII, p. 71). Most of these disciplines above have to do with education or health. Music and drama and the fine arts field, however, have traditionally been associated with women's role of entertaining and performing for others.

In the leading universities, Parrish's study (Table XXXVIII, p. 72) shows that women faculty members follow a general pattern, although they are considerably fewer in number in the top universities. They tend to enter education, home economics, the humanities, and to be absent from the physical sciences, engineering and law.

To summarize, women faculty members tend to follow the traditional feminine fields associated with women's role, although this is compounded by the fact that teaching itself is considered a normatively accepted role for women. Hence, among the different disciplines, one would expect to find women teaching in educational institutions rather than in business, industry, government, etc. However, at the higher professional levels in universities, women's proportionate representation is greatly reduced. It is reduced even further, if education and home economics are omitted from consideration - from 9% of the faculty to 5% in the 18 leading universities (Parrish, 1968:106).

3) Dentists. Women dentists who specialize go into pedodontics and orthodontics most frequently. Women dentists tend to go into teaching and public health areas proportionately more often than do men dentists. These conclusions follow the general pattern found in the other professions. Both pedodontics and orthodontics are specialties related to children; they are the only child specialties in dentistry. Teaching

and public health also may be associated with women's role and approved activities. This data on dentistry thus tends to support H_7 and H_8 . Within general practice, some dentists may tend to treat only children, while still being considered general practitioners. Since there is no data on this, it would be interesting to find out what the breakdown by sex is for this kind of practice.

4) Natural and Social Scientists. Women scientists tend to represent a larger proportion in the social sciences than in the natural sciences and enter the social sciences in a larger proportion than in the natural sciences. Psychology is the most popular field for women and is probably associated (as with psychiatry) with women's socio-emotional role. The other people-oriented fields - anthropology, sociology, linguistics - hold the next largest percentages of women in the field.

The "hard" sciences reflect an under-representation for women, except in mathematics and the biological sciences. By comparing the percentage of women in educational institutions by field (Table XLII, p. 75), we find that a proportionately larger number of women in educational institutions are in biological sciences and in mathematics. Consequently, this larger representation of women in these fields may be accounted for by the need for teachers at the lower, undergraduate levels of college teaching (e.g., beginning mathematics and general biology).

By type of employer, women scientists again tend to be in educational institutions in all the sciences. By primary activity, they tend mainly to teach and to do research (Tables XLIII, p. 77, and XLII, p. 75). Teaching is closely related to women's prescribed role and research, in particular research assistants, is related to woman's helping, subordinate role.

5) Veterinarians. As with some of the other professions, women veterinarians' specialties center around a few select areas - small animals and mixed animals - and research and teaching, along with their being on salary. Consequently, for the same reasons mentioned in the previous sections, data on veterinary medicine tend to support both Hypotheses numbers 7 and 9.

6) Social Workers. Details on specialties of social work reveal that women are found in casework more often than men, with family, medical and school casework predominant. However, they go into child welfare work in equal proportions to men and into psychiatric social work in slightly less proportions. The entire field of social work may be considered an approved kind of occupation for women, so all the specialties are related to the kinds of activities with which a woman is usually associated (children, health, school, family, psychiatry). It has been a predominately female field (at least until 1962) so that when women entered it, they experienced relatively little status inconsistency; they were not restricted to nor needed to specialize in any one area within the field in order to reduce the impact of possible status inconsistency. Their spread over the specialties in social work reflects this notion.

CHAPTER VIII

CONCLUSIONS

Summary and Conclusions

Everett Hughes developed the notion that when an individual holds an unexpected auxiliary characteristic of an incumbent of his status, he is caught in a dilemma because others do not know how to respond to him. They tend to react unfavorably, which in turn affects the individual's self-image. The individual seeks to maintain his self-image and consequently adopts behavior which will reduce the impact of his discrepant status characteristic and bring favorable or at least consistent reactions from others. To use status consistency terminology, the individual is in an inconsistent status because of ranking high on one status dimension and low on another. He seeks to maintain his self-image by adopting behavior which reduces the impact of his inconsistent status. To adopt this behavior is rewarding and not to adopt it is costly.

