It is an increasingly well-documented fact that women in the American universities suffer from sex discrimination. Recent federal legislation makes it legally as well as morally imperative that employment policies in higher education afford equal opportunity to women. Under the law, institutions under federal contracts must be able to demonstrate positively that no discrimination exists in any aspect of employment and that affirmative action is being taken to remedy the effects of past discrimination. This places the burden of proof on the administration of a college to provide evidence of its innocence, rather than the employee or the Federal government to prove the administration's guilt. This document presents a description of a method utilized at the University of South Florida to find specific corrective measures to eliminate existing and to prevent future sex discrimination. It was first used for documentation purposes and subsequently for corrective ones.

(Author/HS)
THE STATUS OF FACULTY WOMEN
A Method for Documentation and Correction of Salary and Rank Inequities Due to Sex

by

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University of South Florida
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A Method for Documentation and Correction of Salary and Rank Inequities Due to Sex

It is an increasingly well-documented fact that women in the American universities suffer from sex discrimination.\(^1\) The need is no longer for "further study" of these injustices, rather for action to eliminate them. The recent federal legislation, which places educational institutions under the Civil Rights Act of 1964\(^2\), makes it legally

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\(^2\) The Equal Employment Opportunity Act of 1972 (Public Law 92-261) of March 24, 1972 placed educational employees under Title VII of the Civil Rights Act of 1964. The Higher Education Act of 1972, Title IX, June 23, 1972 is the most extensive piece of legislation relative to the status of women in education. This act does three things: prohibits sex discrimination in all federally assisted education programs (with a heavy emphasis on admission practices); amends the Civil Rights Act of 1964; and extends coverage of the Equal Pay Act of 1963 to professionals (faculty and administrators). Various government agencies administer this provision. Whoever grants the funds may withhold them. The Attorney General may intervene in sex discrimination cases, and, in the case of equal pay, the solicitor of the Department of Labor may bring suit and order back pay. The portion dealing with equal pay covers all employees in all public and private institutions regardless of whether their salaries come from federal grants and funds.
as well as morally imperative that employment policies in higher education afford equal opportunity to women. Under the law, each institution is not "innocent until proven guilty." As a federal contractor, it must be able to demonstrate positively that "no discrimination exists in all aspects of employment and that affirmative action is being taken to remedy the effects of past discrimination." This places the burden of proof on the administration of a college to provide evidence of its innocence, rather than the employee, or the Federal government to prove the administration's guilt. In any case, it is now a fact of life that every college, if it has not already done so, must find specific corrective measures to eliminate existing and to prevent future sex discrimination. The following is a description of a method which was utilized on the campus of the University of South Florida (Tampa). It was used first for documentative purposes and subsequently for corrective ones.

Documentation

Under the auspices of the local AAUP chapter, figures were amassed to show that teaching and research women at USF are paid less than men of the same academic rank and college, and that women faculty are found among the lower ranks out of
proportion to their number. These figures convinced our new president, Dr. N. Cecil Mackey, of the likely presence of sex bias. In response to the AAUP reports, and the formal request of several women, he appointed an ad hoc committee on the Status of Women and charged it to document further their case and to make recommendations for affirmative action.

An adequate definition of "sex-based inequities" is difficult to establish. While it had been demonstrated that women are paid less and hold lower ranks than men, the possibility existed that this was due to greater productivity, training, and/or years of academic experience of the men compared to the women. In other words, it could have been asserted (and usually has been) that, in general,

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3 Dr. Maxine MacKay headed the small AAUP committee which reported these results based on institutional statistics and/or anecdotal evidence from women responding to a questionnaire. Dr. MacKay was recently appointed Special Assistant Vice President for Women's Affairs at USF. This appointment (Spring, 1972) was an important first step in USF's implementation of affirmative action for women.

