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ABSTRACT

A statistical profile of the salaries, rank, and representation of women and men full-time faculty in universities and colleges in Canada is presented. Data from "Statistics Canada" for the academic years 1972-73, 1975-76, and 1977-78 were used in the comparative analysis. Between 1972-73 and 1977-78, women remained a minority population, 13 to 14 percent of the full-time teaching staff. Throughout the 1970s women continued to be concentrated in the assistant and lecturer rank and men continued to be found disproportionately in the full and associate professorship ranks. Regardless of the year, the modal degree for women was a master's degree, whereas for men it was the Ph.D. degree. Even when sex differences in highest earned degree were taken into account, women, as compared to men, were still absent from full professorship ranks and were primarily found in the lower ranks. Women were conspicuously absent from the engineering and applied sciences and from mathematics and the physical sciences. They were more likely to be found in education, fine arts, humanities, and the health sciences (primarily nursing teaching positions). In 1972-73, the median salary of male full-time teachers was 25 percent higher than the median salary of women. In 1975-76, and in 1977-78, the male median salary was 22 percent higher. Sex differences in rank account for much of the observed male and female differentials in median salaries. Additionally, differences in male-female salaries remain even when sex differences in factors known to influence salaries are taken into account (i.e., rank, highest earned degree, age, years since highest degree, and field of study). An explanation of the analytic techniques employed in the comparison and a bibliography are appended. (SW)

# Rank and Salary Differentials in the 1970s: A Comparison of Male and Female Full-time Teachers in Canadian Universities and Colleges

by

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## Preface

This monograph is a revision of a report prepared for the Association of Universities and Colleges of Canada Status of Women Committee, June, 1978. The purpose of this report was to provide the Status of Women Committee with an updated statistical profile of women and men in universities and colleges in Canada, which could be used as a basis for subsequent research or for policy recommendations. Because of this mandate, the monograph does not contain any policy recommendations. Some readers will be disappointed with the absence of policy formulations. However, the facts speak for themselves and they do suggest the issues which policy analysts must consider.

What are the facts? The position of female faculty vis-à-vis their male colleagues in Canadian universities and colleges has not changed substantially during the 1970s. Women still represent a small proportion of the academic full-time teaching staff; they are still concentrated in the lower ranks and their median salaries are lower than those received by men. The sex differences in salary are congruent with the differences between men and women with respect to rank, highest earned degree, recency of degree, years since award of highest degree, and field of study. In particular, sex differences in rank appear to explain a great deal of the discrepancy in salaries. However, sex differences in salary-related characteristics by no means explain all of the male-female salary differentials; even within comparable rank, highest earned degree, recency of degree, and field of study men generally have higher median salaries than do female academics.

The overall picture which emerges from the analysis of Statistics Canada data on full-time teaching staff between 1972-1973 and 1977-1978 is one of the stability and persistence of sex differences concerning rank, salary, and demographic representation. These findings initially may contradict a more optimistic image of the changing status of female faculty which is generated by some university specific reports. To the extent that these reports are concerned with corrective action, they may indeed document progress, particularly with respect to eradicating unexplained salary differences between male and female teaching staff at a specific university. However, these university-specific reports are often conducted for one year only and only a few provide information on trends over time. By definition, none provide a Canada-wide overview.

The apparent persistence of sex differences in academia during the 1970s may well reflect a temporal lag inherent in altering those factors which are responsible for male-female differences among academics. One set of factors, for example, focuses on the pattern of female academics as an outcome of individual educational and occupational choices which are made in the context both of early sex role socialization and the anticipation or assumption of wife and mother roles. Action toward eradicating sex differences in rank and

salary which derive from this set of explanations focuses on changing the situation outside the university system, and because sex role socialization is seen as a culprit, the time required to bring about change is lengthy.

Because of its emphasis on sex role socialization, and on individuals as decision makers, this set of explanations elicits a limited program of change, one which requires little action within the university setting and one which lends itself to blaming the victim. (If the status of female faculty at Canadian universities and colleges is solely the outcome of sex role socialization and individual choices, then -- so the argument goes -- women have only themselves to blame for their numbers, rank, and salaries.) Reflecting a growing dissatisfaction with this explanatory framework and its strategies for change, considerable attention now is paid to the way in which the system of education in general and the structure of universities more specifically create situations in which female faculty do less well than men with respect to recruitment, promotions, and remuneration (Ambert, 1977; Bernard, 1964; Graham, 1970; Vickers, 1976; and Vickers and Adam, 1977).

Central to this set of structural explanations is the historical and current predominance of men in the educational system. The consequence of this is a male-dominated decision-making structure. This structure creates situations in which decisions made about undergraduate and graduate academic programs and career trajectories are predetermined by virtue of sex-specific sponsorship patterns, recruitment networks, and assumptions about employee interests or capabilities. Alteration of the "old boy" networks of information, sponsorship and recruitment, and the breakdown of sex-specific norms and practices pertaining to hiring, promotion, and salary require strenuous efforts. And although they do not necessarily require socializing a new generation, such changes are not made overnight.

However, the inherent time lag in effecting changes in the status of academic women need not be the only reason for the absence of much change over a seven-year period, nor should it be cited as a reason for complacency. A very real possibility is that the persistence of sex differences in the rank and salaries of Canadian academicians may well reflect not so much a time lag as a failure of efforts at instigating change. Either way the persistence of rank and salary differences between male and female faculty implies the continued need for scrutiny and action. Such scrutiny and action will be especially crucial during the next decade given the changed conditions facing universities.

Because of the baby boom, the 1960 and early 1970 decades were times of expansion and wealth for universities, and these expansionary times provided the context within which the concern over the status of female faculty was expressed, investigated and/or redressed. By contrast, during the late 1970s and into the 1980s, the universities and colleges in Canada are drawing upon the birth cohorts of the 1960s and early 1970s for their student population. Consequently, academic institutions are facing a smaller student population, an increasing imbalance between the numbers of students and faculty, and more financially stringent times.

These conditions have a number of implications for attempts to alter the position of female faculty vis-à-vis their male counterparts. Without question, recruitment into the university setting will be affected for both males and females. Several scenarios concerning the status of female faculty are possible here. If "old boy" networks are operating, the tighter financial situation at universities may operate to increase the hiring of males over females. Alternatively, if universities respond to the tight financial situation by thinning the upper ranks and hiring more sessional lecturers, there may be an increase in the proportion of female faculty, albeit at the low ranks. There also may be the "sinking ship" phenomenon in which the deteriorating conditions of universities make academia less attractive to men, whose places are then filled by women.

The potential cutbacks in the universities and the financial crises forecast for the 1980s also suggest several scenarios which might occur in the future with respect to rank and salary differences between male and female faculty. In the absence of sex discrimination, rank differences, and those salary differences which are a function of rank should lessen over time as women move from the lower ranks to the associate and full professorship ranks in which male faculty now disproportionately concentrate. However, this movement assumes that sex discrimination does not occur and the universities will not respond to increasing financial squeezes by increasingly hiring in the non-tenured lecturer positions in which women now predominate. Clearly one challenge which this report poses for policy and future action is to reconcile the findings, that the overall rank and salary statuses of female faculty relative to male faculty has changed little during the 1970s, with the fiscal cutbacks facing the universities and colleges of Canada during the 1980s.

Monica Boyd
July 1979

## Acknowledgements

Although the author remains responsible for the data interpretation, omissions, and errors, this report benefited greatly from the assistance of Laura Miles and Louise Desramaux. As a research assistant, Laura Miles was responsible for the collection and synthesis of information from university specific reports available in the AUCC or CAUT Ottawa libraries. As Acting Chief of the Post-secondary Education Section, Education, Science and Culture Division, Statistics Canada, Louise Desramaux generously held several meetings on the data used in this report. Her assistance was invaluable in providing information on already published or available data sets and in procuring new, specially requested, data. A number of people at various universities and colleges throughout Canada also responded to an earlier draft of this report which was circulated by the AUCC Status of Women Committee, and I am grateful for their helpful comments.

## Synopsis and Factsheet

Throughout the early 1970s, and culminating with International Women's Year in 1975, many Canadian universities and colleges launched investigations into the status of female faculty. Male-female differences with respect to salary, rank, and other characteristics were frequently observed. Where warranted, universities sometimes undertook corrective action particularly with respect to increasing the salaries and/or rank of women.

The attempts of many universities and colleges to document and to eradicate observed male-female inequalities implies a scenario in which the position of female academics has changed during the 1970s and in which male-female disparities have lessened. Using published and unpublished Statistics Canada data on full-time teachers for the academic years 1972-1973, 1975-1976, with a limited update to 1977-1978, this report investigates the occurence and scope of such changes. It concludes that the increased concern within the universities over the status of female academicians has not yet lead to much change in male-female differentials, particularly those concerning rank and salaries. These conclusions are derived from the findings highlighted below for faculty who are full-time and for whom salary data are available:

I. Changes Over Time in the Representation of Women on University and College Faculty:

Between 1972-1973 and 1977-1978, women remain a minority population. In 1972-1973 approximately 13 percent of the full-time teaching staff of Canadian universities were women; by 1977-1978 the proportion was 14 percent. In 1931 women were approximately 19 percent of the teaching staff in Canadian universities and colleges, 17 percent in 1941, 18 percent 1953, and around 13 percent during the 1960s.

II. Characteristics of Female Faculty Compared to Male Faculty:

A. Rank

Throughout the 1970s women continue to be concentrated in the assistant and lecturer rank and men continue to be found disproportionately in the full and associate professorship ranks.

In 1972-1973, over half of the male academicians (53 percent) were associate or full professors compared to one-fourth of the female faculty. In 1975-1976, 61 percent of the males were in these ranks compared to 28 percent of the females. Unpublished data for 1977-1978 show a continuation of sex differentials in rank with approximately two-thirds of male

faculty holding full or associate professorships compared to slightly over one-third of the female faculty, slightly over another third of the female faculty are in the assistant professor rank, and the remainder are the below assistant professorship rank.

B. Highest Earned Degree

Regardless of the year, the modal degree for women is a Master's degree, whereas for men it is a PhD degree.

In 1972-1973, 59 percent of the male full time teachers had PhD degrees compared to 32 percent of female faculty. In 1975-1976, 62 percent of the male faculty had PhD degrees compared to 34.5 percent of the females.

Master's degrees were the highest earned degree for 45 and 41.5 percent of the female faculty in 1972-1973 and 1975-1976 compared to 27 and 25 percent of the male faculty in those years.

C. Rank and Highest Degree

Even when sex differences in highest earned degree are taken into account, women compared to men are still absent from full professorship ranks and are primarily found in the lower ranks.

For persons holding the doctorate in 1975-1976, nearly a third of the men compared to one-seventh (14 percent) of the women were full professors. Thirty-nine percent of the women with doctorates were at the assistant professor rank compared to 23 percent of the males with PhD degrees.

D. Age

Age differences between men and women teachers are small and have not undergone much change between 1972-1973 and 1975-1976.

In 1972-1973, the median age of male faculty was 38 compared to 39 for females. In 1975-1976, the median age of males was 40 and 39 for women.

E. Year Since Award of Highest Earned Degree

In both 1972-1973 and 1975-1976, the time span since the year of receipt of highest degree is shorter for women than for men.

In 1972-1973, the median years-since-receipt-of-degree is 8 years for men and 7 years for women. In 1975-1976, the median years is 9.3 for men and 7.7 for women.

The tendency for women faculty to receive their highest earned degree more recently than male faculty persists when level of degree is held constant. In 1972-1973, 35 percent of the male faculty with doctorates had received that degree within the past five years compared to 44 percent of the females with doctorates. In 1975-1976, the percentages were 24 and 36 for men and women respectively.

F. Field

Women are conspicuously absent from the engineering and applied sciences and from mathematics and the physical sciences. They are more likely to be found in education, fine arts, and humanities and the health sciences where they concentrate in nursing teaching positions.

In 1972-1973, 12.5 percent of the male faculty were in the health field compared to 20 percent of the female faculty. In 1975-1976, the percentages were 12.5 percent and 21.5 percent for men and women respectively.

In 1972-1973, 16 percent of the male faculty were in the mathematical and physical sciences compared to 4 percent of the female faculty. In 1975-1976, the percentages were 15 percent and 3.5 percent for men and women respectively.

III. Salary Differentials Between Men and Women

A. Men earn more.

In 1972-1973, the median salary of male full-time teachers was 25 percent higher than the median salary of women. In 1975-1976, and in 1977-1978, the male median salary was 22 percent higher.

The dollar value of the salary gap between men and women is increasing over time. In 1972-1973, the median salary of male teachers was higher than that of females by $3,250; by 1975-1976, the differential was $4,200.. In 1977-1978, the median salary of male faculty was approximately $5,000 higher than the median salary of female faculty.

B. Rank is important.

Sex differences in rank account for much of the observed male and female differentials in median salaries. Results of direct standardization indicate that when variables known to influence salaries are taken into account one at a time, rank differences account for over two-thirds of the sex differentials in salary in 1972-1973 and 1975-1976.

C. Differences in male-female salaries remain even when sex differences in factors known to influence salaries are taken into account.

1. Rank

Within each rank, the median salary of male faculty is higher than the median salary of women. The relative advantage of males has decreased slightly between 1972-1973, 1975-1976, and 1977-1978, although the dollar gap has increased.

2. Highest Earned Degree

Within each degree category, the median salary of male teachers is higher than that of female teachers. Salary discrepancies by sex generally decrease with higher certification.

In 1972-1973 and 1975-1976, the median salary of males with bachelor degrees was 31 percent higher than the median salary of females with bachelor degrees.

In 1972-1973 and 1975-1976, the median salary of males with doctorate degrees was approximately 14.5 percent higher than that of females with doctorate degrees.

