DOCUMENT RESUME

ED 080 053 HE 004 392

AUTHOR Kaun, David E.
TITLE The Quality of Work Available to College Educated Women and Men.
PUB DATE [70]
NOTE 35p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *College Graduates; Demand Occupations; Employment Patterns; Females; Higher Education; Job Analysis; Males; Manpower Needs; *Manpower Utilization; *Occupational Information; Personnel Data; *Salaries; *Sex Discrimination

ABSTRACT

The first part of this paper provides a review of the current debate regarding labor market discrimination of women in terms of pay and occupational choice. A review of the various causal factors offered in explaining this discrimination is given. The second part of the paper is concerned with the quality of work obtained by women and men in two education classes, those with four years of college, and those with five or more years of college. Descriptive characteristics of work for detailed occupations, taken from the Dictionary of Occupational Titles, are applied to 1960 Census of Population occupation data. The qualitative characteristics include: intellectual requirements; educational and training requirements; physical working conditions; interests and temperaments; and socio-economic prestige levels of each occupation. This analysis indicates that in general the work available to college educated women is less challenging, utilizes their training to a lesser degree, offers little opportunity for work with abstractions or of a creative nature, and has lower socio-economic prestige, as compared to men with the same education. Custom, labor market institutions, and discrimination are the prime causal factors for these differences. (Author)

THE QUALITY OF WORK AVAILABLE TO COLLEGE EDUCATED WOMEN AND MEN

David E. Kaun
Professor of Economics,
Stevenson College, U. C. Santa Cruz

I. Introduction

In 1948 there were over 17 million women (over 16 years of age) in the labor force. This represented approximately 28 percent of the total U. S. labor force. The female participation rate was 32.7 percent, 22.0 percent for married women, and only 10.8 percent for married women with children under six years of age (see Table 1). At that time one might have thought that these fairly large numbers, large at least by historical standards, were partly the result of a carry over from the Second World War effects on the domestic labor market. As the economy returned to normal, many of these women would return to their more traditional occupation within the home. Nothing of the sort has happened. In fact, as has been well documented, just the reverse has occurred. By 1970 over 31 million women were in the labor force, representing almost 37 percent of the total labor force. A rate of increase, if it were to continue, which would mean that half of the labor force would be female by the early 1990s.[1]

What is even of greater surprise, perhaps, is the type of women who have entered the labor force over this period. In 1948 many more single women were in the labor force than those who were married (particularly those with young children). By 1970, almost as many married women as single women were working outside of the home. The participation rate for married women was almost as high as that of single women, and higher for married women with children between the ages of 6 and 17. Almost one third of the women with young children were in the labor force. The figures in Table 1 indicate the magnitude of change over 1948 which these figures represent.

From the perspective of the late 1940s, these changes would surely be considered dramatic, and even, possibly, revolutionary. And yet, today there are many who are vigorously denouncing our society for, among other things, the discrimination against and oppression of women. Much of this complaint is directed towards the labor market situation. Rather than seeing the past 25 years as representing a fundamental change in our economic system (at least in the labor market), some suggest that revolutionary change must come to our society before the economic situation of women can be altered. One's point of view dictates which of the two revolutions one accepts--that which has occurred, or that which is demanded. There is no doubt, as the above data show,

that the role of women in our economy (and consequently i. the home) has changed extensively over the past 25 years. On the other hand, change and improvement are not synonomous. In many respects it is almost as easy to document the lack of improvement as it is to document the change.

In this paper I shall try to do two things. In the section that follows I provide a brief but (I believe) fairly representative review of the current state of the debate.[2] In the second section new material will be introduced. This deals with the qualitative nature of work available to women. As will be seen below, one of the explanations offered for the apparent economic disadvantage of women is the fact that they are more willing than men to make a trade-off between monetary and psychic rewards from work. With the use of detailed occupational data from the 1960 census, the validity and extent of this trade-off will be examined.

II. Present Status of the Debate

Pay. The following two quotations indicate the extent of diverse opinion on the question of pay differentials for men and women:

> "the wages of American women /in 1969/ averaged only about 60 percent of the wages of men doing the same job. . . ." (Hunt and Sherman, p. 170)

". . . the average within-occupation ratio of female to male income /1950/ is .81 - .82." /additional adjustments for quota and absence differences and experience-given-age differences/ ". . . brings the adjusted sex-income ratio to .87 - .88." (Sanborn, p. 545)

While the above two authors are referring to time periods that differ by 20 years, it is hard to believe that a 30 point change for the worse has taken place over these years. No one disputes the fact that the "average" woman earns less than the male worker today. The issue is over the extent to which this difference can be explained by factors other than discrimination. However, even when utilizing data close in time and trying to standardize for relevant factors, one can find conflicting results.