To categorize individuals as status inconsistencies, some considerations must be made. The individual's discrepant characteristics must be perceived simultaneously by others. The individual must be aware of his inconsistent status. Moreover, the discrepant characteristic must be salient to the status to which the individual aspires. The incongruent stimuli must be fairly divergent in order for the individual to feel the impact of his inconsistent status. And finally, the discrepant character-

istic must be inconsistent with the normative expectations of the environment in which one moves.

For the woman as a professional, it was found that she falls into the category of status inconsistent since she holds the unexpected characteristic of being a female while a professional and meets all the above conditions of status inconsistency. Since she can do nothing about changing her discrepant characteristic of being female, it is hypothesized that she adopts other behavior in order to bring her status characteristics in accord and reduce the impact of her inconsistent status set. This behavior may consist of avoidance, isolation and social segregation on the part of the female professional and her clients or colleagues who seek to avoid situations which may bring a reaction to her inconsistent status. The patterns of behavior taken are the basis of the eight hypotheses developed and tested in the study: 1) women enter the professions in smaller proportions than men, 2) women professionals do not participate fully in the colleague-group, 3) women professionals enter positions isolated from the public, 4) women tend to be salaried, 5) women tend to be in separate career lines from positions of power and prestige, 6) women tend to fill the lower echelons of the profession, 7) women specialize in areas relating to the normatively accepted women's role and 8) women tend to deal with clients and patients of equal or lower status.

The data on which the hypotheses were tested were obtained from many different publications (as outlined in Chapter V). The data dealt with the seven professions which were chosen from among the thirteen professions established in Chapter III. These professions range from the traditional professions of medicine and university teaching to borderline (in process) professions of veterinary medicine and social work.

To summarize the results, it was found that the data generally support all the hypotheses with the exception of Hypothesis number three, which could not be tested. There seems to be a consistent pattern for the few women who do enter the professions to enter a limited number of them and to specialize in those areas which are related to the prescribed role of women in American society. Moreover, they tend to teach or enter research, work in educational institutions and be on salary. Women are not usually found in the top positions nor the most lucrative positions. Further, their career lines do not lead to the top positions and/or they tend to fill the lower echelons within each profession.

It may be concluded that women professionals adopt this pattern throughout the professions, that their career pattern is very different from that of male professionals, and it is suggested that they adopt this pattern in order to reduce the impact of their inconsistent status set.

Recommendations for Future Research

There is a serious lack of accurate detailed data concerning the sex distribution of professionals. The professional house organs do not keep statistics by sex, nor on all different areas within the profession; Census categories are too gross; sample surveys seem to be too narrow. There is a great need for better statistics in order to get an accurate picture of the entire profession and the place of men and women within it. I do not know the best way of gathering these statistics, but I would begin by urging those responsible for data collection in each profession and in the National Register to pay attention to the sex of its members in each tabulation. Next, since most professions have a woman's association, they could be urged themselves to make more accurate detailed

studies for publication. They could also put pressure on the professional association's research bureau to gather statistics by sex.

The hypothesis concerning isolation of women from the public should be tested. Data would have to be collected by the investigator. But this notion that women are in positions isolated from the public is frequently mentioned in the literature and should be tested.

Other hypotheses in this study could have been extended and then tested. Hypothesis number eight concerning clients of equal or lower status might have been tested on other categories of people, not just women and children. These people may be categorized as "despised people" such as alcoholics and the mentally ill.

A study might be focused on those occupations which are in transition from being a non-profession to a profession. What precise changes take place as an occupation is being up-graded? For social work, how important is the fact that men are increasing rapidly in proportion to women? Is this true also for other traditionally women's occupations?

Our study did not pay attention to changes over time. It is necessary to look at the professions over time in order to get the broad picture of what role women have played in the professions. If the percentage of women in the professions is decreasing, as has been suggested, or remaining the same, a historical look at the professions would help explain this trend and help predict which direction it will take in the future.