The abstract of this report may be obtained from ERIC Clearing House on Higher Education. The Status of Academic Women, Review 5, April, 1971. University of South Florida, MacKay, Maxine, "Status of Women Committee Faculty Report", November, 1970, p. 15 and 16 (Micro-Film, Hard Cover)
women are paid less and promoted more slowly, not because they are women, but because they are not as well-trained, have not had the same amount of experience as, or are as productive as, the men alongside of whom they work. Based on statistical analysis, it may be said that the inequality in pay and rank may be said to exist if sex as an independent variable can be shown to be significantly related to salary and rank when other relevant variables, such as training, experience and productivity, have been held constant.

**METHOD**

A sample of teaching and research women were employed full-time at the University of South Florida taken by selecting all holders of the doctorate degree. Thus, we ensured that the formal academic training of these 29 women were "equal" to any group of comparison men. The task of selecting a sample of men who would be "equivalent" to these women in training, productivity, and years since terminal degree was more difficult. Our original plan was to select a group of men by utilizing the data summary sheets by University Planning on all faculty) for all men in the various departments in which the women taught. However, this was not possible due to lack of human resources, however, this was not possible.
and, as it turned out, not necessary. We decided to use a nomination procedure instead. Our Equal Opportunity Officer volunteered to contact by letter each of the women in the sample to ask her to name the man or, in some instances, men, whom she could identify as being her nearest male "counterpart(s)" in terms of training, experience, and productivity. By "counterpart" nothing more was meant than was designated above since, we hastened to add, no faculty member is truly the counterpart of another. It was recognized that there might be an expected tendency for women to name men who held a higher rank or who were earning more than they did in order to influence the outcome of the study. However, with respect to salary at least, it cannot be established, whether or not the women were aware of what the salaries of their male colleagues were for that year. Actually, at that time most women (and probably many men) were not cognizant of salary figures other than their own. Frequently, they reported that they did not know how to obtain these figures even though they are a matter of public record. In any case, to offset this possible source of bias, we then asked each chairman of the departments in which the various women worked to nominate the man (men) he judged to be most closely matched (training, experience and productivity) to each woman in question. The reasoning behind this was that chairmen
presumably are the persons most knowledgeable about the members of their departments and most responsible for salary and promotion recommendations. It was expected that they might be biased in the opposite direction from the women; i.e., that they might select men on the basis of the fact that their salaries and rank are close to, if not lower than, the women for whom they are choosing a match. (How could they justify naming men of presumably equal training, experience and productivity who are paid more or who hold higher rank?)

RESULTS

Matching. The first question, whether or not our matching procedures produced two groups whose average years of service, productivity, and training were actually equivalent, can be answered affirmatively.

(1) Training and employment status—with no exceptions, all members of the sample were employed full-time and, with only two exceptions (both male), all held the doctorate degree.

(2) Experience—The number of years since the terminal degree was used as the measure of experience since it was the simplest to ascertain. This does not deny the fact that many faculty may have had valuable (and valued) experience prior
to obtaining the doctorate. However, we did not feel competent to assess the variety of prior experience for such a diverse sample. Since it is likely that both men and women would "suffer" equally by this narrow definition, it seemed justifiable to use this information as the index.

Table 1 lists the average years since the terminal degree for the three groups (women, their choice of a male "counterpart" and the chairmen's choice) calculated through Fall, 1971. As can be seen in this table, the mean number of years since terminal degree was 5.8, 7.4 and 5.8 for the three groups respectively. When the two male samples were averaged, the mean number of years since terminal degree was 6.6. The difference between 5.8 and 6.6 years is not significant (t = 1.26, df 28). It should be noted that the two extreme scores (29 years) were both in the male groups, which would tend to inflate the size of the male means. Thus, it is possible to say, after averaging the two male groups, that the years of experience of women and men were as closely matched as was possible using this procedure.