Two recent studies are indicative of the dilemma confronting those seeking the truth. Suter and Miller in their study of pay differentials utilize 1966 salary data for men and women age 30-44 (unpublished census data). After correcting for age, education, detailed occupation, full-time employment, and work experience, these authors find the pay of women to be 62 percent of men in comparable situations--and suggest that "much of the remaining unexplained difference . . . could be attributed to discrimination in payment for jobs with equal status" (p. 971). On the other hand, Cohen's

study leads to a different conclusion. Using Michigan SRC data for 1969, he analyzes pay differences for men and women, age 22-64, who work full-time. It might be noted that in his sample only 8.1 percent of the women surveyed reported feelings of discrimination, and most of these cases dealt with matters of promotion (p. 435). After adjusting for the qualification and productivity of women, including factors such as extent of on-the-job training, integration inefficiencies (problems stemming from men and women working together), hours, education, seniority, and absenteeism, Cohen concludes that the original difference of $5,000 in the annual pay of men and women can be explained by these factors, and that discrimination cannot be considered as a significant factor in matters of pay (p. 446).

The fact that it is possible to demonstrate inability of economists to agree on the extent of differentials in pay should not cause us to be complacent or to pooh-pooh the very idea. In general, what is in dispute is the magnitude and incidence (by occupation) of differences in pay, and not their existence. There have been enough detailed studies of specific occupations showing pay differentials based on sex, in addition to the broader studies such as those above, to rest the case in favor of those who claim sex makes a difference.[3] Before dealing with the various explanations

for pay differentials, I want to discuss one additional aspect of the labor market situation confronting women. That is the extent of occupational differences based on sex.

Occupation. Unlike the question of pay, there is nearly unanimous agreement that women and men face a different set of occupational opportunities in the labor market. And this is a situation which seems to be as prevalent today as it was at the start of the century. Francine Blair Weisskoff (p.163) writes, "well over half of all working women in both 1900 and 1960 were employed in jobs in which 70 percent or more of the workers were female'."[4]

Table 2 provides an indication of the types of jobs most readily available to women. Most of these occupations possess one or more of the traits outlined by Harold L. Wilensky: these are 1) traditional home tasks, 2) few or no strenuous or hazardous aspects, 3) patience, waiting, routine, 4) rapid use of hands and fingers, 5) distinctive welfare or cultural orientation, 6) contact with young children, and 7) sex appeal (p. 235). One might well add low pay as a distinctive feature of these jobs. Offering this list is in no way an explanation for the heavy representation of women in a limited number of occupations. Nor is it an explanation for the significant underrepresentation of women in the professions and upper-managerial jobs.[5]

Thus, while one can find some disagreement about the extent of pay differences for men and women doing the same work, the fact that such differences do exist, as well as the fact that occupations in our economy are sex-specific, are two empirical propositions which have been amply supported in the present body of literature. I now turn to the more interesting and even more controversial question of causality. The explanations offered by the writers surveyed usually apply to both facets of the problem, pay and occupation.

Causal Factors. Margaret Benston writes, "Industrialization is, in itself, a great force for human good; exploitation and dehumanization go with capitalism and not necessarily with industrialization." (p. 18) Many writers of the new left have taken up the Marxist-Engles theme that it is the needs of the capitalist system which keep the women tied to the home via family structure and custom. Due to these ties, both real and psychological, the women who venture into the labor market do so on very disadvantageous terms, and constitute a substantial segment of the reserve army of laborers, so vital to the functioning of the capitalist system. The imposed intermittent work cycle of women gives "employers an excuse to pay their young women employees less, and not to promote them to positions of importance." (Goldberg, 1970, p. 39)[6]

The issues in this debate are far too complex to deal with here, but I do want to cite two authors in this context. Weisskoff argues that "the division of labor on the basis of sex appears to be a universal characteristic of every society of which we have knowledge, from the most technologically primitive through the advanced industrial economies." (p. 163) Support for this position is given by Wilensky, who in addition argues that in Russia, often cited as a counter example to the dreary situation for women in the U.S., "similarities . . . in job assignments are probably greater than the differences." (p. 240)[7] However much or little one accepts the capitalism-as-oppressor thesis, what seems to be accepted by most individuals is the fact that custom and tradition, whatever their source, are a basic factor in the dilemma facing women today. Steven Sandell puts the issue well: "a substantial part of the occupational distribution and the observed differences between male and female wages can be attributed to different expected lengths of labor market involvement and differences in the related incentives to invest in human capital for the sexes. These . . . differences stem from the perceived family roles of men and women in contemporary American society." (p. 175)[8] The early socialization of children is obviously geared to easy and ready acceptance on the part of men and women to their respective roles in the home and market.

This basic social and institutional structure leads to a variety of attributes typical of the female labor market entrant, and these attributes in turn are frequently cited as explanations for the pay and occupational differences under discussion. While not exhaustive, the following are among the most often cited:

1. The needs of the family reduces career aspirations of women, which in turn lead to lower levels of investment in education and training, both by the woman herself and her employer (Ginzberg, p. 196; Gordon, p. 187; Manche, p. 320; Oppenheimer, p. 231).