3. Age

Salary discrepancies between men and women teachers increase dramatically with age although there is a decline in the disparity between 1972-1973 and 1975-1976.

In 1972-1973 and in 1975-1976, the median salaries of males age 25-29 were 12.5 percent and 10 percent higher than women age 25-29.

In 1972-1973 and in 1975-1976, the median salary of males age 60-64 was 34 and 31 percent higher than the median salary received by women age 60-64.

4. Years Since Highest Degree

Sex discrepancies in median salaries exist for all years-since-receipt-of-degree categories, generally increasing with length of time since award of the degree. But the size of sex differential does decrease between 1972-1973 and 1975-1976.

In 1972-1973, men earning their highest degree within the past five years had a median salary

12 percent higher than that of female teachers with a similar history. In 1975-1976, the male median salary for persons earning their degree within five years was 11.5 percent higher than the median salary of females.

In 1972-1973, the median salary of males whose highest degree was earned 25-29 years ago was 60 percent higher than the salary of their female counterparts. By 1975-1976, the differential was 47 percent.

5. Field

Male-female salary differentials exist for all the fields with men having higher median salaries than women. The relative size of the gap diminishes slightly within each field between 1972-1973 and 1975-1976, although sizeable differences remain.

In the fine arts where the salary differential is the smallest, the median salary of male faculty was 11 percent and 12 percent higher in 1972-1973 and 1975-1976 respectively than the salaries received by women in this field.

In the health professions and occupations, the median salaries of men were 56 and 45 percent higher than the median salaries of women in this field in 1972-1973 and 1975-1976 respectively.

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## I. Introduction

> A hundred years ago it was normal to find that men were paid higher wages than women. For example, in Canadian universities and colleges during the 1870s, the median salary of full-time male teachers was nearly twenty-five percent higher than the median salary of female teachers. To be sure, there was a slight decline in this income inequity over time, but the increased salary paid to women was never enough to have much impact. In fact, between 1872-1873 and 1875-1876, the income gap between male and female teachers actually increased from $3,250 to $4,200. Generally, salary disparities between men and women teachers were highest in Ontario and lowest in Quebec, and intermediate in the Atlantic and Western regions.

The above portrayal of salary discrepancies between male and female academicians could be readily dismissed as a collection of historical facts were it not for the temporal inaccuracy of the text. The data cited refer not to the 1870s but to the 1970s. As shown in Table 1, salary discrepancies between male and female teachers in Canadian universities and colleges are very much phenomena of the present, and trend data suggest no marked decline in these inequities. In 1972-1973, the median salary of male full-time faculty was 24.7 percent higher than that of females -- indicating that the median salaries of women would have to be increased by that amount if they were to achieve income equity with their male counterparts. By 1975-1976, the median salary of male teachers was still 22.3 percent higher than that received by women and paradoxically the real income gap between the sexes had increased.[1] This gap is revealed not only by the difference in male-female

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[1] The discrepancy between the two measures of salary inequality, the percent male/female median salary ratio, and the difference between male and female median salaries reflects the use of a standardized measure on the one hand and an absolute measure on the other. Relative to the median salary of women, the median salary of men has decreased slightly over time, partly because women have obtained slightly higher salary increases from year to year compared to men. However, because men have a higher median salary to begin with, an identical or even slightly less percentage yearly increase compared to women would add more dollars to a male median salary than it would to the female median salary. Hence the real dollar difference in median salaries of male and female teachers increases over time.

Table 1: Numbers, Rank, Median Salary and Percentiles for Full Time Teachers in Universities and Colleges by Sex, Canada, 1972-1973, 1973-1974, 1974-1975, 1975-1976, 1976-1977.

| | Academic Year | | | | |
|---|---|---|---|---|---|
| | 1972-1973 | 1973-1974 | 1974-1975 | 1975-1976 | 1976-1977 |
| Numbers (a) | | | | | |
| Male | 22,584 | 24,201 | 25,194 | 25,751 | 26,283 |
| Female | 3,338 | 3,598 | 4,036 | 4,186 | 4,418 |
| Percent | | | | | |
| Full Professor (a,b) | | | | | |
| Male | 23.0 | 24.4 | 25.1 | 26.4 | 27.8 |
| Female | 5.8 | 6.6 | 6.7 | 7.0 | 7.4 |
| Percent | | | | | |
| Assistant Professor (a,b) | | | | | |
| Male | 12.1 | 11.3 | 12.3 | 12.0 | 10.2 |
| Female | 34.5 | 30.9 | 33.0 | 31.2 | 29.3 |
| Median Salary | | | | | |
| Male | 16,400 | 17,700 | 19,500 | 23,000 | 25,600 |
| Female | 13,150 | 14,300 | 15,850 | 18,800 | 20,900 |
| Percent Male/Female | 24.7 | 23.8 | 23.0 | 22.3 | 22.5 |
| Salary Percentiles | | | | | |
| 10th | | | | | |
| Male | 11,950 | 12,750 | 14,000 | 16,400 | 18,000 |
| Female | 9,800 | 10,500 | 11,700 | 13,550 | 15,000 |
| 90th | | | | | |
| Male | 25,300 | 26,900 | 29,575 | 33,900 | 37,000 |
| Female | 18,900 | 20,450 | 22,425 | 25,900 | 29,000 |

(a) Data refer only to those persons for whom salary data are tabulated.

(b) Data are computed specific to each sex. For example, of the 22,584 male faculty in 1972-1973 for whom salary data are tabulated, 23 percent are full professors.

Source: Statistics Canada. Teachers in Universities, Part I. Salaries General 1972-1973 to 1974-1975, Tables 1A, 1B, and 1C; Teachers in Universities, 1975-1976, Table 15. Teachers in Universities, 1976-1977, Table 15.

income (Table 1), but also by percentile data. In 1972-1973, 10 percent of the male teachers were earning $25,300 or more compared to their female counterparts who were earning salaries of $18,900 or more. By 1976-1977, the discrepancy in the top 10 percent of the income earners had increased from $6,400 to $8,000, with 10 percent of the men earning $37,000 or more compared to $29,000 for female teachers (Table 1).

Tied as they are to the more general issues of status inequalities between Canadian men and women, these income discrepancies between male and female academicians have not gone unnoticed or unexamined. Male-female salary disparities among academicians in Canada are observed and investigated in two different types of studies during the 1970s: (1) university-specific reports which focus upon the situation at a given institution; and (2) survey reports which provide aggregate information for Canada or a region of the country as the unit of analysis. Despite differences in study design and in the populations investigated, both the Canada- or province-wide studies and the university-specific investigations reach similar conclusions: women form a relatively small percentage of the teaching staff at Canadian universities and colleges; compared to men, women concentrate in the lower academic ranks; and the mean or median salaries of female faculty are lower than those received by male faculty. Usually a substantial portion of the salary differential between men and women is accounted for by sex differences in rank. Sex differences with respect to other variables such as age, highest degree, years since highest degree, years in present rank, years at the university in question, tenure, publications, discipline, starting rank, and starting salary also are associated with salary differentials between men and women. But the existence of these associations and their strength varies depending upon the type of study, the number of variables examined, and the university in question. Further, some studies observe a residual salary differential which is not explained by compositional differences between men and women faculty and which suggests the existence of sex discrimination in salaries.

These conclusions represent a distillation of a more detailed review of studies which was prepared for the original version of this report (Boyd, 1978: 8-28), and not all studies concur with all aspects of this synthesis. However, the general similarity of results is impressive given the variation among the investigations with respect to the study design, the population covered, and the years reviewed. Compared to survey reports, university-specific reports generally draw upon a wider range of information which is obtained from faculty personnel records. Because of such data and the nature of in-house research, university-specific studies often rely on regression analyses or on matched peer analyses of male-female salary differentials. Some university reports also present information in the form of univariate and bivariate tabulations, but generally the investigations are multivariate and the explanations offered for male-female salary differentials include a wide array of variables. In contrast, because Statistics Canada collects information only on a selected list of faculty characteristics fewer variables in a survey report can be examined as explanatory variables which underlie male-female salary differentials. Statistics Canada data are published as cross tabulations and as a result, survey reports also tend to emphasize univariate and bivariate data presentation and to rely on the use of frequencies, percents, and Statistics Canada-computed medians and percentiles for incomes.

Other differences between the two types of studies exist. By definition, university-specific reports cover only the faculty at a specified university whereas survey reports summarize information from those schools reporting to the Statistics Canada Post-Secondary Education Section (see Appendix I). Further, the university-specific studies are not annual reviews, and since not all universities or colleges have conducted investigations into male-female faculty salary differentials, the university reports strictly speaking do not provide a general overview of sex differentials among Canadian faculty. As might be expected from the growing attention given to the general status of women throughout the 1970s in Canada, most of the studies commissioned by universities and colleges span the period from 1970 to the present. By far the heaviest concentration of research occurred in 1975, International Women's Year, and the exuberance carried over to 1976 as well. Prior to 1974, studies were conducted at such institutions as McGill University (1970), McMaster University (1974), Memorial University (1974), Queen's University (1974), University of British Columbia (1973), University of Manitoba (1975), University of Toronto (1974), and University of Windsor (1974). During 1975 and 1976, further reports were filled at such institutions as McGill (1976), McMaster (1976), Mount Allison University (1975), Queen's (1975), St. Francis Xavier University (1976), University of Alberta (1975), University of Guelph (1975), University of Ottawa (1976), University of Regina (1976), University os Saskatchewan (1975), Victoria University (1975), and York University (1975; 1976). Fewer studies were done in 1977 and 1978 in spite of the fact that the AUCC urges all universities and colleges to fund continuing committees on the status of women academics and to report periodically the findings of in-depth salary analyses. Alberta and Regina (1977) have both conducted follow-up studies in the hope of correcting discrepancies between comparable male and female academics. Trent University (1977) and York (1977) have both issued reports on action taken on recommendations made by salary review committees. And University of Calgary (1977), Manitoba (1978), and Simon Fraser University (1977) have all issued new reports within the past year and a half.[2]

In contrast to the temporal variation in university-specific reports, Statistics Canada annually publishes data collected on full-time faculty in Canadian universities and colleges. However, despite the potential use of this data in providing an overview on male and female faculty, few survey studies into sex differentials exist in Canada. There are two Canada-wide reports which utilize Statistics Canada data for 1965-1966 (Robson and Lapointe, 1971) and for 1969-1970 (Adam, 1971; Vickers and Adam, 1977), and several province-specific reports (Ontario: Ministry of Colleges and Universities, 1975; Payton, 1975). Although these survey reports all indicate that male-female salary discrepancies in Canadian universities in part reflect the sex differences in rank and in part a residual difference which cannot be explained by sex differences, the Canada-wide reports (Adam, 1971; Robson and Lapointe, 1971) in particular are derived from data collected during the 1960s. Throughout the early 1970s and culminating with International Women's Year in 1975, Canadian universities and colleges gave increased attention to the documentation and removal of these sex-based differences, especially with respect to salary and rank. Yet in the absence of a more recent survey

[2]As is true for the survey reports, the university reports which are reviewed in this report do not represent all the studies conducted. Studies reviewed in this report generally were those available in the Ottawa libraries of the CAUT or the AUCC.

report, there is no way of ascertaining if such attention substantially modified the conclusions reached by earlier survey reports and upheld by more recent university-specific investigations. Specifically, do salary differentials between male and female university and college teachers persist or narrow during the 1970s? What changes, if any, exist with respect to the distributions of men and women throughout the university system, and what relationship do these distributions have to sex differences in salaries? Finally, what evidence is there for the persistence of salary differentials by sex irrespective of male-female differences in rank, highest degree, years since award of degree, age, and field?

These questions are examined in this report by analyzing data collected from universities and published annually by Statistics Canada. Because of the tedium in discussing similar data year by year, the temporal analysis is streamlined by focusing on data for 1972-1973, 1975-1976, and 1977-1978. The first two dates correspond to dates selected by the AUCC Status of Women Committee in a request to Statistics Canada for unpublished university-specific information on sex differences in rank and salary. The academic year 1975-1976 also is the most recent period for which extensive cross-tabulations for Canada were available when the report was being prepared (Boyd, 1978). Reflecting the relative richness of data for 1972-1973 and 1975-1976 compared to later years, the first half of this report concentrates on a detailed examination of male-female differentials between 1972-1973 and 1975-1976. However, in the last section of the report, additional information is provided which shows the persistence of male-female rank and salary differentials through the 1977-1978 academic year. The data analysis, then, serves a dual purpose: (1) to update the evidence concerning male-female differences with special reference to the rank and salaries of full-time teaching staff at Canadian universities and colleges; and (2) to provide a backdrop against which the AUCC-requested data can be analyzed in the future.

## II. Male and Female Faculty in Canadian Universities and Colleges: Compositional Differences, 1972-1973 and 1975-1976

One of the questions raised in the previous section was whether or not sex differentials with respect to salaries narrowed or persisted during the 1970s, which generally is viewed as an era of concern over and progress with respect to the status of women. As discussed earlier, data in Table 1 show some narrowing of the difference in median salaries between male and female faculty, but overall the trend is one of persistence of a difference rather than its elimination. In 1972-1973, the median salaries of male full-time faculty were 25 percent higher than those of female faculty; by 1975-1976 the differential was 22 percent, and it remained unchanged for 1977-1978. These data raise the question of what underlies the persistence of sex differences in income during a six-year period which coincided with a fair amount of university-specific scrutiny and examination. One way to answer this question is to pose several others: Where in Canadian universities and colleges are women and men found? Do differences in composition with respect to rank, age, highest earned degree, and other relevant factors underlie the sex differences in salaries? What is the evidence for the existence of sex differences in salaries when differences in composition are held constant?