Whenever two men were named as "counterparts" for women, their data was averaged. This was also done in calculating productivity data.
Table 1
Description of Samples

<table>
<thead>
<tr>
<th>Groups</th>
<th>Years Service as of Fall, 1971</th>
<th>Productivity Average of 1968 - 69 - 70</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sum</td>
<td>Mean</td>
</tr>
<tr>
<td>Women</td>
<td>168.0</td>
<td>5.8</td>
</tr>
<tr>
<td>Women's Nominees</td>
<td>214.9</td>
<td>7.4</td>
</tr>
<tr>
<td>Chairmen's Nominees</td>
<td>168.4</td>
<td>5.8</td>
</tr>
</tbody>
</table>

(3) Productivity—The Research Summary Data Sheets which the University Planning Office developed and maintained for each faculty member were used to obtain an index of the scholarly productivity of the faculty sample.
The procedure for determining scholarly productivity by no means produced an absolute measure of productivity, but rather led to the development of an indicator which, at least, could be said to be objective. The Research Data Sheets summarize the scholarly activities which faculty members report each year on annual report forms. The Placement Office had already developed a systematic way of "translating" the various academic accomplishments of faculty from their annual reports into these activity "recap sheets." These were used because, again, we did not feel competent, nor have the time, to call for and review detailed vitae for all the sample in order to assign relative points for the diversity of activities which would have been found. Using the Placement Office's coded data, a point system was devised. In brief, three points were assigned for each book, two points for each workbook or monograph, and one point for each article, chapter, or book review written. One point was allotted for each grant received, each performance given or each contribution to an exhibit and for each special award or honor. In one case, three points were assigned for a sizeable one-person art show since this represented a long-term effort similar to that of a book.\footnote{Evaluation of teaching effectiveness for the purpose of assigning points was not possible. Since teaching historically has had less influence on salary and rank than research and publication has, and because it is so difficult to assess objectively, we felt justified (not happy) in omitting it from our point system. The only place where it was taken into account was in years of experience (mentioned above under experience) or where a special teaching award was won.}
Using this system, each faculty member's productivity was tabulated for the years 1968, 1969, and 1970 (the 1970 annual report turned in February, 1971, being the last one available). This was necessary in situations when a faculty member was not employed until 1969 or 1970, or had taken a leave of absence for a year, or simply failed to turn in a report. In the case of individuals where there was no reported scholarly activity for all three years, the average for the group minus these individuals was supplied and enclosed in parentheses. The use of the average of a three-year sample of academic output was felt to be an adequate representation of scholarly effort and prejudicial to none of the groups. In other words, it was just as probable that three of the "best" or three of the "worst" years of any person sampled, male or female, might have been selected. Furthermore, it was the most current measure obtainable.

Table 1 summarizes the mean productivity points for each faculty sample. (Whenever two men were named as "counterparts" to a woman, their average was averaged.) As can be seen here, the total numbers of production points for the three groups were 105.6, 113.2 and 95.2, with the respective means being 3.6, 3.9 and 3.3. When the two male groups' productivity means are averaged and then compared to the
female's a perfect match is apparent (3.6 for men versus 3.6 for the women).

In general, it can be said that the nomination technique succeeded in producing two groups of faculty whose training, experience and productivity were comparable. Interestingly, the woman's choice and the chairman's choice frequently differed in the direction predicted, so that it was necessary to combine them to produce a match.

Salary. Table 2 lists the differences between each woman's salary and the average of the salaries of her two male "counterparts." The woman's salary was higher than the man's in only four, and the same as in three, of the 29 cases. The mean difference was $1,374.86. The t test of differences (t = 3.84, df = 28) was significant (p < .01), indicating that salary is significantly dependent upon sex, such that men received higher (on the average, $1,374.86) salaries than their female "counterparts."


TABLE 2

Salary and Rank Differences

<table>
<thead>
<tr>
<th>Men - Women Salary Differences</th>
<th>Women - Men Rank Differences</th>
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<tr>
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<tr>
<td>2233.34</td>
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</tr>
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</table>

Mean = 1374.86

Variance = 3724625.07

\[ t = 3.84 \]

Mean = 51.72

Variance = 9014.78

\[ t = 2.93 \]
Rank. The differences between the rank (where a rank of 100 = Full Professor, 200 = Associate, etc.) of each woman and the average of the ranks of her two male "counterparts" are also shown in Table 2. The mean difference was 51.7 or approximately "half" a rank. The $t$ test of differences ($t = 2.93, df = 28$) was significant ($p < .01$), which means that sex is apparently a significant variable in determining rank as well as salary, such that men hold higher rank than their female "counterparts."