2. The needs of the family limit the woman to job location and hours of work, thus putting her at a disadvantage in the labor market (Bell, p. 79; Ginzberg, p. 196).

3. The respective roles of husband (head of the household and boss) and wife (passive recipient of husband's provisions and direction) carry over into sex attitudes regarding supervisory positions in the labor market. These attitudes militate against female supervisory positions, regardless of the sex of the subordinate worker. Goldberg (1970, p. 40) writes: "Men, after all, are accustomed to give orders to women, not receive them, in the home as well as on the job; and women are used to taking orders from men, and, looking at other women as rivals and competitors /and thus/ would resent taking orders from them." Similar views are given by

Oppenheimer, p. 228, and Sanborn, p. 547. Given these very powerful forces, Oppenheimer writes, with justification, "what is surprising perhaps is not that men and women usually compete in separate labor markets, but that male labor is ever substituted for female labor or female for male." (p. 234)

As frequently as one finds these negative implications of family and other social institutions, the literature on women abounds with more favorable implications as well. While recognizing the influence of cultural factors, McNally writes, "Most women . . . seem to be content, or reconciled, to do the kind of work women have always done. . . . It is hard to believe that if a strong desire to break into other types of work had prevailed among women in general, they would not have achieved more in the past 10 or 20 years." (p. 212) The working conditions available to women are attractive, and several authors argue that these attractions offset the low rates of pay (See Kreps, p. 13, and Cohen, p. 437.). In describing her employment as editorial assistant for a learned journal Helen MacGill Hughes wrote, "For me this was the beginning of 17 gratifying, underpaid years." (p. 767) Indeed, the psychic pleasures of wife and mother are also put forth as a form of income not available in the market place, and as a source of satisfaction in which women, because of our custom and institutions, have an advantage over men

(Phelps). The following section is devoted to the question of psychic aspects of work available to women. To date, it seems to me that very little is available in the literature on this question that isn't essentially impressionistic or anecdotal (Kreps, p. 13).

Before doing so, however, a few summary comments are in order. The facts in the case, pay and occupational differentials, though subject to some minor qualifications, are clear. Women have a distinct place in the labor market, and where they work with men or in comparable jobs, their rates of pay are less. The causes of this situation are less clear. The literature is very much like the several blind men describing the elephant, each having had thorough contact with a different one of its many parts. And herein lies the real basis for concern. In an issue which has aroused such widespread concern, and is so diverse in its elements, many will and do try to treat the issue as one of "the woman" problem. There is no such thing in reality. Many women are delighted with their role of homemaker, and part-time (or intermittant) contributor to their family income. Other women, despite custom, have always found a professional career their prime or only interest, and historically have and will continue to lead successful and productive lives in the market place alongside equally ambitious and talented men. The difficulty we face today is the fact that for an extended

period of time past, the former group has vastly outnumbered the latter. And the traditions of the market place have been oriented to that situation. For whatever motives, the desired mix of life-style between the home and market has changed for a substantial number of women, but no means all, and perhaps less than the majority of women. What we are thus experiencing is a conflict between the aspirations of these women, and our innately lethargic and at times unresponsive customs and institutions.[9] Life was indeed simpler and more ordered in the good old days, but we have almost all migrated from the farm by now. There is no stronger advocate for the women's movement than Germaine Greer. In a debate before the Cambridge Union she predicted that decades of effort will be required before we will fully accommodate the needs and aspirations of women. She's probably right.

III: The Qualitative Aspects of Work

The Dictionary of Occupational Titles provides a description of occupations from a variety of viewpoints. These measures allow for an informative picture of the nature of work available to women in our economy. It is possible to apply the DOT job attributes to United States Census of Population occupational categories.[10] This procedure gives, for each of several qualitative attributes, the distribution of women by education level who are involved

in occupations with a given characteristic. More specifically, each of the detailed census occupations is given a value ran[illegible] for each DOT attribute utilized. The number of women in each education class involved in a given occupation are then translated into the numbers involved in work of a given attribute, and the percentage distribution for each attribute for women in each education class is computed. In this paper, I will examine the distribution of attributes for women in the experienced civilian labor force who have four years of college, and those who have five or more years of college.[11] The nature of work available to these two education classes will be compared with comparable groups of men.

The number of women with four or more years of college has grown substantially since 1959. At that time there were 1,702 thousand, representing 7.9 percent of all labor force women (comparable figures for men were 4,210 thousand and 10.7 percent respectively). By March of 1970 the numbers had increased to 4,210 thousand women (6,943 men), or 10.7 percent of all women in the labor force (14.2 for men) (Handbook of Labor Statistics, p. 46).

The data utilized in this study are for 1960, but there is little reason to think that opportunities for women have improved significantly since that time. Indeed, there is some evidence to suggest a deterioration in occupational status, at least through 1966 (Knudsen).[12] The data allow

for an exploration of the assertion (discussed in the preceding section) that women are able to take a substantial portion of their income in non-monetary (psychic) forms, as compared with men, and this at least partially accounts for the observed differences in pay. The attributes considered can be divided into five general catagories. These are intelligence requirements, educational and training requirements, physical working conditions, interests and temperaments, and measures which define some of the activities involved in any specific occupation.[13] Each of these catagories will be discussed in turn.