This section focuses upon the distribution of male and female faculty with respect to factors known to affect salaries; the subsequent sections look at salary differentials. For reasons given earlier the analysis for the most part is based on data for academic years 1972-1973 and 1975-1976. The data are taken from Statistics Canada published reports on faculty salaries. The interested reader is referred to Appendix I for a more detailed description of the data and the minor changes in coverage which occur between 1972-1973 and 1975-1976. Only one caveat is noted here. Because the task at hand is to understand why salary discrepancies still persist and remain so high, information on the characteristics of men and women faculty refer only to those persons for whom income data are available in Statistics Canada reports. As a result, there may be minor discrepancies in numbers or distributions between data presented in this section and data on all faculty which also appear in Statistics Canada publications.

Based on the available data for 1972-1973 and 1975-1976, what can be said about the location of men and women faculty in Canadian universities and colleges and the changes over time? First and foremost, the social ferment of the 1970s with respect to the status of women has been accompanied by only very modest gains in the percentage of women faculty employed full-time at colleges and universities. To be sure, a comparison of the numbers of male

and female faculty in Canada indicates that relative to men, women were disproportionately recruited into the university and college system. Between 1972-1973 and 1975-1976, the number of male teachers increased by 14 percent to 22,584, whereas the number of female teachers increased by 25 percent to 4,186.[3] But because female faculty have always been fewer in number than their male counterparts, such increases did not substantially alter the percentage of academic positions held by women. By 1975-1976, only 14 percent of full-time faculty for which there are income data were women, compared to 12.9 percent in 1972-1973 (Table 2). Although direct comparisons are difficult to make because of changes in the number and type of schools reporting to Statistics Canada, data for earlier time periods also contribute to this image of female academics as a minority population. The proportion of full-time female faculty was 15 percent in 1921, 19 percent in 1931, 17 percent in 1941, 18 percent in 1953, and around 13 percent during the 1960s (Vickers and Adam, 1977: Table IV-3).

The absence of a dramatic change during the 1970s in the percentage of full-time female faculty also is paralleled by only very minor changes in the distribution of men and women with respect to rank, highest degree, field, age, and years since award of highest degree. Table 2 shows the percentage distributions of full-time male and female faculty with respect to these characteristics for 1972-1973 and 1975-1976 and gives the percent female for categories of each characteristic. The index of dissimilarity and medians provides summary measures of the difference in male-female distributions. This index of dissimilarity, which is discussed in Appendix II, indicates the percentage of one population that would have to shift categories of a given variable for its distribution to be similar to a second population with which comparisons are made. The index is sensitive to the number of categories used, generally becoming larger with increasing categories. For that reason the indexes should not be compare across characteristics (e.g., the index for rank cannot be compared to the index calculated for education), although they can be used to indicate what changes have occurred over time regarding male-female percentage distributions with respect to a given characteristic, as long as the number of categories does not change (see Appendix II).

A. Rank

The data in Table 2 reconfirm the analysis of earlier studies which showed that compared to men, women faculty are clustered in the lower ranks. Irrespective of the year, the data show that fewer than 10 percent of full-time paid female teachers are full professors compared to over one-fifth of their male counterparts. Conversely, women are overrepresented in the lower ranks, with over two-thirds in the rank of assistant professor or below. As revealed by the index of dissimilarity and a comparison of percentage distributions, these differences between men and women faculty with respect to rank

[3]Again the reader is reminded that these figures and percents are based on persons for whom there are salary data. Because Statistics Canada omitted salary data for unusual cases, the actual number of teachers is somewhat larger. See Appendix I.

TABLE 2: NUMBERS, PERCENT DISTRIBUTIONS AND PERCENT FEMALE OF FULL-TIME TEACHERS IN UNIVERSITIES AND COLLEGES, BY SEX AND BY RANK, HIGHEST EARNED DEGREE, FIELD, AGE AND YEARS SINCE HIGHEST EARNED DEGREE, CANADA 1972-1973 AND 1975-1976[a].

| Characteristics [a] | Numbers | | | | Percent Distributions | | | | Percent Female | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1972-1973 | | 1975-1976 | | 1972-1973 | | 1975-1976 | | 1972-1973 | 1975-1976 |
| | Male | Female | Male | Female | Male | Female | Male | Female | | |
| Total, N. | 22,584 | 3,338 | 25,751 | 4,186 | 22,584 | 3,338 | 25,751 | 4,186 | 12.9 | 14.0 |
| Rank, Total | 22,584 | 3,338 | 25,751 | 4,186 | 100.1 | 100.1 | 100.1 | 100.0 | 12.9 | 14.0 |
| Full Professor | 5,193 | 194 | 6,794 | 292 | 23.0 | 5.8 | 26.4 | 7.0 | 13.6 | 4.1 |
| Associate Professor | 6,750 | 657 | 8,903 | 994 | 29.9 | 19.7 | 34.6 | 23.7 | 8.9 | 10.0 |
| Assistant Professor | 7,902 | 1,336 | 6,975 | 1,595 | 35.0 | 40.0 | 27.1 | 38.1 | 14.5 | 18.6 |
| One Rank Below Assistant | 1,914 | 833 | 1,330 | 630 | 8.5 | 25.0 | 5.2 | 15.1 | 30.3 | 32.1 |
| Other[b] | 825 | 318 | 1,749 | 675 | 3.7 | 9.5 | 6.8 | 16.1 | 27.8 | 27.8 |
| Index of Dissimilarity | - | | - | | 27.4 | | 30.2 | | | |
| Highest Degree, Total | 22,584 | 3,338 | 25,751 | 4,186 | 100.0 | 100.0 | 100.0 | 100.0 | 12.9 | 14.0 |
| Doctorate | 13,241 | 1,077 | 16,003 | 1,445 | 58.6 | 32.0 | 62.1 | 34.5 | 7.5 | 8.3 |
| Masters | 6,070 | 1,458 | 6,334 | 1,735 | 26.9 | 43.7 | 24.6 | 41.5 | 19.4 | 21.5 |
| Professional Degree | 1,186 | 86 | 1,378 | 117 | 5.2 | 2.6 | 5.4 | 2.8 | 6.8 | 7.8 |
| Bachelors | 1,713 | 590 | 1,517 | 703 | 7.6 | 17.7 | 5.9 | 16.8 | 25.6 | 31.7 |
| Other[c] | 374 | 127 | 519 | 186 | 1.7 | 3.8 | 2.0 | 4.4 | 25.3 | 26.4 |
| Index of Dissimilarity | - | | - | | 29.0 | | 30.2 | | | |
| Field, Total | 22,584 | 3,338 | 25,751 | 4,186 | 100.0 | 100.0 | 100.0 | 100.1 | 12.9 | 14.0 |
| Education | 1,864 | 493 | 2,396 | 722 | 8.3 | 14.8 | 9.3 | 17.2 | 20.9 | 23.2 |
| Fine & Applied Arts | 779 | 161 | 921 | 216 | 3.4 | 4.8 | 3.6 | 5.2 | 17.1 | 19.0 |
| Humanities & Related | 4,206 | 853 | 4,398 | 869 | 18.6 | 25.6 | 17.1 | 20.8 | 16.9 | 16.5 |
| Social Sciences & Related | 5,214 | 592 | 6,191 | 821 | 23.1 | 17.7 | 24.0 | 19.6 | 10.2 | 11.7 |
| Agricultural & Biological Sciences | 1,599 | 302 | 1,884 | 344 | 7.1 | 9.0 | 7.3 | 8.2 | 15.9 | 15.4 |
| Engineering & Applied Sciences | 1,950 | 19 | 2,185 | 20 | 8.6 | .6 | 8.5 | .5 | 1.0 | .9 |
| Health Professions & Occupations | 2,721 | 663 | 3,223 | 900 | 12.1 | 19.9 | 12.5 | 21.5 | 19.6 | 21.8 |
| Mathematics and Physical Sciences | 3,544 | 148 | 3,946 | 145 | 15.7 | 4.4 | 15.3 | 3.5 | 4.0 | 3.5 |
| Other | 707 | 107 | 607 | 149 | 3.1 | 3.2 | 2.4 | 3.6 | 13.4 | 19.7 |
| Index of Dissimilarity | - | | - | | 24.7 | | 24.2 | | | |
| Age, Total | 22,584 | 3,338 | 25,751 | 4,186 | 100.1 | 100.0 | 100.0 | 100.0 | 12.9 | 14.0 |
| Less than 25 | 95 | 62 | 67 | 46 | .4 | 1.9 | .3 | 1.1 | 39.5 | 40.7 |
| 25 - 29 | 2,472 | 516 | 1,518 | 513 | 11.0 | 15.5 | 5.9 | 12.3 | 17.3 | 25.3 |
| 30 - 34 | 5,478 | 689 | 5,431 | 868 | 24.3 | 20.6 | 21.1 | 20.7 | 11.2 | 13.8 |
| 35 - 39 | 4,746 | 526 | 5,840 | 780 | 21.0 | 15.8 | 22.7 | 18.6 | 10.0 | 11.8 |
| 40 - 44 | 3,675 | 484 | 4,672 | 559 | 16.3 | 14.5 | 18.1 | 13.4 | 11.6 | 10.7 |
| 45 - 49 | 2,569 | 425 | 3,382 | 563 | 11.4 | 12.7 | 13.1 | 13.5 | 14.2 | 14.3 |
| 50 - 54 | 1,709 | 271 | 2,386 | 378 | 7.6 | 8.1 | 9.2 | 9.0 | 13.7 | 13.6 |
| 55 - 59 | 1,039 | 208 | 1,425 | 274 | 4.6 | 6.2 | 5.5 | 6.5 | 16.7 | 16.1 |
| 60 - 64 | 570 | 106 | 842 | 167 | 2.5 | 3.2 | 3.3 | 4.0 | 15.7 | 16.6 |
| 65 plus | 185 | 37 | 152 | 23 | .8 | 1.1 | .6 | .5 | 16.7 | 13.1 |
| Not Reported | 46 | 14 | 36 | 17 | .2 | .4 | .1 | .4 | 23.3 | 32.1 |
| Median [d] | - | | - | | 38.8 | 38.8 | 40.0 | 39.2 | - | - |
| Years Since Award of Highest Earned Degree | 22,584 | 3,338 | 25,751 | 4,186 | 100.1 | 100.0 | 100.1 | 100.0 | 12.9 | 14.0 |
| 0 - 4 | 6,981 | 1,226 | 5,656 | 1,316 | 30.9 | 36.7 | 22.0 | 31.4 | 14.9 | 18.9 |
| 5 - 9 | 6,725 | 952 | 8,209 | 1,363 | 29.8 | 28.5 | 31.9 | 32.6 | 12.4 | 14.2 |
| 10 - 14 | 3,490 | 447 | 5,016 | 632 | 15.4 | 13.4 | 19.5 | 15.1 | 11.4 | 11.2 |
| 15 - 19 | 2,130 | 228 | 2,814 | 356 | 9.4 | 6.8 | 10.9 | 8.5 | 9.7 | 11.2 |
| 20 - 24 | 1,512 | 160 | 1,954 | 184 | 6.7 | 4.8 | 7.6 | 4.4 | 9.6 | 8.6 |
| 25 - 29 | 532 | 95 | 1,070 | 148 | 2.4 | 2.9 | 4.2 | 3.5 | 15.2 | 12.2 |
| 30 - 34 | 398 | 35 | 379 | 57 | 1.8 | 1.0 | 1.5 | 1.4 | 8.1 | 1 |
| 35 - 39 | 237 | 39 | 292 | 35 | 1.0 | 1.2 | 1.1 | .8 | 14.1 | 10.7 |
| 40 - 44 | 79 | 17 | 67 | 16 | .4 | .5 | .3 | .4 | 17.7 | 19.3 |
| 45 plus | 14 | 3 | 8 | 2 | .1 | .1 | | | 17.6 | 20.0 |
| No Degree | 199 | 47 | 43 | 12 | .9 | 1.4 | .2 | .3 | 19.1 | 21.8 |
| Not Reported | 287 | 89 | 243 | 65 | 1.3 | 2.7 | .9 | 1.6 | 23.7 | 21.1 |
| Median [e] | - | | - | | 8.0 | 7.0 | 9.3 | 7.7 | - | - |

(a) Data is presented only on the population for whom salary data are available As a result, the data will not necessarily be identical to that found in Statistics Canada reports on the entire full-time faculty in Canada.

(b) Includes visitors, ungraded staff and those teachers whose rank is more than one level below Assistant Professor.

(c) Includes a professional designation other than a degree, such as Chartered Accountant, Registered Industrial Accountant and Undergraduate Diploma. Staff without a degree are also included in the "other" degree category.

(d) Calculated on the basis of five year age groupings, excluding those persons who did not report age.

(e) Calculated on the basis of five year groupings, excluding those persons who had no degree or who did not report a degree.

Source: Statistics Canada. Teachers in Universities. Part I, Salaries General. 1972-1973 to 1974-1975. Tables 1A and 3A (Catalogue 81-241). Part II. Salaries Related to Experience. 1972-1973 to 1974-1975. Tables 2A and 5A (Catalogue 81-242). Statistics Canada. Post Secondary Education Section. Education, Science and Culture Division. Unpublished Tabulations 1975-1976

do not dramatically change between 1972-1973 and 1975-1976. Between these two dates the percentage of faculty in the ranks of full and associate professors increased for both sexes, but overall women remained concentrated in the lower ranks.