**DISCUSSION.**

The salary and rank analyses clearly suggested discrimination on the basis of sex. It was possible that the quality of the academic production of the women might have been inferior to that of the men. Or it could be argued that some women who write articles are in departments where speeches are more valued, while others who give speeches are in departments where article-writing is reinforced, and so on. Occam's razor would appear capable of cutting down these arguments while leaving a discrimination hypothesis untouched. Furthermore, it must be remembered the context in which this study

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6 Jane Loeb and Marianne Ferber also point this out in a paper describing a correlational technique to ferret out sex as a determiner of salary and rank. See "Sex as Predictive of Salary and Status on a University Faculty," paper presented at the annual meeting of National Council on Measurement in Education, New York, Feb., 1971.
took place. That is, national, regional and local statistics all show the same pattern of unequal salary and rank distributions between the sexes. One interesting fact at USF is that while the women in this sample had a slightly lower average number of years of service than the men to whom they were compared, their productivity was equal to that of their male counterparts. In other words, they produced to the same degree as their counterparts, but took less time to do it.

The mean discrepancy in salary between the sample of women and their closely-matched male group was $1,374.86. Since the mean salary for all faculty women at USF was $12,470.04 (9 months), an average 11% increase in the salaries of women could serve as a rough estimate of adequate salary equalization. Of course, a clear-cut class case of discrimination such as was demonstrated in this study could not lead to the generalization that every woman is underpaid, or underpaid to the same extent. We also realized that correction of apparent rank inequalities would be an even more complicated process, though just as necessary.

An additional problem involved in estimating the magnitude of salary or rank discrimination against women at the University of South Florida, or at any other institution, is that opportunity to acquire evidence of merit may be differentially available to the sexes. For example, one of the reasons committee membership was omitted in assessing
productivity in this study stemmed from the fact that women, up to the time of the study, had been given fewer opportunities to serve on, or to chair, important university and departmental committees than their male colleagues. In addition to this local source of exclusion from opportunity to serve, other non-employment opportunities in professional organizations, fellowships, journal editorships and research grants may have been less available to women than to men. In all events, even when the self-fulfilling prophecy (i.e. women are expected to perform at a lower level and therefore do so) had not resulted in the women in this study accomplishing at a lower rate than the selected groups of men, the rewards for their efforts were still substantially lower.

CORRECTION

In early February, the study described above was given to the administration with a request that corrective action be taken immediately. Our president responded by appointing a small committee, chaired by the author, charged with the task of reviewing each full-time faculty woman's salary for possible sex bias. A one-by-one compulsory review

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7This was one of the findings made by the University's Status of Women Committee and submitted in its report to the president.
of the cases of all 135 full-time female professors was conducted within a 5-week period of time.\(^8\) We sent a letter to each woman and to her supervisor (chairperson or dean) asking both the woman and the supervisor to independently select a male counterpart. As an aid for this selection, we also duplicated and mailed computerized personnel data on all the members of the department in which the woman worked. Chairpersons were requested to study and make available to the women for study the latest curriculum vitae of men in the department or college who seemed likely choices as counterparts. With this information, women faculty and their heads were asked to follow the detailed steps outlined in a memorandum\(^9\) sent to our committee by President Mackey. Specifically, the steps were as follows:

"1. Determine whether there is, in fact a male counterpart whose salary could be compared with the salary of the individual woman whose case is being reviewed. The indication of a counterpart would have to be agreed upon by the woman and by her department chairman. If an agreed-upon counterpart is identified, any difference in salary between the male counterpart and the woman would be assumed prima facie to be the result of discrimination. The department chairman, of course, would have both the opportunity

\(^8\)A half-time clerk was assigned to us for the purpose of handling the records and typing up the final report.