Intelligence Requirements. The first three panels of Table 3 give the distribution of the experienced labor force (women and men) by years of college for intelligence, verbal, and numerical aptitudes. These are, according to the DOT, "specific capacities and abilities required of an individual in order to learn or perform adequately a task or job duty" (Vol II, p. 653). The rankings given for panels A, B, and C go from maximum aptitude (top 10 percent of the population) requirement to lesser levels as one reads from left to right.

In all three attributes, women are vastly underrepresented in jobs requiring the highest levels as compared with men of comparable education. For example, one percent of women with four years of college, and five percent of the women with five or more years of education, are involved in work

requiring the highest level of intelligence aptitudes. The comparable figures for men are 17 and 35 percent. This pattern holds for verbal and numerical requirements as well. The jobs in our society offering the greatest mental and verbal challenges are far more likely to be available to men than women. And this situation can hardly offer women the substantial psychic return from work necessary to offset the lower pay they receive.

Unless one is willing to argue that women are less able than men, or less interested in challenging work, the above provides an unhappy picture for women. It would seem that ability differences can be ruled out as a valid explanation. The numerous studies done by psychologists are generally in agreement that sex differences are negligible in explaining general intelligence (Jensen, p. 117; Miner, p. 86). Indeed, there is evidence to suggest that women might have advantages over men in the process of learning and early development, which one might expect to carry over into the labor force. Young girls tend to be healthier, have fewer learning and behavior disorders, develop faster, and have fewer mental deficiencies (Jensen, p. 116-117).

There is some evidence suggesting women have lower levels of aspirations with respect to their work (Harrison, p. 82), but such conclusions are apt to be difficult to interpret. It is not at all clear that these lower

aspirations are not simply a recognition on the part of women that they will not be allowed to rise as fast and as far as their male counterparts.

Educational and training requirements. Panels D and E provide the two measures of educational requirements available in the DOT. General Educational Development (GED) has been translated into specific years of schooling by Eckaus (. (p. 184-85). The distributions for GED requirements of occupations are given in panel D. The highest levels are at the right of the panel. Eckaus assigns four years of college to the GED level 5 (p. 185). As was the case in the preceding section, men are much more likely to obtain work demanding the highest levels of educational development than are women of comparable years of college. Again, it would seem that the most challenging work in our society is more readily available to men. Also, similar to the results in the preceding section, is the fact that men are found in a wider range of jobs than women, with the latter being concentrated in the upper, but not the top, of the GED distribution. These results might suggest that the women who do manage to complete a college degree, or more, are more homogeneous in terms of abilities than are men, and that the former do tend to be the most able members (financially as well as intellectually) of their sex. One would expect this result in a society where women face significant obstacles

to higher education. Based on Project Talent Data, it appears in fact that men of low ability and socio-economic status do have a higher probability of attending college than do women and the likelihood of college attendance is less for the most able women as well (Jensen, p. 14). Earlier studies done by the Educational Testing Service support these findings (Harbeson, p. 84).

In addition, the smaller variance of women as compared to men in the above panels is consistent with some psychological studies of intelligence. In a 1926 study of individuals with IQ's in excess of 140, the top one percent of the population, the ratio of males to females in this group was 1.2, while a 1965 study dealing with the top 10 percent of the population found the ratio of females to males to be 1.46--these "results can be viewed as compatible if there is a sex difference in mean score in favor of girls and a greater variance for boys. Thus, in the region of the mean girls would excel boys, but at the extremes of the distribution there would be a greater percentage of boys" (Jensen, p. 119). However, other psychologists have argued that the variations are not significantly different, and that any observed "greater frequency of male geniuses and institutionalized male mental deficients is to be expected as a result of cultural factors" (Miner, p. 86). Whatever the final verdict among psychologists, the variations at the upper IQ levels are a great deal smaller than those observed in Table 3.

The DOT measure of Specific Vocational Preparation (SVP) includes specific training in school as well as on the job, and training gained simply through experience. The distribution of this attribute is given in panel E. The scale runs from fewest to most years of training required as one reads from left to right. The SVP level 8 implies four to ten years of training. The pattern is familiar. Twenty-nine percent of the men with four years of college, and 48 percent of the men with five or more years of college are involved in occupations with the greatest SVP requirements. The comparable figures for women are 7 and 16 percent respectively. The conclusions reached above hold.

Physical Working Conditions. The DOT does indicate, for each occupation, the extent to which several obviously distasteful attributes are present. These include such factors as noise, hazards, fumes, and odors. The number of attributes have been counted in each occupation, with no effort made to distinguish among unpleasantries. The scale for panel F may be interpreted as a measure of the extent of unpleasantness experienced by men and women in connection with their occupations.