As suggested by earlier studies, the differences between male and female faculty with respect to rank partially may explain the higher salaries paid to male faculty, as noted in Table 1. Of course, the question remains as to why women continue to be disproportionately found in the lower academic ranks compared to men. Among the possible reasons for their concentration are: sex discrimination, lack of bargaining power, lack of publication, recency of entry, lower certification (Ambert, 1976; Bernard, 1964; Graham, 1970; Vickers, 1976; Vickers and Adam, 1977). These explanations suggest there is a particular penalty which women pay for being female and for assuming social roles defined as appropriate for women. Sex discrimination implies that even if they have the same characteristics as men, women are recruited to the lower ranks and/or kept there for a longer period of time. These recruitment and promotion patterns may be enhanced by the fact that female faculty, if they are married, may be less mobile than males and thus may have less bargaining leverage. As Vickers (1976: 219) comments:

> "They (women) are also less mobile and hence cannot play the 'university A has offered me a better job' game to extract promotions or higher salary -- a common tactic of male academics in a favorable job market."

Other characteristics of women may also account for the continued concentration of female faculty in the lower ranks and their relative absence compared to men in the associate nd full professor positions. Because of the demands of the wife and mother roles, women may not be as likely as men to publish. Similarly, reflecting sex-role socialization, discouragement of advanced studies by professors, and the timing of marriage and childbearing (Ambert, 1976), women faculty may not be as likely as male faculty to hold a PhD degree. Since publishing and advanced graduate work are criteria for promotion, absence of these could hinder female mobility through the academics ranks.

Recency of recruitment is a final factor which may explain the failure to observe much difference over time in the distribution of men and women by academic rank in Canada. The push to hire women is a recent one. This push, combined with the increased population of women in graduate programs, implies that female recruits to the university academic staff are likely to follow the traditional pattern of entering at the junior ranks. Under these circumstances, the continued concentration of women academics at the bottom ranks would not necessarily reflect discrimination but rather could exist because of an increased attempt to recruit women academicians, presumably with the intent of following an equitable promotion policy. Of course, other reasons may be given for increases in recent recruitment of women and their concentration in lower ranked academic positions. There may be pressure to put more women on faculty and to hire them in the lower ranks because fewer men are in graduate school as a result of poor employment possibilities. Women may be viewed as cheaper to hire than men.

Which of these many factors underlies the findings observed in Table 2 concerning the continued concentration of female faculty in the lower ranks compared to men? Unfortunately, the documentation is not easily provided. Matched-peer studies conducted by various Canadian universities have in some, but not all, instances revealed sex discrimination to be a factor in male-female differences in rank. Quantitative data on sex differences in bargaining power and publications are virtually absent in Canada. Studies in the United States reveal contradictory findings concerning publication. At least one study finds that when men and women are matched for rank, married women publish slightly more than their male colleagues (Simon, Clark, and Galway, 1967). Other studies have consistently observed that women publish less (see Bernard, 1964, for a review). Part of the lower publication productivity of women compared to men may be due to the tendency of men and women to be in different fields or, as Bernard describes in the case of scientists, to have careers with different patterns of publication (Bernard, 1964: 153).

B. Age

To a very limited extent, published Statistics Canada data does provide some clues as to whether or not male-female differences in rank reflect sex differences in recency of recruitment. Data in Table 2 on the age distributions of full-time male and female faculty reveal that a slightly higher percentage of women are under the age of 30 compared to men. The last two columns of Table 2 show that between 17 and 25 percent (depending on the year) of all faculty between ages 25 and 29 are women, a figure which is far in excess of the overall representation (12.9 percent in 1972-1973 and 14 percent in 1975-1976). These data do not prove that the continued concentration of women in the lower ranks relative to men reflects the recency of recruitment, but they are compatible with such an interpretation. Certainly both the number and percentage of men at younger ages has diminished between 1973-1974 and 1975-1976.

However, the overall impact of the disproportionate concentration of women on sex differences in rank cannot be very great. Data in Table 2 indicate that overall age differences between male and female full-time faculty are small and have not undergone much change between 1972-1973 and 1975-1976. For both years under investigation the median ages of both men and women are between 38 and 40 years. Thus, even if women are predominating among the new faculty recruits to the university system, the overall age distribution is such that age differences between men and women do not appear to account for differences in rank or, as Section III will show, for differences in salary.

C. Highest Earned Degree

Earlier the suggestion was put forward that differences in rank between male and female teachers in Canadian universities and colleges might be explained in part by differences in educational certification. Certainly, this interpretation receives support from the data presented in Table 2. Percentage distributions (Table 2, columns 5-8) show that the modal degree for women is a master's degree, whereas for men it is a PhD degree. Again, there

TABLE 3 : PERCENT DISTRIBUTION OF RANK BY HIGHEST DEGREE FOR FULL-TIME TEACHERS IN UNIVERSITIES AND COLLEGES, BY SEX, CANADA 1972-1973 AND 1975-1976

| Rank and Year | Total | | Highest Earned Degree | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Doctorate | | Masters | | Professional | | Bachelor | | Other | |
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 1972-1973 | | | | | | | | | | | | |
| Total, N. | 22,584 | 3,338 | 13,241 | 1,077 | 6,070 | 1,458 | 1,186 | 86 | 1,713 | 590 | 374 | 127 |
| Total Percent | 100.1 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.1 | 100.0 | 100.1 | 100.0 |
| Full Professor | 23,0 | 5.8 | 29.0 | 12.9 | 12.4 | 2.7 | 27.2 | 5.8 | 13.4 | 1.4 | 14.2 | 2.4 |
| Associate Professor | 29.9 | 19.7 | 36.0 | 34.3 | 20.9 | 15.0 | 26.8 | 17.4 | 18.6 | 6.9 | 21.4 | 9.4 |
| Assistant Professor | 35.0 | 40.0 | 31.5 | 45.5 | 42.9 | 43.8 | 34.1 | 43.0 | 34.9 | 23.6 | 34.0 | 25.2 |
| One Rank Below Assistant | 8.5 | 25.0 | 1.4 | 3.2 | 19.1 | 30.0 | 9.1 | 29.1 | 23.2 | 48.3 | 16.6 | 40.2 |
| Other | 3.7 | 9.5 | 2.1 | 4.1 | 4.7 | 88.5 | 2.8 | 4.7 | 10.0 | 19.8 | 13.9 | 22.8 |
| Index of Dissimilarity | 27.4 | | 17.8 | | 15.6 | | 30.8 | | 35.0 | | 32.6 | |
| 1975-1976 | | | | | | | | | | | | |
| Total, N. | 25,751 | 4,186 | 16,003 | 1,445 | 6,334 | 1,735 | 1,378 | 117 | 1,517 | 703 | 519 | 186 |
| Total, Percent | 100.1 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 99.9 | 100.0 | 100.1 | 100.0 | 100.1 | 100.0 |
| Full Professor | 26.4 | 7.0 | 32.3 | 14.3 | 14.4 | 3.2 | 29.8 | 9.4 | 15.6 | 1.6 | 11.8 | 4.3 |
| Associate Professor | 34.6 | 23.7 | 40.3 | 40.5 | 25.4 | 18.4 | 29.9 | 21.4 | 21.2 | 6.8 | 22.4 | 8.6 |
| Assistant Professor | 27.1 | 38.1 | 23.4 | 39.0 | 35.1 | 43.6 | 32.0 | 41.0 | 28.1 | 26.0 | 27.6 | 24.2 |
| One Rank Below Assistant | 5.2 | 15.1 | .8 | 1.5 | 12.7 | 18.8 | 6.2 | 19.7 | 16.1 | 31.3 | 12.7 | 21.0 |
| Other | 6.8 | 16.1 | 3.2 | 4.7 | 12.4 | 16.0 | 2.0 | 8.5 | 19.1 | 34.3 | 25.6 | 41.9 |
| Index of Dissimilarity | 30.2 | | 18.0 | | 18.2 | | 29.0 | | 30.4 | | 24.6 | |

Source: Statistics Canada. Teachers in Universities. Part I Salaries general. 1972-1973 to 1974-1975. Table 1A (Catalogue 81-241). Statistics Canada. Post-Secondary Education Section. Education, Science, and Culture Division. Unpublished Tabulations 1975-1976.

is little change in the distribution of highest earned degree for men and women between 1972-1973 and 1975-1976. By 1975-1976, slightly under two-thirds of the male faculty for which there are salary data had PhD degrees compared to slightly over one-third of the women. Conversely, one-fourth of the male faculty held master's degrees compared to over 40 percent (41.5 percent) of the female faculty. The lower educational certification of women faculty is also evident in the proportion of degree holders who are women. In 1975-1976, 8 percent of all persons with PhD or professional degrees employed full-time in universities and colleges were women compared to 21 percent for master's degree holders and 32 percent for persons employed with bachelor's degrees.

Since level of degree often is a criterion of promotion and salary increments, the data in Table 2 suggest that part of the differences between men and women faculty with respect to salary and rank reflect the fact that men tend to have PhD degrees and women tend to have master's degrees. However, differences in type of highest degree held do not account for all of the sex differentials in income or rank. With respect to rank, Table 3 shows that even when highest earned degree is taken into account (held constant), women compared to men still are absent from the full professor ranks and are primarily found in the lower ranks. For example, for persons holding the doctorate degree in 1975-1976, nearly a third of the men were full professors compared to one-seventh (14.3 percent) of the women. Thirty-nine percent of the women with doctorates were at the assistant professor rank compared to 23 percent of males with PhD degrees. Similar patterns are observed for the rank distribution of men and women faculty holding master's, professional, bachelor's, and other types of degrees. In fact, the index of dissimilarity shows that the greatest rank discrepancy between men and women faculty is for persons with professional, bachelor's or other degrees.

Again, given the published data at hand, it is impossible to exactly determine why at each level of highest earned degree women compared to men are found in the lower ranks. Some university studies do indicate that sex discrimination serves to keep women in the lower ranks longer than men and to reduce their chances for promotion into the higher ranks. In addition, recency of hiring or recency of degree may be factors.

## D. Years Since Award of Highest Earned Degree

Data on years since award of highest degree do suggest that the concentration of women in the lower ranks can be attributed in part to the recency with which women on full-time Canadian teaching staff have earned their highest degree. Data in Table 2 (bottom panel) show that the time span since the year of receipt of the highest degree is shorter for women than for men. Proportionately more women than men have received their highest degree within the past five years of the specified dates. In 1975-1976, for example, 31 percent of women faculty had obtained the highest degree within the past five years compared to 22 percent of male faculty. Similarly, the median years since award of highest degree are lower for women than for male teachers. Again in 1975-1976, the median years since award of highest degree was 7.7 years for women faculty compared to 9.3 years for males.

Table 4: Percent Distributions and Medians for Years Since Award of Highest Earned Degree by Selected Highest Earned Degrees and Sex for Full Time Teachers in Universities and Colleges, Canada, 1972-1973 and 1975-1976.

| Years Since Award of Highest Degree | Year[a], Highest Degree and Sex | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1972/1973 | | | | | | 1975/1976 | | | | | |
| | Doctorate | | Masters | | Bachelors | | Doctorate | | Masters | | Bachelors | |
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| Total, N[b] | 13,132 | 1,062 | 6,023 | 1,440 | 1,692 | 580 | 15,963 | 1,439 | 6,287 | 1,729 | 1,499 | 695 |
| Total, Percent | 100.0 | 100.1 | 99.9 | 100.0 | 100.0 | 99.7 | 100.0 | 100.1 | 100.1 | 100.1 | 100.0 | 99.9 |
| 0 - 4 | 34.7 | 44.4 | 33.0 | 38.5 | 18.0 | 31.0 | 23.9 | 35.9 | 21.3 | 29.7 | 13.5 | 29.9 |
| 5 - 9 | 30.3 | 26.6 | 33.4 | 32.3 | 28.3 | 30.3 | 33.2 | 33.8 | 36.0 | 35.2 | 22.1 | 31.1 |
| 10 - 14 | 15.5 | 15.2 | 14.5 | 12.6 | 16.4 | 13.6 | 20.2 | 14.4 | 18.8 | 17.0 | 19.7 | 14.2 |
| 15 - 19 | 9.9 | 6.1 | 7.0 | 6.7 | 10.8 | 8.6 | 11.0 | 8.6 | 9.7 | 7.8 | 12.3 | 9.6 |
| 20 - 24 | 5.6 | 4.3 | 6.9 | 4.9 | 10.9 | 5.5 | 7.1 | 4.2 | 6.6 | 4.4 | 10.9 | 4.2 |
| 25 - 29 | 1.6 | 1.8 | 2.3 | 2.6 | 5.8 | 4.8 | 2.8 | 2.3 | 5.1 | 3.4 | 11.1 | 5.2 |
| 30 - 34 | 1.4 | .6 | 1.5 | .8 | 4.6 | 2.2 | .9 | .6 | 1.2 | 1.3 | 4.7 | 2.7 |
| 35 - 39 | .8 | .8 | .9 | .8 | 3.5 | 2.9 | .8 | .1 | 1.1 | .8 | 3.9 | 2.3 |
| 40 - 44 | .2 | .3 | .3 | .8 | 1.5 | .3 | .1 | .2 | .2 | .4 | 1.7 | .7 |
| 45+ | (d) | — | .1 | — | .2 | .5 | (d) | — | .1 | .1 | .1 | — |
| Median[c] | 7.5 | 6.0 | 7.5 | 6.8 | 11.1 | 8.1 | 8.9 | 7.1 | 9.0 | 7.9 | 13.7 | 8.2 |

(a) Refers to the academic year for which data are collected; not to the year of award of highest degree.
(b) Excludes persons with no degree or years since award of highest earned degree not reported.
(c) Calculated from grouped data.
(d) Less than .1 percent.

Source: Statistics Canada. Teachers in Universities. Part II. Salaries Related to Experience. 1972-1973 and 1974-1975. Table 2A (Catalogue 81-242).

Statistics Canada, Post Secondary Education Section. Education, Science and Culture Division. Unpublished tabulations.