Finally, it has been suggested that if women are not increasing in the professions and if men are taking over top positions of formerly women's occupations, the future of women in the occupational structure looks bleak. That is, women will be even lower on the occupational

ladder than they are now. Other factors point to this. Taylor (1968: 488-9) suggests that the origins of those in the professions are stabilizing, i.e., the professions tend to reproduce themselves. This suggests that the structure of the professions will more likely remain the same rather than change radically. Also, the income gap between men and women is and has been widening. This suggests that economically women are losing ground. Unemployment for women is also increasing faster than for men and the gap is widening. From these trends, it appears that the occupational picture for women is getting worse. But it is a question which should be thoroughly studied and analyzed to see if this is in fact the case.

Speculations

On the basis of conducting this study, it is possible to speculate on the implications of the findings as they relate to women's position in American society. Table XLVI presents some background statistics.

From this table, it is seen that 42% of the women are in the labor force as compared to 81.0% of the men. Concerning educational attainment, men and women are nearly equal except in the highest levels where the percentage of men who have 5 or more years of college is greater than that of women. Since the bachelors degree is the first prerequisite for entering the professions, it is shown that women receive bachelors degree (considering four years of college generally equivalent to a bachelors degree) in about the same percentage as men. So there is a considerable supply of women with four years of college from which candidates for the professions could be drawn. Women do not go on for further education in the same proportions as men, however. So the problem arises

TABLE XLVI

PER CENT DISTRIBUTION OF POPULATION 18 YEARS OF AGE
AND OLDER IN THE LABOR FORCE BY EDUCATION
AND BY SEX, 1968

Education Level	Population		Labor Force	
	Women	Men	Women	Men
Number	66,288,000	57,989,000	27,846,000	47,255,000
Per Cent	100.0	100.0	100.0	100.0
Less than College	81.1	75.4	77.2	74.4
College:				
1 to 3 years	11.3	12.4	12.3	12.2
4 years	5.7	6.9	7.4	7.7
5 or more years	<u>1.9</u>	<u>5.3</u>	<u>3.1</u>	<u>5.9</u>
Median	12.2	12.2	12.4	12.3

Source: Women's Bureau, 1969 Handbook on Women Workers, p. 178.

at the top levels of education. If one takes the position that women should be encouraged to go on for more training and assume a professional career, what do the professions have to offer women?

On the basis of this study, the consistent pattern throughout the professions tends to show that women are not given full professional standing. They tend to be given (or take) a somewhat reduced status within the profession because they tend to fill peripheral needs of the profession, tend not to attain top positions, tend to be restricted in participation in colleague-groups. In other words, women tend not to be included in Hughes' "inner fraternity." We are not concerned here with all the reasons why this pattern tends to exist. For now, the pattern appears and the point is that in our society the rewards of professional

standing are not as great for women as for men. Encouraging women to enter a long training period and make other sacrifices in order to become a professional seems futile. Considering the pay-off in the profession and the social stigma for the woman, it seems that greater sacrifices are being asked of women than of men. There are too many other alternatives open to women which are more compatible with her prescribed role and which require less effort and emotional cost.

It is clear that the number of women in the labor force has increased. Educational trends show that more women are going on to college and that education is directly related to employment. That is, the more education, the more likely it is that people will work. With these trends, it appears that the chances of women getting professional degrees and entering the professions would be increased. This is not the case, however. Some writers say that the percentage of women earning professional degrees and doctorates has decreased in the last 50 years; others say it has remained the same. At any rate, it does not seem to be increasing. If it is true that women are not entering the professions in increasing proportions, one of the reasons may be found in the results of this study, that women do not attain full professional standing and receive the rewards due a professional.

BIBLIOGRAPHY

Status Inconsistency

Broom, Leonard.

- 1959 "Social differentiation and stratification." Pp. 429-441 in Robert K. Merton, Leonard Broom and Leo S. Cottrell, Jr. (eds.), *Sociology Today*. New York: Harper and Row.

Fenchel, Gerd H.; Moderer, Jack H.; and Hartley, Eugene L.