Here for the first time is some evidence consistent with the psychic income trade-off thesis. It does appear that virtually all, 95 percent or more, college educated women are involved in occupations where physical drawbacks are absent. While the vast majority of men are also free from

such unpleasantries in their work, a substantial minority do experience negative physical attributes connected with their work.

Interests. The existing evidence on the vocational preferences of college students show that four factors are important to most students, and that nearly all students find one of these factors to be a prime consideration (Rosenberg, p. 12). Financial rewards is one. The evidence cited above demonstrates the situation confronting women on this. The other three are creativity, self-fulfillment, and helping others. Panels G, H, and I deal with "preference for certain types of work activities or experiences, with accompanying rejection of contrary types of experiences" (DOT, Vol II, p. 654). The results here suggest that college educated women do relatively well on two counts, and not so well on a third. Very large numbers of women are involved in work requiring an interest in people and ideas, significantly larger than for men (panel G), and the same is true where tangible satisfaction is inherent in the work (panel H). However, with respect to working in abstractions, as opposed to routine work, very few women are in such occupations (panel I). Many more college trained men are involved in work which would seem to offer opportunities of a creative nature.

Work with people. Since so many women are involved with other people in their work, it is worth looking at the precise

nature of this involvement. Perhaps the most widely recognized aspect of the DOT measures is the Data-People-Things rating. Panel J gives the distributions for college educated men and women working with people. As is well known, most women with four or more years of college are involved in some form of instruction, and very few women deal with people in any other capacity. Men, on the other hand, are somewhat less involved with other people in their work, but where there is such involvement, it is more diverse. Most importantly, I think, for purposes of this study, is the fact that large numbers of men with five or more years of college (26 percent) work with people ~~on~~ in the capacity of mentoring, i.e., most of the professions other than teaching.[14] In addition to teaching, it is work of this nature which allows the individual the greatest explicit opportunity to help others. Very few women have such an opportunity.

Prestige. Finally, in addition to the DOT attributes, I have computed the distribution of work in terms of socio-economic prestige rankings for occupation.[15] These are given in panel K. The results here are strikingly similar to those presented earlier in this section. Relatively few women are involved in the highest prestige occupations, 3 percent for women with four years of college and 12 percent for women with five or more years of college, as compared with men (4 and 29 percent respectively). This pattern holds

for the occupations in the second decile of rankings as well. In addition, a sizable minority of women, 23 percent for those with four years of college, and 9 percent for those with five plus years, are in occupations at the lower end of the prestige index. It would seem that the perception of inferiority of occupations held by women are shared by advocates of women's liberation and society in general.

Summary. While providing some support to the notion that women get paid less, but enjoy it more, the above analysis of the qualitative nature of work offers a fairly bleak picture. It is true that almost all working women can avoid physical disadvantages in their occupations, and that many do have jobs offering some tangible satisfaction. However, the work available to college educated women is less challenging, utilizes their training to a lesser degree, and offers little opportunity for work of an abstract nature, as compared with men of comparable education. It is hard to believe that this under-utilization of talent, and work in lower prestige occupations can offer a large enough psychic component (if any) to offset the existing pay differentials. And unless one is willing to argue that college educated women are less intelligent (incorrect), or less desirous of challenging work (at best an ambiguous argument), this state of affairs is not only economically inefficient, but very cruel as well. The additional possibility that the interests

in part time work can explain some of these results is effectively negated by Bell. Most women work full time schedules, and of those who work, only one out of five works part time by choice (p. 79).[16] Rather than providing educated women with a source of personal satisfaction, labor market opportunities are apt to be a source of unhappiness for many.[17]

FOOTNOTES

1. With our present concern with various isms, including sexism, it is interesting to note a peculiar practice of economists. In virtually all studies of labor force participation of married women, the husband's income is included as an independent variable, and as it turns out a highly significant one (See Kreps, Ch 2.). To the best of my knowledge, I have never seen a study of male labor force participation which utilized the wife's income in a similar manner.

2. The literature on women in the labor market has grown enormously in the past decade. Three journals have recently published issues which are quite broad in their coverage, and seem to me to contain much of the essence of the debate. These are: American Journal of Sociology, Jan. 1973, 78; Industrial Relations, May 1968, 7; and The Review of Radical Political Economics, July 1972, 4.

3. For a study of law school graduates see McNally, p. 216, and for the academic profession, see Bayer and Astin. In both professions, women seem to receive lower rates of pay.

4. According to Weisskoff, the labor market has absorbed increasing numbers of women via growth in traditional female jobs, new occupations which become female jobs, and

the shift in sex composition from male to female (p. 163). For additional documentation on the sex ordering of occupations, see Richard B. Mancke (p. 321).

5. Support for this assertion is given in Gordon (p. 187), Mancke (p. 322), and McNally (p. 214).

6. For a development of the Marxist-Engles position see Madden.

7. This situation in Russia is spelled out in considerable detail by Goldberg (1972). In describing the present status of women, she writes, "The role of women in the Soviet economy is determined primarily by economic expediency, within a context of male privilege" (p. 66). For a more optimistic (and apparently naive) view see Sherman and Hunt, p. 617.