The tendency for women faculty to receive their highest degrees more recently than male faculty also persists when level of highest degree is held constant. Percent distributions and medians are presented in Table 4 for selected ranks (doctorate, master's, and bachelor's), and the data show that within each degree category, female faculty have received their degrees more recently than males with comparable degrees. The sex differences in receipt of degree are particularly striking for recipients of bachelor's degrees. In 1975-1976, over half of the male teachers in Canadian universities and colleges had received their bachelor's degrees at least 13.7 years ago compared to 8.2 years for women faculty. These data suggest, but do not conclusively prove, that sex differences in recency of degree-award in part account for the concentration of women in the lower ranks, even when level of degree is considered (see Table 3), and for sex differences in salary.

E. Field

In addition to rank, highest degree, and years since award of highest degree, field is another significant dimension along which male and female academicians differ. Percent distributions in Table 2 show that, compared to their male counterparts, women faculty are more likely to be in the fields of education, fine arts and humanities, agricultural and biological sciences, and health professions and occupations. They are less likely to be found in the social sciences, mathematics, physical sciences, and engineering and applied sciences. Women are particularly absent from the latter field. In 1975-1976, there were 12 women employed as full-time teachers in engineering, 4 in architecture, and none in forestry. Data presented in Appendix III show that this concentration occurs irrespective of rank (Tables A and B).

Such sex differences in the field of specialization are not surprising in view of various sociological findings concerning female employment. Sociologists have long observed that when women worked, they were likely to be found in occupations which represented extensions of the nurturing and expressive roles assumed as mothers and wives. Thus, certain occupations such as primary school teaching, nursing, domestic help, waitressing, are filled predominantly by women. Universities do not appear to be immune to this pattern. Both in 1972-1973 and 1975-1976, the fields containing the largest percent of female faculty were education, fine arts, and the health professions. Detailed data not presented here show that concentration in the health professions is due to the predominance of female faculty in nursing. Women academicians are conspicuously absent from the fields of dentistry, public health, and pharmacy.[4]

The concentration of women within certain academic fields compared to men reflects a variety of factors ranging from sex-role socialization to

[4]For example, out of the 900 female faculty in the health professions for whom salary data are available in 1975-1976, there were 31 in dentistry, 16 in pharmacy, and 32 in public health. There were 516 women (and 13 men) in the discipline of nursing, or 57 percent of all women faculty in the health professions and occupations.

the organization of education and its financing. In the former instance, a female child is informed by parents, teachers, peers, and/or the media that certain occupations or areas of interest are appropriate or inappropriate for her sex. In the latter case, even if a female persists in her attempts to acquire educational skills which are useful if not mandatory for entering a given field, she may discover that she is not treated seriously and/or refused financial aid or subsequent employment (see Ambert, 1976; Roby, 1972; Vickers and Adam, 1977, for further discussion). All of these discouragements apply as well to a male who seeks to enter an occupation or field of study which is defined as sexually inappropriate.

During the 1970s, governmental agencies and individuals alike stressed the importance of eradicating these sex differences in occupational socialization and in educational and occupational opportunities. However, it still may be too early to judge the impact of such advocacy upon the fields chosen by university-educated women and men. Certainly the data for the years 1972-1973 and 1975-1976 show very little change. In fact, Chart I shows that the proportion of women has actually increased in several fields in which women academics are already concentrated: education, fine arts, and the health professions. There also has been an increase in the proportion of female teachers in the social sciences and very small decreases in several other fields (Chart I).

Chart I: Increases and Decreases in the Proportionate Representation of Females on Full Time Teaching Staff at Canadian Universities and Colleges by Field, 1972-1973 and 1975-1976.

| |
|---|
| Fields in which the proportion of women increased between 1972-1973 and 1975-1976. |
| Education |
| Fine and Applied Arts |
| Social Sciences and Related |
| Health Professions and Occupations |
| Other Fields |
| Fields in which the proportion of women decreased[(a)] between 1972-1973 and 1975-1976. |
| Humanities and Related |
| Agriculture and Biological Sciences |
| Engineering and Applied |
| Mathematics and Physical Sciences |

(a) Note: The magnitude of decrease is very small. See Table 2.

F. Summary

From the Statistics Canada data analyzed in the preceding sections, the following composite profile of female full-time university and college teachers emerges. Compared to male academicians, female faculty in the 1970s continue to be a minority within the universities, constituting only 14 percent by 1975-1976 of the total full-time teaching staff for whom salary data are available. Women are more likely than men to be concentrated in the ranks of assistant professor and below. They also are more likely than male faculty to have the master's degree as the highest earned degree instead of the PhD and to have received their degrees more recently. Relative to their overall proportionate representation on university and college teaching staff, women faculty are underrepresented in certain fields, such as engineering and applied sciences, mathematics, the physical sciences, and the social sciences. They are concentrated in the fields of education, fine arts, and the health professions and occupations. This overall picture of the location of women within the university and college during the 1970s is very similar to that depicted in the Adams (1971) report using 1969-1970 and 1970-1971 data. In conjunction with the Adams report, the stability of the profile of women faculty over the four years under investigation (1972-1973 to 1975-1976) indicates that the attention paid to the status of female faculty during the 1970s has not yet substantially altered the position of women in academia.

## III. Male-Female Discrepancies in Salary: 1972-1973 and 1975-1976

In addition to its relevancy for discussions on the changing status of women, the preceding overview of the characteristics of academic men and women is of interest because of the association of many of these characteristics with salary. Table 1 reveals that as recently as 1975-1976 and 1976-1977, male full-time teachers in Canada had a median salary 22 percent higher than that received by female full-time teachers. However, academic salaries are very much influenced by such criteria as rank, highest degree, field, recency of degree, as well as by years in rank, number of publications, quality of publication, contribution to graduate training, departmental administration, and competing job offers. Although Statistics Canada data are available for only a limited number of these variables, the sex differences among Canadian academicians with respect to rank, highest degree, field, and years since receipt of degree are congruent with the higher median salary of men compared to women.

Of course, sex differences in characteristics known to affect salary are not the only explanation of male-female salary differentials. As discussed earlier, sex inequalities in salaries may reflect additional, less easily quantifiable factors such as attitudes and beliefs about women and/or the real or perceived inability of female academics to move to another university. The operation of such factors may result in sex discrimination, in which female faculty are less well paid than men, even when objective characteristics of both sexes are very similar or identical.

Rigorous documentation of the causes of the salary differentials between male and female teachers in Canadian universities and colleges is best achieved through a matched-peer study or through a multivariate analysis in which individuals are the unit of analysis and the influence of a variety of factors is simultaneously considered. Relying as it does upon data available in two- and three-way tables, the analysis presented in this section cannot match the level of explanation reached by university-specific studies based on personnel records or by regression analyses of tapes housed at Statistics Canada. However, at least two questions can be answered on the basis of published and unpublished Statistics Canada data: To what extent do sex differences in rank, highest degree, and other characteristics account for the observed male-female differences in median salary? and What is the evidence for the persistence of salary differentials by sex irrespective of male-female differences in characteristics?

TABLE 5: The Effect[a] of Sex Differences in Rank, Highest Earned Degree, Field, Age, and Years Since Highest Earned Degree on Median Salary Differences Between Male and Female Full Time Teachers in Canadian Universities and Colleges, 1972-1973 and 1975-1976.

| Characteristics | Approximate[b] Percent of Median Salary Gap Due to Sex Differences in Characteristics | | Approximate[b] Percent of Median Salary Gap Remaining After Taking Sex Differences in Characteristics in Account | |
|---|---|---|---|---|
| | 1972-1973 | 1975-1976 | 1972-1973 | 1975-1976 |
| Rank | 69 | 69 | 31 | 31 |
| Highest Earned Degree | 29 | 26 | 71 | 74 |
| Field | (e) | 6 | 97 | 94 |
| Age[c] | 1 | 8 | 99 | 92 |
| Years Since Highest Earned Degree[d] | 6 | 14 | 94 | 86 |

(a) The effect of each characteristic is calculated separately.
(b) As discussed in the text and Appendix II, a small amount of error is introduced into the calculations. For that reason, figures should be treated as approximate.
(c) Excludes persons for whom no age was given.
(d) Excludes persons for whom data are given, or who had no degree or whose highest degree was received 45 or more years ago.
(e) Not calculated. Standardized female median salary is lower than actual observed salary (See Appendix II, Table B).

Source: Tables 2 and 6.

## A. Sex Differences in Characteristics: Direct Standardization

The demographic technique of direct standardization is used to answer the first question. This technique, which is described in Appendix II, calculates the median income of female full-time faculty expected if these women had the same percent distribution as their male colleagues with respect to a given characteristic. The technique does not adjust for sex differences in the median income which men and women with similar characteristics receive (e.g., male teachers versus female teachers with MA degrees); rather, it assumes the existence of these sex differences in median salaries and simply asks what would happen to the overall salary differentials if men and women were alike with respect to a variety of factors. Again the interested reader is referred to Appendix II for a discussion of this technique and an example of its application.

Based on the direct standardization technique, Table 5 indicates the extent to which sex differences in rank, highest earned degree, field, age, and recency of degree account for the differences in median salaries of men and women faculty in 1972-1973 and 1975-1976. Because of the calculation procedures (see Appendix II), the figures appearing in Table 5 have a range of error associated with them. This range of error is not enough to invalidate

the general levels of magnitude observed in Table 5; however, its existence cautions against making a distinction between variables where differences in percentage points are small (as in the case of age and field).

According to the data presented in Table 5, rank emerges as the most important of the five variables considered to underly sex differentials in median salary. If female full-time teachers in Canadian universities and colleges were represented by exactly the same percent in the ranks of full, associate, assistant, lecturer, and other ranks as are male teachers, the male-female median salary gap in 1972-1973 and 1975-1976 would be narrowed by 69 percent (again, keeping in mind the approximate nature of the figures). To state the matter differently, over two-thirds of the male-female median salary differential during these years can be attributed to sex differences in rank, whereby women cluster in the assistant and below-assistant ranks compared to men who are more likely to be in the full or associate professor rank.

After rank, highest earned degree is the next most important factor underlying male-female salary discrepancies. However, its impact is substantially less than rank. If full-time female teachers were to have the same profile with respect to highest degree as do male teachers, the salary gap would be reduced by a little more than 25 percent. Sex differences in field of specialization, years since award of highest earned degree, and age account for an even smaller, almost trivial portion of the male-female salary gap.

Given the range of error associated with each figure in Table 5, there appears to be little change between 1972-1973 and 1975-1976 in the extent to which male-female differences on selected variables underlie the differences in median salaries observed in Table 1.

Although differences in rank account for a substantial proportion of the male-female salary gap, Table 5 also shows that male-female median salary differentials persist among Canadian academicians even when adjustments are made for sex differences in characteristics known to influence salaries. For example, after taking into account sex differences in highest earned degree, nearly three-quarters of the male-female salary differential remains. Approximately 30 percent of the gap is left unaccounted for when adjustments are made for sex differences in rank. These results, of course, are based on considering the influence of each factor at a time; a multivariate analysis might give different results.

## B. The existence of Sex Differences in Salary

The differentials in median salaries of male and female teachers persist because even when men and women are identical with respect to rank, degree, field of specialization, age, and recency of degree, male faculty receive higher median salaries. The existence of these within-category differences in median salaries for men and women are shown in Table 6. This table reveals that for all levels of rank, type of degree, field of specialization, and for all categories of age and years since receipt of highest degree, male full-time faculty earn more -- and often substantially more -- than their female counterparts. These inequalities are shown by comparing

TABLE 6 : MEDIAN SALARIES BY SEX AND MALE-FEMALE SALARY DIFFERENCES OF FULL-TIME TEACHERS IN UNIVERSITIES AND COLLEGES BY RANK, HIGHEST DEGREE, FIELD, AGE AND YEARS SINCE HIGHEST DEGREE, CANADA 1972-1973 and 1975-1976.