- 1951 "Subjective status and the equilibration hypothesis." *Journal of Abnormal and Social Psychology* 46 (October):476-479.

Goffman, Erving.

- 1957 "Status consistency and preference for change in power distribution." *American Sociological Review* 22 (June):275-81.

Homans, George C.

- 1961 *Social Behavior: Its Elementary Forms*. New York: Harcourt, Brace and World.

Hughes, Everett Cherrington.

- 1945 "Dilemmas and contradictions of status." *American Journal of Sociology* 50:353-359.

Jackson, Elton.

- 1962 "Status inconsistency and symptoms of stress." *American Sociological Review* 27 (August):469-480.

Lenski, Gerhard.

- 1956 "Social participation and status crystallization." *American Sociological Review* 21 (August):458-464.

Malewski, Andzej.

- 1963 "The degree of status incongruence and its effects." Pp. 303-308 in Reinhard Bendix and Seymour Martin Lipset (eds.), *Class, Status and Power*. New York: The Free Press, 1966.

Professions

Barber, Bernard.

- 1965 "Some problems in the sociology of the professions." Pp. 1-14 in Kenneth S. Lynn and the editors of *Daedalus, The Professions in America*. Boston: Beacon Press.

Etzioni, Amitai (ed.).

- 1969 *The Semi-Professions and Their Organization*. New York: The Free Press.

Ginzberg, Eli.

- 1968 "Professional manpower for an affluent society: the opportunity gap." Pp. 4-10 in American Medical Women's Association, *The Fuller Utilization of the Woman Physician*. Washington, D. C.: Women's Bureau, U. S. Department of Labor.

Goode, William J.

- 1969 "The theoretical limits of professionalization." Pp. 266-313 in Amitai Etzioni, *The Semi-Professions and Their Organization*. New York: The Free Press.

Hodge, Robert W.; Paul M. Siegel; and Peter H. Rossi.

- 1966 "Occupational prestige in the United States: 1925-1963." Pp. 322-334 in Reinhard Bendix and Seymour Martin Lipset, *Class, Status and Power*. New York: The Free Press.

Lynn, Kenneth S. and the Editors of Daedalus.

- 1965 *The Professions in America*. Boston: Beacon Press, 1965.

Moore, Wilbert.

- 1967 "Economic and professional institutions." Pp. 276-328 in Neil J. Smelser (ed.), *Sociology*. New York: John Wiley and Sons, Inc.

Stafford, Rita L.

- 1967 "An analysis of consciously recalled motivating factors and subsequent professional involvement for American women in New York state." Unpublished Ph.D. dissertation, School of Education, New York University. P. 151 in Carol Lopate, *Women in Medicine*. Baltimore: Johns Hopkins Press, 1968.

Taylor, Lee.

- 1968 *Occupational Sociology*. New York: Oxford University Press.

Toren, Nina.

- 1969 "Semi-professionalism and social work: a theoretical perspective." Pp. 141-194 in Amitai Etzioni, *The Semi-Professions and Their Organization*. New York: The Free Press.

Vollmer, Howard M. and Donald L. Mills (eds.).

- 1966 *Professionalization*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Wilensky, Harold.

- 1964 "The professionalization of everyone?" *American Journal of Sociology* 70 (September):137-158.

Women

Bernard, Jessie.

1964 Academic Women. University Park, Pennsylvania: Pennsylvania State University Press.

Caplow, Theodore.

1954 The Sociology of Work. New York: McGraw-Hill Book Company.

Lewis, Edwin C.

1968 Developing Woman's Potential. Ames, Iowa: Iowa State University Press.

Lifton, Robert Jay (ed.).

1965 The Woman in America. Boston: Beacon Press.

Mattfeld, Jacquelyn A. and Carol G. Van Aken (eds.).

1965 Women and the Scientific Professions. Cambridge: The MIT Press.

Parrish, John B.

1961 "Professional womanpower as a national resource." Quarterly Review of Economics and Business 1 (February):54-63.

Rossi, Alice.