8. M. and J. Rowntree argue along similar lines. And it would appear that all facets of American society are susceptible to sexist attitudes, including the New Left, see Kreps, p. 55, and Quick, p. 15. For similar attitudes among French professional women, see Silver, p. 849.

9. Ginzberg feels "we have permitted old models and stereotypes to remain entrenched in the face of a vastly altered reality" (p. 201). A slightly more sympathetic view is that of Sandell, who writes, "Probably the greatest obstacle

to equal opportunity for career-oriented women . . . is the difficulty employers have in distinguishing them from women whose labor force attachment is casual and usually for short duration." (p. 176)

10. In preparing the data for this study, I utilized the U.S. Department of Labor Manpower Administration preliminary conversion tables (mimeographed) for conversion of DOT to B. L. S. classifications. For a detailed statement of the methodology utilized see Kaun, appendix B. Copies of this appendix are available from the author upon request.

11. Of the 161 detailed occupations given in Occupational Characteristics, Census of Population 1960, V 2: 7A-7B, Table II, all but 24 were amenable to translation into specific DOT occupations. The 137 occupations utilized represented 63 percent of the experienced female labor force (four years of college) and 68 percent of the females with five or more years of college. The comparable figures for males are 69 and 75 percent respectively. The percentages for women with less education are considerably lower.

Another reason for limiting the analysis to college educated women is the fact that most of the concern expressed by women comes from this group. It is this group of workers, both male and female, who might be expected to place a high value on psychic rewards at the expense of money income.

12. More recent Department of Labor statistics are consistent with Knudsen's conclusions. In 1971, 14.5 percent of employed women were in the professional and technical occupations (12.2 percent in 1960), while the figures for men are 14.0 percent in 1971 (10.7 percent in 1960). For managers, officials and proprietors, 5 percent of employed women in 1971 (4.9 percent in 1960), and 14.6 percent of men (13.4 percent in 1960) were in these occupations. Thus, in these two high status occupations, very broadly defined, women experienced less rapid relative growth than did men. (Stein and Travis, Table C-6, and Green and Stinson, Table A-17)

13. The complete description of each of the attributes utilized is available in the Dictionary of Occupational Titles Vol II, 1966, Appendix A and B. This information, plus a list of the census occupations utilized and those excluded are available from the author upon request.

14. Mentoring involves "dealing with individuals in terms of their total personality in order to advise, counsel, and/or guide them with regard to problems that may be resolved by legal, scientific, clinical, spiritual, and/or other professional principles" (DOT, Vol II, p. 649)

15. The Duncan Socio-Economic Index has been used here, with each occupation group placed in its respective decile, i.e.,

occupations with an index of 97 and 92 are placed in the 10th decile (Robinson, et al, pp. 344 ff).

16. The numbers for 1960 are as follows: 15,011 thousand women were on full time schedules, 1,971 thousand on part time by choice, and 1,083 thousand were on involuntary part time schedules. Comparable figures for 1970 were 19,621 thousand; 6,364 thousand; and 1,090 thousand respectively (Handbook of Labor Statistics, pp. 61-62).

17. In documenting the fact that adult women experience greater mental illness (not caused by organic or toxic condition) Gove and Tudor speculate on the inferior occupational status of women as a possible cause (p. 815). The data presented in this paper offers considerable support to their speculations.

TABLE 1

Labor Force Participation Rates

Labor Force	1948		1970	
Total Labor Force	62,080	100%	85,903	100%
Male	44,729	72	54,343	63
Female	17,351	28	31,560	37
Participation Rates	(percent)		(percent)	
Male	87.0		80.6	
Female (total)	32.7		43.4	
Married Women	22.0		40.0	
No children	28.0		42.2	
Children present (ages 6-17)	26.0		49.0	
Children present (under age 6)	10.8		30.3	

Source: Handbook of Labor Statistics, 1971, pp. 25 and 49.

TABLE 2

Occupations in Which 70 Per Cent or More
Of the Workers Were Women, 1960

Occupation	Percent female	Percent of female labor force in occupation
Attendants in physicians' and dentists' offices	98	0.3
Chambermaids and maids	98	0.8
Nurses	98	2.8
Receptionists	98	0.6
Dressmakers and seamstresses	97	0.5
Private household workers	96	7.9
Stenographers, typists and secretaries	96	10.0
Telephone operators	96	1.6
Sewers and stitchers	94	2.6
Dieticians and nutritionists	93	0.1
Demonstrators	92	0.1
Milliners	91	0.0
Hairdressers and cosmetologists	89	1.2
Boarding and lodging housekeepers	88	0.1
File Clerks	86	0.5
Librarians	86	0.3
Waitresses, counter and fountain workers	84	4.0
Bookkeepers and cashiers	82	5.2
Hospital attendants, practical nurses, and midwives	81	2.3
Housekeepers and stewards	80	0.6
Textile spinners	79	0.2
Knitting mill operatives	78	0.2
Dancers and dancing teachers	77	0.1
Library attendants and assistants	77	0.1
Apparel and accessories operatives	74	1.3
Office machine operators	74	1.1
Laundry and dry cleaning operatives	72	1.3
Teachers	72	5.4
Fruit, nut, and vegetable graders and packers	71	0.1
Attendants, professional and personal services	70	0.2
Total		51.5