\(^9\)In addition, this same memorandum was reproduced in full in our internal publication, Intercom. The study has been widely advertised in the university community so that it could be the subject of public scrutiny.
and the obligation to point out any substantive basis he thought might exist as an explanation for the difference other than discrimination on the basis of sex.

2. Where no counterpart can be identified, the individual woman's salary would be compared with the average salary of males within the department having comparable rank, experience, length of service, and academic qualifications, including teaching, research, and service. If there is a reason to believe that a woman's rank is lower than that of men in the department who have comparable backgrounds and experience in other respects, that fact should be taken into account. In a situation where this type of comparison is used there would be an assumption that the difference between the woman's salary and an average for the males so compared would approximate the extent of discrimination based on sex. Again, the departmental chairman would be expected to offer any explanation or justification which he might believe existed for salary differentials.

3. If there are no faculty colleagues with whom meaningful salary comparisons can be made, the salary of the woman being considered would be compared with the salary that would be offered to a recruit with similar qualifications, assuming the position were new or unfilled. The salary which would be offered to such a candidate having those qualifications to fill that position would be taken as the salary to be used for comparison with the woman's current salary."

After this initial review, we urged each woman and her supervisor to discuss their choices and attempt to come to an agreement. In the great majority of cases, agreement was reached, and, afterwards, each party reported the names of the counterpart(s) independently. Thus, the committee's job was primarily administrative: that of contacting the individuals, providing them with preliminary data and the procedures to be followed, assisting wherever asked (sometimes smoothing ruffled feathers), collecting the agreements...
and finally, collating them in a report. It was not for us to arbitrate in only a very few cases. When we used the curriculum vitae of the woman and the question in order to ascertain the closest male counterpart in much the same way as described in the method section of this paper. In several instances a simple averaging of two or more nominees resulted in a close match, just as would be predicted from the general findings of the study.

Most of the women elected the counterpart as a means of examining their salaries. In some instances, when an appropriate counterpart could not be identified, however, the other two methods were used. When the woman's salary was compared to that of her counterpart (or average for that rank or to a "new position" salary) it was discovered that the average difference favoring the close to $1400. It should be recalled that this was the figure which the first study revealed as the average difference between men and women's salaries.

**Conclusion**

The President has issued a written statement to the effect that "off-the-top" money from the 1972-73 increase money will be reserved for the purpose of
inequities in faculty women's salaries. Although women on campus wanted immediate and complete remedy, they indicated to the president that should this work a hardship on their male colleagues in severely reducing their pay increases, they would be willing to have the correction spread over a two-year period. That is, they indicated a willingness to go slowly in the interest of maintaining good morale. The fact that the administration moved quickly in providing the mechanism and resources for action led to a credibility in the institution's intent among the female faculty so that this compromise was possible. As it turns out, a decision was made by the faculty budget committee and the administration to award 100% of the recommended equity this year.

In sum, this method of finding male counterparts through a nomination technique has been found to be useful in both the documentation (group study) and the correction (individual case study) of sex-based inequities in salary. With respect to rank, it has been useful in the group study. In the case by case study, we were not asked to make specific recommendations for each woman regarding the appropriate rank for her. However, we were authorized to note whenever the academic rank of the woman differed from that of her counterpart. The remedy for inequities in rank will require
a larger departmental effort in reviewing policies affecting promotion. It is hoped that since the discrepancies in rank have been publicly identified, thorough investigation and correction of them will occur at the departmental and college level during the forthcoming year.

Of the 135 cases of women faculty which were reviewed, 93 of them will receive equity raises in the fall ranging from $74 to $3950, totaling $135,000. This made USF the first of the nine state universities in Florida to develop substantial parity in faculty salaries—a parity mandated by both the 1971 and the 1972 State Legislatures. The university has received wide publicity in the media as a result of its actions on this matter.

July, 1972