| Characteristics | Median Salary 1972-1973 | | 1975-1976 | | Percent (Male-Female) Salaries | | Difference (Male-Female) Median Salary | |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | 1972-1973 | 1975-1976 | 1972-1973 | 1975-1976 |
| Total | 16,400 | 13,150 | 23,000 | 18,800 | 24.7 | 22.3 | 3,250 | 4,200 |
| **Rank** | | | | | | | | |
| Full Professor | 24,000 | 22,100 | 31,450 | 29,050 | 8.6 | 8.3 | 1,900 | 2,400 |
| Associate Professor | 17,650 | 16,900 | 23,350 | 22,400 | 4.4 | 4.2 | 750 | 950 |
| Assistant Professor | 14,300 | 13,300 | 18,850 | 18,150 | 7.5 | 3.9 | 1,000 | 700 |
| One Rank Below Assistant | 11,350 | 10,600 | 15,400 | 14,500 | 7.1 | 6.2 | 750 | 900 |
| Other(a) | 12,300 | 10,300 | 19,200 | 16,000 | 19.4 | 20.0 | 2,000 | 3,200 |
| **Highest Degree** | | | | | | | | |
| Doctorate | 17,350 | 15,150 | 23,900 | 20,850 | 14.5 | 14.6 | 2,200 | 3,050 |
| Masters | 14,250 | 12,750 | 20,500 | 18,100 | 11.8 | 13.3 | 1,500 | 2,400 |
| Professional Degree | 21,125 | 15,100 | 27,800 | 21,550 | 39.9 | 29.0 | 6,025 | 6,250 |
| Bachelors | 14,450 | 11,025 | 21,000 | 16,000 | 31.1 | 31.2 | 3,425 | 5,000 |
| Other(b) | 14,425 | 11,350 | 20,400 | 15,650 | 27.1 | 30.4 | 3,075 | 4,750 |
| **Field** | | | | | | | | |
| Education | 16,475 | 14,100 | 22,950 | 19,650 | 16.8 | 16.8 | 2,375 | 3,300 |
| Fine & Applied Arts | 14,200 | 12,800 | 19,950 | 17,750 | 10.9 | 12.4 | 1,400 | 2,200 |
| Humanities & Related | 15,200 | 12,900 | 21,700 | 18,800 | 17.8 | 15.4 | 2,300 | 2,900 |
| Social Sciences & Related | 15,650 | 13,275 | 21,950 | 18,900 | 17.9 | 16.1 | 2,375 | 3,050 |
| Agricultural & Biological Sciences | 17,050 | 14,025 | 23,950 | 19,875 | 21.6 | 20.5 | 3,025 | 4,075 |
| Engineering & Applied Sciences | 17,350 | 12,800 | 24,750 | 21,725 | 35.5 | 13.9 | 4,550 | 3,025 |
| Health Professions & Occupations | 20,100 | 12,900 | 27,050 | 18,600 | 55.8 | 45.4 | 7,200 | 8,450 |
| Mathematics & Physical Sciences | 16,450 | 12,700 | 23,400 | 19,150 | 29.5 | 22.2 | 3,750 | 4,250 |
| Other | 16,000 | 12,700 | 17,750 | 15,650 | 26.0 | 13.4 | 3,300 | 2,100 |
| **Age** | | | | | | | | |
| Less than 25 | 9,600 | 9,050 | 12,800 | 11,900 | 6.1 | 7.6 | 550 | 900 |
| 25 - 29 | 12,150 | 10,800 | 15,900 | 14,500 | 12.5 | 9.7 | 1,350 | 1,400 |
| 30 - 34 | 14,200 | 12,400 | 18,900 | 17,000 | 14.5 | 11.2 | 1,800 | 1,900 |
| 35 - 39 | 16,450 | 13,600 | 22,100 | 19,100 | 21.0 | 15.7 | 2,850 | 3,000 |
| 40 - 44 | 18,600 | 14,225 | 24,900 | 20,300 | 30.8 | 22.7 | 4,375 | 4,600 |
| 45 - 49 | 20,700 | 14,800 | 27,300 | 21,300 | 39.9 | 28.2 | 5,900 | 6,000 |
| 50 - 55 | 22,350 | 15,300 | 29,500 | 21,725 | 46.1 | 35.8 | 7,050 | 7,775 |
| 55 - 59 | 22,900 | 16,925 | 30,750 | 23,200 | 35.3 | 32.5 | 5,975 | 7,550 |
| 60 - 64 | 23,550 | 17,625 | 30,950 | 23,650 | 33.6 | 30.9 | 5,925 | 7,300 |
| 65 plus | 22,000 | 16,100 | 30,000 | 23,450 | 36.6 | 27.9 | 5,900 | 6,550 |
| **Years Since Award of Highest Earned Degree** (c) | | | | | | | | |
| 0 - 4 | 13,650 | 12,150 | 18,400 | 16,500 | 12.3 | 11.5 | 1,500 | 1,900 |
| 5 - 9 | 16,000 | 13,225 | 21,350 | 18,750 | 21.0 | 13.9 | 2,775 | 2,600 |
| 10 - 14 | 19,100 | 15,150 | 25,000 | 21,075 | 26.1 | 18.6 | 3,950 | 3,925 |
| 15 - 19 | 21,700 | 15,975 | 28,300 | 22,600 | 35.8 | 25.2 | 5,725 | 5,700 |
| 20 - 24 | 23,225 | 15,975 | 30,900 | 23,225 | 45.4 | 33.0 | 7,250 | 7,675 |
| 25 - 29 | 24,025 | 15,000 | 31,975 | 21,825 | 60.2 | 46.5 | 9,025 | 10,150 |
| 30 - 34 | 23,750 | 16,800 | 32,950 | 21,150 | 41.4 | 55.8 | 6,950 | 10,800 |
| 35 - 39 | 24,150 | 15,800 | 32,450 | 23,550 | 52.8 | 37.8 | 8,350 | 8,900 |
| 40 - 44 | 23,000 | 18,500 | 32,150 | 22,925 | 24.3 | 40.2 | 4,500 | 9,225 |

(a) Includes visitors, ungraded staff and those teachers whose rank is more than one level below Assistant Professor.

(b) Includes a professional designation other than a degree such as Chartered Accountant, Registered Industrial Accountant and Undergraduate Diploma. Staff with a degree are also included in the "other" degree category.

(c) Excludes persons with no degree and persons with 45 or more years since highest earned degree because of small numbers.

Source: Statistics Canada. Teachers in Universities. Part I. Salaries General 1972-1973 to 1974-1975. Tables 1A and 3A (Catalogue 81-241); Part II. Salaries Related to Experience. 1972-1973 to 1974-1975. Tables 2A and 3A (Catalogue 81-242). Statistics Canada. Post Secondar[illegible]cation Section. Education, Science and Culture Division. Unpublished Tabulations, 197[illegible].

actual salaries (Table 6, columns 1 to 4) and by the ratio of male to female salaries expressed as a percentage (Table 6, columns 5 and 6). This percentage ratio (Appendix II) indicates how much higher male median salaries are compared to those of females with similar characteristics. In addition, the absolute differences in median salaries are given (Table 6, columns 7 and 8). Here the data show that for the most part, the size of the salary gap in actual dollars has increased between 1972-1973 and 1975-1976.

B1. Rank and Highest Earned Degree

As shown in Table 6, the magnitude of the male-female salary differentials depends very much on the characteristic considered. The smallest differences in either the percent male-female ratio or in absolute median salary gap are observed when rank is held constant -- a finding which again confirms the importance of rank as a variable affecting the sex differences on salaries. For both years, 1972-1973 and 1975-1976, the male-female salary differential is the smallest for the associate professor rank, where the median salary of male full-time teachers is about 4 percent higher than that of female full-time faculty. Excluding the "other" or residual category, the highest salary differentials are observed between male and female full professors. The median salary of male full professors is approximately 8 percent higher than that received by female full professors, and this discrepancy is unchanged over the four-year period under scrutiny.

Overall, the data on sex salary differentials by rank indicate that within each rank male faculty are paid more than women and that this advantage has continued over time although very slight decreases are observed for all ranks excepting the "other" or residual positions (Table 6, columns 5 and 6). But in terms of income foregone, the cost to women of this inequity has actually increased over time because of the general rise in median salary.[5] In 1972-1973, the median salary of male full professors was $1,900 higher than the median salary of female faculty in the same rank. By 1975-1976, the discrepancy had increased to $2,400. Similar trends are observed for other

[5]As noted in the opening pages (page 3, footnote 1) of this report, these statements are not necessarily contradictory. For example, assume that the median income of male assistant professors is 5 percent higher than that of female assistant professors and that this ratio remains unchanged over a ten-year period. At the beginning of this ten-year period, women receive a median salary of $10,000 and men a salary of $10,500. If salaries doubled within ten years, the salaries of females would be $20,000 and that of males would be $21,000. The relative position of men and women would remain the same (at 5 percent male-female ratio); but the actual salary differential would have increased. At the beginning of the time period, a "cost" borne by a woman for having a lower salary would be $500; ten years later, it would increase to $1,000. Conversely, the benefit to males of a 5 percent higher median salary compared to female assistant professors would be $500 at the beginning of the ten-year period and $1,000 at the end.

ranks, with the exception of the assistant professorship rank, where the absolute discrepancy male-female median gap has narrowed between 1972-1973 and 1975-1976.

When all ranks are considered, both the relative (percent male-female ratio) and the absolute difference in salaries are largest for men and women in the "other" category, with a slight increase in the discrepancies between 1972-1973 and 1975-1976. In 1972-1973, males in this rank had median incomes which were $2,000 or 19 percent higher than those received by their female counterparts. Four years later, the male median salary was 20 percent higher and the absolute gap had increased to $3,200. In the absence of detailed information it is difficult to establish the cause of these sizeable male-female salary inequalities which are observed in the "other" rank.[6] But there is no question that the gap substantially affects the salary position of female academicians. In 1975-1976, 16 percent of all female full-time teachers were in the "other" rank compared to slightly less than 7 percent of the male teaching staff (Table 2).

Sex differences in highest earned degree may be one reason why males earn more than females in all ranks, but particularly in the "other" rank. Table 7 shows that within each rank women compared to men are more likely to have a master's degree rather than a PhD, and this tendency increases for the ranks of associate, assistant, and lecturer (one rank below assistant). Female faculty also are more likely to have only a bachelor's degree compared to male teachers, and this sex difference is sharpest in the rank of "other", where over a third of the women have a BA degree compared to fewer than one-tenth of the men (Table 7, columns 11 and 12).

Salaries, of course, vary with type of degree. Thus, if men and women within each rank differ with respect to highest earned degree, some overall differences in salary are to be expected. But this argument supposes that men and women of comparable certification are comparably paid. As data in Table 6 show, men and women faculty with similar degrees are not similarly paid. As a result, taking sex differences in highest degree into account does not remove the male-female salary differentials observed by rank (Table 8).

As shown in Table 6, salary discrepancies by sex generally decrease with higher qualifications. The median salary of males with a bachelor's degree is 31 percent higher than that observed for females, but the median salary for males with a PhD is about 14.5 percent higher than the salary of similarly educated females. Generally, the percentage discrepancies in male-female salaries by degree has remained about the same over the four-year period although the absolute gap has increased, with the gap being the greatest for persons without a doctorate or master's degree. The one exception to these trends is the salary discrepancy observed for males and females with professional degrees. In 1972-1973, the median salary of male teachers with a

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[6]Conventional wisdom maintains that discriminatory practices are most evident at the lower ranks in that women are more likely to be hired for junior positions and are paid less than men. See Ambert, 1976; Graham, 1970; Roby, 1972, for further discussion.

Table 7: Percent Distribution of Highest Earned Degree by Rank for Male and Female Full Time Teachers in Universities and Colleges, Canada 1972-1973 and 1975-1976.

| Year and Highest Degree | Rank and Sex | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Full | | Associate | | Assistant | | Below Assistant | | Other | |
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 1972-1973 | | | | | | | | | | | | |
| Total, N | 22,584 | 3,338 | 5,193 | 194 | 6,750 | 657 | 7,902 | 1,336 | 1,914 | 833 | 825 | 318 |
| Total Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 99.9 | 100.0 | 100.0 | 99.9 | 100.0 | 100.0 | 100.0 |
| Doctorate | 58.6 | 32.2 | 73.9 | 71.6 | 70.6 | 56.3 | 52.7 | 36.7 | 9.7 | 4.1 | 34.4 | 13.8 |
| Masters | 26.9 | 43.7 | 14.5 | 20.1 | 18.8 | 33.3 | 33.0 | 47.7 | 60.7 | 52.6 | 34.6 | 39.0 |
| Professional | 5.2 | 2.6 | 6.2 | 2.6 | 4.7 | 2.3 | 5.1 | 2.8 | 5.6 | 3.0 | 4.0 | 1.3 |
| Bachelors | 7.6 | 17.7 | 4.4 | 4.1 | 4.7 | 6.2 | 7.6 | 10.4 | 20.7 | 34.2 | 20.7 | 36.8 |
| Others | 1.7 | 3.8 | 1.0 | 1.6 | 1.2 | 1.8 | 1.6 | 2.4 | 3.2 | 6.1 | 6.3 | 9.1 |
| Index of Dissimilarity | 29.0 | | 6.2 | | 16.6 | | 18.6 | | 16.3 | | 23.3 | |
| 1975-1976 | | | | | | | | | | | | |
| Total, N | 25,751 | 4,186 | 6,794 | 292 | 8,903 | 994 | 6,975 | 1,595 | 1,330 | 630 | 1,749 | 675 |
| Total, Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 99.9 | 100.0 |
| Doctorate | 62.1 | 34.5 | 76.1 | 70.9 | 72.4 | 58.9 | 53.6 | 35.3 | 9.9 | 3.5 | 29.3 | 10.1 |
| Masters | 24.6 | 41.5 | 13.5 | 18.8 | 18.1 | 32.2 | 31.9 | 47.4 | 60.3 | 51.8 | 44.9 | 41.2 |
| Professional | 5.4 | 2.8 | 6.0 | 3.8 | 4.6 | 2.5 | 6.3 | 3.0 | 6.5 | 3.6 | 1.6 | 1.5 |
| Bachelors | 5.9 | 16.8 | 3.5 | 3.8 | 3.6 | 4.8 | 6.1 | 11.5 | 18.3 | 34.9 | 16.5 | 35.7 |
| Other | 2.0 | 4.4 | .9 | 2.7 | 1.3 | 1.6 | 2.0 | 2.8 | 5.0 | 6.2 | 7.6 | 11.5 |
| Index of Dissimilarity | 30.2 | | 7.4 | | 15.6 | | 21.7 | | 17.8 | | 23.1 | |

Source: Statistics Canada. Teachers in Universities. Part I, Salaries general 1972-73 to 1974-75. Table 1A. (Catalogue 81-241). Statistics Canada. Post Secondary Education Section. Education, Science and Culture Division. Unpublished Tabulations, 1975-76.