Source: Mancke, p. 321

TABLE 3

Distribution of Attributes for the Experienced Labor Force: Females and Males by Years of College, 1960

INTELLIGENCE REQUIREMENTS

			DOT RANKING						
			1	1.5	2	2.5	3	3.5	4
A. INTELLIGENCE	female	4	.01	.28	.60	.08	.02	.01	.03
		5+	.05	.44	.46	.03	.01	--	--
	male	4	.17	.49	.05	.19	.04	.05	.01
		5+	.35	.48	.07	.06	.01	.02	--
B. VERBAL	female	4	--	.26	.60	.08	.04	.01	.01
		5+	.01	.46	.46	.05	.02	--	--
	male	4	.02	.61	.04	.21	.05	.05	.02
		5+	.10	.71	.06	.08	.02	.02	.01
C. NUMERICAL	female	4	.03	.19	.07	.61	.09	.01	.01
		5+	.05	.30	.10	.47	.06	.01	--
	male	4	.28	.06	.28	.14	.21	.01	.03
		5+	.33	.13	.18	.26	.08	--	.01

EDUCATION AND TRAINING

			2	2.5	3	3.5	4	4.5	5	5.5	6
GENERAL	female	4	--	--	.01	.05	.02	.08	.78	.05	.01
D. EDUCATIONAL		5+	--	--	--	.02	.01	.05	.72	.08	.11
DEVELOPMENT	male	4	.02	--	.03	.06	.12	.29	.26	.08	.14
		5+	.01	--	.01	.02	.04	.12	.23	.16	.42

E. SPECIFIC VOCATIONAL PREPARATION

		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	9
female	4	--	--	--	--	.03	--	.01	.02	.02	.60	.19	.05	.06	.01
	5+	--	--	--	--	.01	--	--	.01	.01	.44	.29	.08	.09	.07
male	4	.01	--	.02	--	.01	.02	.01	.03	.15	.14	.25	.07	.28	.01
	5+	--	--	.01	--	--	.01	--	.01	.05	.08	.20	.16	.40	.08

PHYSICAL WORKING CONDITIONS

			none	few	many
F. NUMBER OF DRAWBACKS	female	4	.97	.01	.02
		5+	.95	.01	.04
	male	4	.80	.11	.09
		5+	.79	.17	.04

Table 3 (continued)

INTERESTS

Preference for work involving:

	female		male	
G. Contact with Things and Objects	4	5+	4	5+
	.05	.03	.21	.12
People and Ideas	.87	.90	.34	.52
Neither	.08	.07	.45	.36

	female		male	
H. Abstraction	4	5+	4	5+
	.10	.15	.25	.36
Routine	.06	.03	.25	.10
Neither	.84	.82	.50	.54

	female		male	
I. Esteem of Others	4	5+	4	5+
	.01	--	.04	.01
Tangible Satisfaction	.83	.86	.42	.72
Neither	.16	.14	.54	.27

WORK WITH PEOPLE

	female		male	
J. Mentoring	4	5+	4	5+
	.01	.04	.04	.26
Negotiating	.01	.08	.02	.18
Instruction	.72	.69	.09	.16
Supervision	.02	.01	.03	.01
Directing	.04	.04	.01	.02
Persuading	.01	.01	.16	.05
Speaking Signaling	.04	.02	.25	.09
Serving	--	--	--	--
Not Related	.16	.04	.40	.23

PRESTIGE RANKING OF OCCUPATIONS

	female		male	
K. Decile on Duncan Scale (Socio-Economic Ranking)	4	5+	4	5+
1	.02	.01	.01	--
2	.21	.08	.03	.01
3	.04	.01	.04	.01
4	.05	.01	.04	.01
5	.03	.02	.04	.01
6	.11	.10	.09	.11
7	.06	.04	.20	.07
8	.32	.34	.28	.25
9	.13	.26	.23	.22
10	.03	.12	.04	.29

Source. See text.

REFERENCES

Bayer, Alan E., and Astin, Helen S., "Sex Differences in Academic Rank and Salary Among Science Doctorates in Teaching," Journal of Human Resources, Spring 1968, III, 191-200.

Bell, Carolyn Shaw, "Age, Sex, Marriage and Jobs," Public Interest, Winter 1973, 76-87.

Benston, Margaret, "Political Economy of Women's Liberation," Monthly Review, Sep. 1969, 20, 13-27.