1965 "Women in science." Science 148 (May 28):1196-1202.

Data

American Anthropological Association.

1968 American Anthropologist 70 (August)

American Association of Junior Colleges

1970 Junior College Journal (January).

American Association of University Professors.

1970 American Association of University Professors Bulletin (January).

American College of Surgeons.

1968 1968 Directory. Chicago: Lakeside Press.

American Dental Association.

1968 1968 American Dental Directory.

American Economics Association.

1969 The American Economics Review LIX (May).

American Forestry Association.

1969 American Forests 75 (January).

- Society.
The American Mathematical Society 75 (November).
- ation.
ices (December 13).
al Directory, Pt. 1
- n's Association.
ilization of the Woman Physician. Washington,
's Bureau, U. S. Department of Labor.
- al Society.
The American Meteorological Society 51 (February).
- al Association.
chologist 25 (February).
- Association.
nological Review (February).
- Association.
The American Statistical Association 64 (June).
- men. University Park, Pennsylvania: Pennsylvania
sity.
- of America.
Society of America Bulletin 80 (November).
- John A. Centra.
veterinarian." Personnel and Guidance Journal 46
-975.
- ica of American Medicine. New York: Macmillan Co.
- S. (director of the Commission on the Survey of
- of Dentistry. Washington, D. C.: American Council
ion.
- Coker, Jr.
a physician in public health conflict and reconciliation
and professional roles." Sociology and Social Research
5.
- Medicine. Baltimore: Johns Hopkins Press.
- Inc.
of Medical Specialists. Vol. XIII. St. Louis: Von
ress, Inc.

Maryland State Planning Commission.

- 1962 Medical Education and Research Needs in Maryland. Baltimore: State Planning Department.

National Education Association.

- 1955 Teacher Supply and Demand, 1954-55. Research Bulletin 33 (December).
- 1968 Salaries in Higher Education, 1967-68. Research Report 1968-R7. Washington, D. C.: National Education Association.

National Education Association, National Council of Administrative Women in Education.

- 1965 Wanted - More Women in Education Leadership. Washington, D. C.: National Education Association.

National Social Welfare Assembly, U. S. Department of Labor and U. S. Department of Health, Education and Welfare.

- 1960 Salaries and Working Conditions of Social Welfare Manpower in 1960. New York: National Social Welfare Assembly, Inc.

Parrish, John B.

- 1962 "Women in top level teaching and research." American Association of University Women Journal (January):99-107.

Rayack, Elton.

- 1967 Professional Power and American Medicine: The Economics of the American Medical Association. Cleveland: The World Publishing Co.

Reed, Louis.

- 1968 Studies of the Incomes of Physicians and Dentists. Washington, D. C.: U. S. Department of Health, Education and Welfare, Social Security Administration.

Sigma Xi

- 1970 American Scientist 58 (March-April).

Society for the Study of Evolution.

- 1969 Evolution - International Journal of Organic Evolution 23 (December).

U. S. Department of Commerce, Bureau of the Census.

- 1963 United States Census of Population: 1960. Occupational Characteristics, PC(2)-7A. Washington, D. C.: U. S. Government Printing Office.
- 1964 United States Census of Population: 1960. Characteristics of Professional Workers, PC(2)-7E. Washington, D. C.: U. S. Government Printing Office.

U. S. Department of Health, Education and Welfare.

1962 Health Manpower Sourcebook, Section 14, "Medical specialists."
Washington, D. C.: U. S. Government Printing Office.

U. S. Department of Health, Education and Welfare, Office of Education.

1969 Higher Education Salaries, 1966-67. National Center for Educational Statistics. Washington, D. C.: U. S. Government Printing Office.

U. S. Department of Labor, Women's Bureau.

1962 1962 Handbook on Women Workers. Washington, D. C.: U. S. Government Printing Office.

1969 1969 Handbook on Women Workers. Washington, D. C.: U. S. Government Printing Office.

U. S. National Science Foundation.

1969 American Science Manpower 1966. NSF 68-7. Washington, D. C.:
U. S. Government Printing Office.