Table 8: Median Salary and Percent Male/Female Salary by Highest Earned Degree and Rank for Male and Female Full Time Teachers in Universities and Colleges, Canada 1972-1973 and 1975-1976.

| Rank | Year and Highest Earned Degree | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1972 - 1973 | | | | | 1975 - 1976 | | | | |
| | Doctorate | Masters | Professional Degree | Bachelors | Other[a] | Doctorate | Masters | Professional Degree | Bachelors | Other[a] |
| **Salary, Male** | | | | | | | | | | |
| Full | 23,950 | 23,500 | 28,500 | 23,600 | 23,050 | 31,300 | 31,150 | 36,700 | 31,400 | 31,350 |
| Associate | 17,550 | 17,425 | 21,725 | 17,950 | 16,775 | 23,200 | 23,200 | 27,325 | 24,075 | 22,850 |
| Assistant | 14,000 | 13,700 | 18,000 | 14,000 | 13,650 | 18,650 | 18,600 | 23,650 | 19,025 | 18,850 |
| Below Assistant | 11,800 | 11,200 | 15,750 | 11,050 | 11,550 | 16,000 | 15,200 | 16,975 | 15,400 | 15,700 |
| Other | 13,525 | 11,700 | 9,600 | 11,200 | 12,000 | 19,000 | 19,800 | 12,850 | 18,900 | 19,050 |
| **Salary, Female** | | | | | | | | | | |
| Full | 21,850 | 22,400 | X | X | X | 28,900 | 29,350 | 32,700* | 29,450* | X |
| Associate | 16,900 | 16,800 | 18,100* | 17,200 | 16,400 | 22,300 | 22,350 | 25,850 | 22,925 | 22,975 |
| Assistant | 13,600 | 13,150 | 15,000 | 13,250 | 12,900 | 18,150 | 18,075 | 21,200 | 17,900 | 16,500 |
| Below Assistant | 11,275 | 10,625 | 12,000 | 10,450 | 10,850 | 14,300 | 14,700 | 16,800 | 14,400 | 13,700 |
| Other | 12,325 | 10,650 | X | 9,300 | 10,100 | 16,550 | 16,825 | 11,550 | 15,450 | 14,825 |
| **Percent, Male/Female Median Salaries** | | | | | | | | | | |
| Full | 9.6 | 4.9 | X | X | X | 8.3 | 6.1 | 12.2* | 6.6* | X |
| Associate | 3.8 | 3.7 | 20.0* | 4.4 | 2.3 | 4.0 | 3.8 | 5.7 | 5.0 | -0.5 |
| Assistant | 2.9 | 4.2 | 20.0 | 5.7 | 5.8 | 2.8 | 2.9 | 11.6 | 6.3 | 14.2 |
| Below Assistant | 4.7 | 5.4 | 31.2 | 5.7 | 6.5 | 11.9 | 3.4 | 1.0 | 6.9 | 14.6 |
| Other | 9.7 | 9.9 | X | 20.4 | 18.8 | 14.8 | 17.7 | 11.3 | 22.3 | 28.5 |

(a) Professional designation other than a degree e.g., Chartered Accountant, Registered Industrial Accountant and undergraduate diploma. Staff without a degree are also included in "other".

(X) Fewer than 10 cases. Median salary not calculated according to Statistics Canada guidelines.

(*) Median salary based on fewer than 20 cases.

Source: Statistics Canada. Teachers in Universities. Part I. Salaries general. 1972-73 to 1974-75. Table IA. (Catalogue 81-241). Statistics Canada. Post-secondary Education Section. Education, Science and Culture Division. Unpublished tabulations, 1975-76.

professional degree was $6,025, or approximately 40 percent, higher than that observed for female faculty with professional degrees, By 1975-1976, the relative gap had narrowed; males with professional degrees had a median salary which was 29 percent higher than their female counterparts. However, this differential still meant that with professional degrees, male academicians earned a median salary $6,250 dollars higher than women with professional degrees -- an absolute gap which is the largest for all the types of degree categories. The magnitude of the salary gap in part reflects the concentration of both men and women with a professional degree in the very high paying fields of health occupation and professions. In addition, within this field, men and women are differentially concentrated, with the latter more likely to be teaching on nursing faculties and the former in the area of medicine (see page 14).

As shown in Table 8, these sex differences in median salary by highest earned degree persist even when rank is taken into account and vice versa. Table 8 may be read in two different ways. Reading across the bottom panel of Table 8, row by row, indicates that even when the effects of rank are held constant, the median salary discrepancies noted above for men and women in similar rank remain. In particular, 1972-1973 salary differences are largest for men and women teachers with professional degrees, although these differentials decrease across all ranks by 1975-1976.

Conversely, Table 8 also indicates that even when the sex differences between men and women academicians are taken into account, the overall pattern of salary differentials by rank persists. Holding the effects of sex differences in highest earned degree constant requires reading down each column. When this is done, the data show that for men and women with PhDs, salary differentials are lowest at the rank of associate and assistant -- with the median salary of males in these ranks being approximately between 3 and 4 percent higher than those of females in 1972-1973 and 1975-1976. However, salary discrepancies increase for doctorates in the very bottom ranks and at the full professorship level. It is evident from Table 8 that regardless of degree, the discrepancy in male-female salary tends to be largest at the lowest ranks of lecturer and "other".

In general, male-female salary inequities exist even when men and women have the same rank, the same degree, and when they are matched simultaneously with respect to both rank and type of degree. Slight changes in the size of the inequities do occur over the four years under investigation, but these changes by no means obliterate the differences, and in some instances (particularly for the "other" rank category) the difference increases. To be sure, in some cases the male-female percent differentials are small -- particularly for persons with doctorate or MA degrees who are associate or assistant professors. But it must be remembered that associated with these small percentage differences are real dollars. The fact that in 1975-1976 the median salary of male doctorates at the associate rank was 4 percent higher than the median salary of females with comparable rank and degree means a sex difference in median salary of $900 to the advantage of men.

B2. Years Since Highest Earned Degree and Age

In addition to rank and type of highest earned degree, sex differentials in median salary also exist when male and female full-time faculty are matched with respect to age and years since award of highest degree. As shown in Table 6, the discrepancies in salary become particularly pronounced with age and with increasing years since the award of the highest degree. Male-female differences in salary are smallest for persons who are under thirty or who recently received their highest degree. But even for the younger groups or recent degree recipients, income discrepancies by sex are not inconsequential. In 1975-1976 the median salary of males age 25-29 was nearly 10 percent higher than the median salary observed for full-time female teachers in that age group. Likewise, the median salary for men earning their highest degree within the past five years was 11.5 percent higher than the median salary of their female counterparts.

Between 1972-1973 and 1975-1976, there is a noticeable decline in the size of the male-female median salary discrepancy within age or recency of degree categories. As a result, the absolute size of the income gap (Table 6, columns 7 and 8) has not substantially changed for persons between 25 and 50 years of age or for persons whose highest degree was awarded between 5 and 25 years ago. However, despite declines over time in the male-female salary discrepancies (as measured by the percent male-female salary ratio), sex differences in salaries still increase with age and with years since the award of the highest degree even when type of highest degree is held constant (Appendix III, Table C). Female full-time faculty who are in their 50s and early sixties or who are 25 years or more removed from their highest degree are especially penalized by sex differences in salary.

This pattern by which male-female differentials increase with age and with years since award of highest degree is intriguing. Initially it appears to suggest that sex differences in salary occur at the beginning of academic careers and widen over the academic lifetime. Some university studies support the argument that men and women begin their academic careers with unequal incomes as a consequence of women frequently beginning their careers in the lecturer rank. Canada-wide data on starting salaries are not collected by Statistics Canada, but data on salary differentials between men and women who have received similar degrees indicate that women faculty earn less than men during the initial five-year period of employment (Appendix III, Table C). However, the argument that these sex differences in salaries widen over the academic lifetime simply cannot be confirmed from the data in this report. An equally plausible interpretation is that men and women do begin their careers with unequal salaries but that the magnitude of the differential remains unchanged over the career. In this case, the observed increases in male-female salary differentials with age and with years since award of degree (Table 6) would be produced by differences in the size of the initial gap between each age or degree recipient cohort, with the gap becoming smaller for younger age groups or more recent degree recipients. Clearly the two interpretations have different implications for ameliorative action concerning male-female salary discrepancies. It is unfortunate that the data base of this report does not permit ascertaining whether or not the increasing sex differentials by age or years since award of highest degree reflect

differences in starting salaries and/or widening inequalities in salaries over the lifetime of men and women teachers in Canada. Matched-peer studies may be more amenable to such analysis.

B3. Field

Previous investigations into male-female salary differentials in academia have noted that women more than men are absent from the higher salaried fields of the physical and applied sciences and are found in the lower paying fields of the humanities, education, and the social sciences. However, as suggested by the results of direct standardization, these sex differences in field of concentration by no means account for the male-female salary inequities. In fact, data in Table 6 (third panel) show sizeable salary differences between male and female full-time teachers within all fields. The largest salary gap exists between men and women who are employed as teachers in the health field and in the agricultural, biological, mathematical, and physical sciences.

In 1975-1976, the median salary of male teachers in the health field was 45 percent higher than the median salary of female faculty in this area, with a median salary gap of $8,450. Compared to the salaries of their female colleagues, male teachers in the mathematical and physical sciences or men in the agricultural and biological fields had median salaries which were over 20 percent higher. Even in the fine arts, where the salary differential was the smallest, the median salary of male full-time faculty was 12 percent higher than the median salary of female faculty. These data indicate that within each field substantial sex differences in median salary remain by 1975-1976 even though the relative (percent male-female ratio) salary gap did diminish in all fields except the fine arts between 1972-1973 and 1975-1976.

The earlier analyses of sex differential in salaries show that much, but not all, of the differential reflects the concentration of women in the lower paying ranks compared to male teachers who are more often found in the higher paid ranks. When rank is held constant, the sex differences in median salary by field are diminished but not eradicated (Table 9). It is difficult to make summary statements from Table 9 because the size of the differentials in salary fluctuate according to the year, rank, and field considered. Salary differentials continue to be largest for men and women in the health field regardless of rank. Generally, sex differentials in salary are smaller for persons who are associate or assistant professors in education, fine arts, the humanities, and the social sciences. In the fine arts, women in the rank of associate professor actually had median salaries in 1972-1973 which exceed those of their male colleagues. However, in the very high and the very low ranks, larger male-female salary inequities exist by field.

At the full professor rank, the median salaries of male teachers in 1975-1976 range from 3.4 percent (humanities) to 13 percent (health) higher than those received by women in the same field. But the largest male-female salary differentials exist for persons employed as visitors, ungraded staff or in the rank below lecturer, ranging from 7.2 percent for the residual field category to 43 percent in the humanities.

TABLE 9 : MEDIAN SALARY OF TEACHERS IN UNIVERSITIES AND COLLEGES BY RANK, SEX AND FIELD, CANADA 1972-1973, 1975-1976.

| FIELD | YEAR AND RANK | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1972 - 1973 | | | | | | 1975 - 1976 | | | | | |
| | Total, All Ranks | Full Professor | Associate Professor | Assistant Professor | One Rank below Assistant | Other[a] | Total, All Ranks | Full Professor | Associate Professor | Assistant Professor | One Rank below Assistant | Other[a] |
| Salary, Male | 16,400 | 24,000 | 17,650 | 14,000 | 11,350 | 12,300 | 23,000 | 31,450 | 23,350 | 18,850 | 15,400 | 19,200 |
| Education | 16,495 | 23,775 | 18,250 | 14,500 | 11,500 | 13,175 | 22,950 | 31,300 | 24,150 | 19,700 | 16,500 | 23,650 |
| Fine & Applied Arts | 14,200 | 21,750 | 16,400 | 12,950 | 10,500 | 10,000 | 19,950 | 29,200 | 21,750 | 17,300 | 14,075 | 19,400 |
| Humanities & Related | 15,200 | 23,150 | 16,900 | 13,450 | 11,200 | 10,300 | 21,700 | 30,150 | 22,400 | 18,300 | 14,850 | 20,950 |
| Social Sciences & Related | 15,650 | 24,000 | 17,650 | 13,850 | 11,250 | 11,250 | 21,950 | 31,400 | 23,100 | 18,450 | 14,900 | 19,400 |
| Agricultural & Biological Sciences | 17,050 | 23,500 | 17,500 | 14,000 | 11,400 | 9,700 | 23,950 | 31,350 | 23,400 | 18,400 | 14,975 | 15,000 |
| Engineering & Applied Sciences | 17,350 | 23,350 | 17,700 | 14,250 | 11,200 | 11,900 | 24,750 | 30,850 | 23,750 | 19,600 | 15,750 | 23,650 |
| Health Professions & Occupations | 20,100 | 27,000 | 20,425 | 16,800 | 15,000 | 13,700 | 27,050 | 35,200 | 26,800 | 22,300 | 17,200 | 19,025 |
| Mathematics & Physical Sciences | 16,450 | 23,600 | 17,250 | 13,800 | 11,375 | 12,900 | 23,400 | 30,800 | 22,975 | 18,425 | 15,525 | 21,000 |
| Other | 16,000 | 29,000 | 18,875 | 13,900 | 11,300 | 13,000 | 17,750 | 37,450 | 25,000 | 17,725 | 17,575 | 16,300 |
| Salary, Female | 13,150 | 21,100 | 16,900 | 13,300 | 10,600 | 10,300 | 18,000 | 29,050 | 22,400 | 18,150 | 14,500 | 16,000 |
| Education | 14,100 | 23,100 | 17,400 | 14,150 | 10,850 | 11,500 | 19,650 | 29,300 | 23,500 | 18,900 | 15,200 | 18,600 |
| Fine & Applied Arts | 12,800 | x | 16,500 | 12,900 | 10,350 | 8,600* | 17,750 | 26,850* | 23,050 | 16,500 | 14,300 | 16,825 |
| Humanities & Related | 12,900 | 21,825 | 16,600 | 13,100 | 10,550 | 10,100 | 18,800 | 29,150 | 21,400 | 17,900 | 14,500 | 14,725 |
| Social Sciences & Related | 13,275 | 21,800 | 16,850 | 13,300 | 11,100 | 10,250 | 18,900 | 28,675 | 22,500 | 18,050 | 14,450 | 17,400 |
| Agricultural & Biological Sciences | 14,025 | 21,200 | 17,250 | 13,600 | 10,400 | 9,300 | 19,875 | 28,150 | 22,925 | 17,775 | 13,700 | 13,250 |
| Engineering & Applied Sciences | 12,800 | - | x | 12,700* | x | x | 21,725 | x | x | x | x | x |
| Health Professions & Occupations | 12,900 | 23,000 | 17,150 | 13,450 | 10,600 | 9,150 | 18,600 | 31,100 | 22,400 | 18,500 | 14,625 | 16,250 |
| Mathematics & Physical Sciences | 12,700 | x | 16,300 | 13,100 | 10,500 | 10,125 | 19,150 | x | 22,100 | 18,300 | 14,275 | 16,575 |
| Other | 12,700 | x | 18,475* | 13,100 | x | 11,950 | 15,650 | x | x | x | x | 15,200 |
| Percent Male/Female Ratio | 24.7 | 8.6 | 4.4 | 5.3 | 7.1 | 19.4 | 27.8 | 8.3 | 4.2 | 3.9 | 6.2 | 20.0 |
| Education | 16.8 | 2.9 | 4.9 | 2.5 | 6.0 | 32.0 | 16.8 | 6.8 | 2.8 | 4.2 | 8.6 | 27.2 |
| Fine & Applied Arts | 10.9 | x | - .6 | .4 | 1.4 | 16.3 | 12.4 | 8.6* | - 5.6 | 4.8 | - 1.6 | 15.3 |
| Humanities & Related | 17.8 | 6.1 | 1.8 | 2.7 | 6.2 | 2.0 | 15.4 | 3.4 | 4.7 | 2.2 | 2.4 | 43.3 |
| Social Sciences & Related | 17.9 | 10.1 | 4.7 | 4.1 | 1.4 | 9.8 | 16.1 | 9.5 | 2.7 | 2.2 | 3.1 | 11.5 |
| Agricultural & Biological Sciences | 21.6 | 10.8 | 1.4 | 2.9 | 9.6 | 4.3 | 20.5 | 11.4 | 2.1 | 3.5 | 9.3 | 13.2 |
| Engineering & Applied Sciences | 35.5 | x | x | 12.2* | x | x | 13.9 | x | x | x | x | x |
| Health Professions & Occupations | 55.8 | 17.4 | 19.1 | 24.9 | 41.5 | 49.7 | 45.4 | 13.2 | 19.6 | 20.5 | 17.6 | 17.1 |
| Mathematics & Physical Sciences | 29.5 | x | 5.8 | 5.3 | 8.3 | 27.4 | 22.2 | x | 4.0 | .7 | 8.8 | 26.7 |
| Other | 26.0 | x | 2.2* | 6.1 | x | 8.9 | 13.4 | x | x | x | x | 7.2 |