Census of the Population, 1960, Occupational Characteristics, V 2: 7A-7B U.S. Department of Commerce, Washington, D.C.

Cohen, Malcolm S., "Sex Differences in Compensation," Journal of Human Resources, Fall 1971, VI, 434-47.

Dictionary of Occupational Titles, Vol. I, II, III, IV, 3rd edition, U. S. Department of Labor, Washington, D.C., 1965 and 1966.

Eckaus, R.S., "Economic Criteria for Educational Training," Review of Economics and Statistics, May 1964, 46, 181-90.

Ginzberg, Eli, "Pay check and Apron--Revolution in Womanpower," Industrial Relations, May 1968, 7, 193-203.

Goldberg, Marilyn Power, "Women in the Soviet Economy," Review of Radical Political Economics, July 1972, 4, 60-75.

_____. "The Economic Exploitation of Women," Review of Radical Political Economics, Spring 1970, 2, 34-47.

Gordon, Margaret S., "Introduction: Women in the Labor Force," Industrial Relations, May 1968, 7, 187-92.

Gove, Walter R., and Tudor, Jeannette F., "Adult Sex Roles and Mental Illness," American Journal of Sociology, Jan. 1973, 78, 812-35.

Green, Gloria P. and Stinson, John F., "Employment and Unemployment," Special Labor Force Report No. 142, B. L. S., U. S. Department of Labor, 1972.

Harbeson, Gladys E., Choice and Challenge for the American Women, Schenkman, Cambridge, Mass., 1967.

Handbook of Labor Statistics, 1971, Bull. 1705, U. S. Department of Labor, Washington, D. C.

Harrison, Evelyn, "The Working Women: Barriers to Employment," Public Administration Review, June 1964, 24, 79-85.

Hughes, Helen MacGill, "Maid of All Work or Departmental Sister-in-Law?," American Journal of Sociology, Jan. 1973, 78, 762-72.

Jensen, Arthur R., "The Race x Sex x Ability Interaction," in Intelligence: Genetic and Environmental Influences, Robert Cancro, editor, Grune and Stratton, New York, 1971.

Kaun, David E., "The College Dropout and Occupational Choice," in Higher Education and the Labor Market, Ch. 5, Carnegie Commission on Higher Education, McGraw Hill,1973 (forthcoming).

Knudsen, Dean, "The Declining Status of Women: Popular Myths and the Failure of Functionalist Thought," Social Forces, Dec. 1969, 48, 183-93.

Kreps, Juanita, Sex in the Market Place, Johns Hopkins Press, Baltimore, 1971.

Madden, Janice, "The Development of Economic Thought on the 'Woman Problem'," Review of Radical Political Economics, July 1972, IV, 21-38.

Mancke, Richard B., "Lower Pay for Women: A Case of Economic Discrimination?," Industrial Relations, Oct. 1971, 10, 316-26.

McNally, Gertrude Bancroft, "Patterns of Female Labor Force Activity," Industrial Relations, May 1968, 7, 204-18.

Miner, John B., Intelligence in The United States, Springer, New York, 1957.

Oppenheimer, Valerie Kincade, "The Sex Labeling of Jobs," Industrial Relations, May 1968, 7, 219-34.

Phelps, Charlotte D., "Is the Household Obsolete?," American Economic Review, May 1972, LXII, 167-74.

Quick, Paddy, "Sexual Politics," Newsletter of the Union for Radical Political Economics, Feb. 1973, 4, 15.

Robinson, John P., et. al., Measures of Occupational Attitudes and Occupational Characteristics, University of Michigan Survey Research Center, 1969.

Rosenberg, Morris, Occupations and Values, Free Press, New Jersey, 1957.

Rowntree, M. and Rowntree, J., "More on Political Economy of Women's Liberation," Monthly Review, Jan. 1970, 21, 26-32.

Sanborn, Henry, "Pay Differences between Men and Women," Industrial and Labor Relations Review, July 1964, 17, 534-50.

Sandell, Steven H., "What Economic Equality for Women Requires" --(discussant), American Economic Review, May 1972, LXII, 175-76.

Sherman, Howard J., and Hunt, E. K., Economics: An Introduction to Traditional and Radical Views, Harper & Row, New York, 1972.

Silver, Catherine Bodard, "Solon, Foyer, Bureau: Women and the Professions in France," American Journal of Sociology, Jan. 1973, 78, 836-51.

Stein, Robert L. and Travis, Herman, "Labor Force and Employment in 1960," Special Labor Force Report No. 14, B. L. S., U. S. Department of Labor, 1961.

Suter, Larry E., and Miller, Herman P., "Income Differences between Men and Career Women," American Journal of Sociology, Jan. 1973, 78, 962-74.

Weisskoff, Francine Blau, "Womans Place in the Labor Market," American Economic Review, May 1972, LXII, 161-66.

Wilensky, Harold L., "Women's Work: Economic Growth, Ideology, Structure," Industrial Relations, May 1968, 7, 235-48.