(a) Refers to visitors, ungraded staff and those teachers whose rank is more than one rank below assistant professor.
(x) Fewer than 10 cases. Median salary not calculated according to Statistics Canada guidelines.
(*) Median salary based on fewer than 20 cases.

Source: Statistics Canada. Teachers in Universities. Part I. Salaries general. 1972-1973 to 1974-1975. Table 3A (Catalogue 81-241)
Statistics Canada Post Secondary Education Section. Education, Science and Culture Division. Unpublished Tabulations, 1975-1976.

B4. Summary

Both university-specific studies and more general analyses of Statistics Canada data for Canada show that male and female teachers in universities and colleges are dissimilar with respect to a variety of characteristics known to be associated with salary. This section asks to what extent sex differences in rank, highest earned degree, year since award of highest degree, age, and field underlie the higher median salaries of male faculty compared to female faculty. According to the results of direct standardization in which the impact of these variables are examined one at a time, sex differences in rank account for over two-thirds of the male-female salary differentials observed in 1972-1973 and in 1975-1976. Sex differences in highest earned degree are also important but account for little more than one-fourth of the salary discrepancy between male and female teachers in Canadian universities and colleges.

However, compositional differences between men and women on teaching staff only partly explain why male teachers have median salaries which in 1975-1976 were over 20 percent higher than the median salary of female faculty. The analysis of the median salaries received by men and women indicates that for the most part men receive higher median salaries compared to women even when the sexes are identical with respect to rank or level of degree or recency of degree or field or age. There is little change in the relative magnitude of these sex discrepancies in salaries for rank and type of degree over time. Between 1972-1973 and 1975-1976, the relative salary gap between men and women of comparable age, recency of degree, and field did decline somewhat, but sizeable differentials still exist. Furthermore, because salary levels have generally increased over the four-year period, the dollar amount of the discrepancies between male and female full-time teachers has been increasing for most categories of rank, degree, years since award of highest degree, age, and field.

Overall, the univariate and bivariate data presented in this section do not support the argument that substantial progress in eradicating salary differences has occurred between 1972-1973 and 1975-1976. The analysis suggests that salary differentials would lessen considerably if the rank distributions of men and women became more alike. But as shown earlier, between 1972-1973 and 1975-1976 women continue to concentrate in the lower ranks compared to male faculty who dominate in the associate and full professor ranks. Furthermore, this section shows that even when men and women teachers are similar with respect to rank, highest degree, recency of highest degree, age, and field, the median salary of males is higher than that observed for females. Even where the higher median salary of male teachers has declined over time relative to female median salaries, the decrease has not been substantial enough to offset the tendency for the actual dollar value of the gap to increase. Apparently as overall salary levels increase in academia, the male-female salary differentials cost women academicians more and more.

## IV. Which Way the Seventies? Male-Female Differences in Rank and Salaries by 1977-1978

Reflecting the availability of Canada-wide published data on university and college faculty, the preceding discussion on characteristics and salaries of male and female full-time teachers refers to the period between 1972-1973 and 1975-1976. Although these years encompass the period of increased concern with the status of women both within the universities and in the larger Canadian society, the impact of this concern is not strongly evident with respect to the position of female faculty. As of 1975-1976, women in universities still concentrated in the lower ranks, still disproportionately held master's degrees, and still had lower salaries than their male colleagues, even when matched on such characteristics as rank, highest degree, recency of degree, age or field.

Recognizing that the four years between 1972-1973 and 1975-1976 constitute a relatively short time in which to proceed from concern to documentation of a problem to corrective action, this section examines the position of men and women full-time teachers in Canadian universities and colleges over the time period 1972-1973 to 1977-1978. But although it updates the previous sections by extending the time coverage to 1977-1978, this section focuses on change over time only with respect to rank and salary profiles of male and female full-time teachers. This restrictive focus is dictated by the use of unpublished data which were obtained by special request from Statistics Canada, Post-secondary Education Section. Because there are minor differences in the populations included in the published data used in the previous sections and in the unpublished data used in this section, the data in this section on rank and salary for the years 1972-1973 and 1975-1976 are not identical to those appearing earlier (see Appendix I for a discussion of the population coverage). Further, the data appearing in the previous sections are taken from published Statistics Canada reports on all full-time teaching staff, including persons in medical and dental schools (see Appendix I). Because the data appearing in this section are derived from specially requested tabulations, rank and salary data in this section are given for teaching staff both including and excluding the medical and dental staff. This distinction is made because the higher salaries which are paid to teachers in medical and dental schools compared to elsewhere in academia and the absence of women in these schools tend to slightly accentuate the overall sex differentials in rank and salary for male and female faculty. Finally, data on sex differences in rank and salary are also presented by region, although the bulk of the discussion will focus on the general patterns observed for Canada.

TABLE 10: Percent Distribution of Rank by Sex and Region for Full Time Teaching Staff[a], at Universities and Colleges, Including and Excluding Medical and Dental Personnel, Canada 1972-1973, 1975-1976 and 1977-1978.

| Rank and Region | Including Medical and Dental | | | | | | Excluding Medical and Dental | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1972-1973 | | 1975-1976 | | 1977-1978 | | 1972-1973 | | 1975-1976 | | 1977-1978 | |
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| Canada, N | 21,874 | 3,256 | 24,838 | 4,028 | 25,859 | 4,422 | 19,322 | 2,947 | 21,669 | 3,590 | 22,416 | 3,923 |
| Percent | 100.0 | 100.0 | 99.9 | 99.9 | 99.9 | 100.1 | 100.0 | 100.0 | 100.1 | 99.9 | 99.9 | 100.1 |
| Full Professor | 22.3 | 5.5 | 25.9 | 6.7 | 28.9 | 7.8 | 21.5 | 5.6 | 25.4 | 6.4 | 28.4 | 7.5 |
| Associate | 30.6 | 20.0 | 35.6 | 24.4 | 37.9 | 28.1 | 30.8 | 20.1 | 36.1 | 24.1 | 38.4 | 27.9 |
| Assistant | 36.1 | 40.9 | 28.0 | 39.5 | 25.0 | 37.8 | 36.2 | 40.9 | 27.5 | 39.1 | 24.4 | 37.8 |
| Rank below Assistant[b] | 8.7 | 25.5 | 5.4 | 15.6 | 4.1 | 13.5 | 9.0 | 25.2 | 5.5 | 15.6 | 4.3 | 13.2 |
| Rank below Preceding[c] | 1.1 | 6.0 | .8 | 5.3 | .9 | 6.2 | 1.2 | 6.1 | 1.0 | 5.6 | 1.0 | 6.6 |
| Other[d] | 1.2 | 2.1 | 4.2 | 8.4 | 3.1 | 6.7 | 1.3 | 2.1 | 4.6 | 9.1 | 3.4 | 7.1 |
| Atlantic Region, N. | 2,380 | 415 | 2,673 | 517 | 2,800 | 592 | 2,162 | 397 | 2,398 | 491 | 2,497 | 539 |
| Percent | 100.0 | 100.1 | 100.0 | 100.0 | 99.9 | 99.9 | 100.0 | 100.0 | 100.0 | 100.1 | 100.1 | 100.2 |
| Full Professor | 17.1 | 4.1 | 18.8 | 3.5 | 21.4 | | 16.0 | 4.3 | 18.4 | 3.7 | 20.7 | 4.3 |
| Associate | 24.7 | 13.5 | 31.9 | 17.2 | 39.4 | 22.1 | 24.5 | 13.9 | 32.0 | 16.9 | 39.7 | 21.2 |
| Assistant | 42.6 | 36.4 | 38.1 | 47.4 | 32.5 | 47.1 | 43.4 | 35.0 | 38.3 | 47.3 | 32.7 | 47.9 |
| Rank below Assistant[b] | 14.6 | 38.8 | 9.8 | 22.2 | 5.6 | 19.4 | 14.9 | 39.5 | 9.8 | 22.0 | 5.8 | 18.6 |
| Rank below Preceding[c] | .8 | 6.5 | .9 | 9.3 | 1.0 | 7.4 | .9 | 6.5 | 1.0 | 9.8 | 1.2 | 8.2 |
| Other[d] | .2 | .7 | .5 | .4 | — | — | .3 | .8 | .5 | .4 | — | — |
| Quebec, N | 4,906 | 730 | 5,595 | 896 | 5,913 | 984 | 4,274 | 660 | 4,730 | 741 | 5,021 | 834 |
| Percent | 100.1 | 100.0 | 100.0 | 99.9 | 100.0 | 100.0 | 99.9 | 100.0 | 100.0 | 100.1 | 100.1 | 100.0 |
| Full Professor | 18.5 | 4.8 | 21.7 | 6.2 | 26.1 | 8.6 | 17.6 | 5.0 | 20.9 | 5.7 | 25.5 | 7.8 |
| Associate | 29.1 | 20.1 | 34.7 | 24.1 | 38.2 | 30.0 | 28.5 | 19.7 | 34.5 | 23.8 | 38.2 | 30.1 |
| Assistant | 39.3 | 45.5 | 30.0 | 41.5 | 27.0 | 39.5 | 39.4 | 45.3 | 29.9 | 42.0 | 27.0 | 39.7 |
| Rank below Assistant[b] | 10.2 | 26.4 | 6.5 | 20.2 | 5.5 | 17.0 | 11.3 | 27.0 | 7.2 | 20.2 | 6.2 | 17.7 |
| Rank below Preceding[c] | — | — | — | — | — | — | — | — | — | — | — | — |
| Other[d] | 3.0 | 3.2 | 7.1 | 7.9 | 3.2 | 4.9 | 3.1 | 3.0 | 7.5 | 8.4 | 3.2 | 4.7 |
| Ontario, N | 8,758 | 1,231 | 9,968 | 1,561 | 10,304 | 1,719 | 7,729 | 1,115 | 8,783 | 1,404 | 9,016 | 1,544 |
| Percent | 100.1 | 100.0 | 99.9 | 100.1 | 100.0 | 100.0 | 100.1 | 100.1 | 100.0 | 100.0 | 100.1 | 99.9 |
| Full Professor | 24.7 | 6.0 | 28.0 | 6.7 | 29.8 | 7.3 | 24.5 | 5.8 | 27.8 | 5.9 | 29.7 | 6.8 |
| Associate | 30.8 | 20.3 | 34.9 | 24.3 | 36.1 | 26.6 | 31.3 | 20.3 | 35.3 | 24.0 | 36.5 | 25.8 |
| Assistant | 33.6 | 38.5 | 25.4 | 33.8 | 22.9 | 33.7 | 33.4 | 39.2 | 24.6 | 32.8 | 21.9 | 33.0 |
| Rank below Assistant[b] | 9.3 | 27.8 | 5.3 | 15.2 | 4.5 | 12.6 | 9.1 | 26.7 | 5.3 | 15.5 | 4.5 | 12.6 |
| Rank below Preceding[c] | 1.1 | 6.3 | .9 | 5.8 | .8 | 5.6 | 1.2 | 6.9 | 1.0 | 6.1 | .9 | 6.2 |
| Other[d] | .6 | 1.1 | 5.4 | 14.3 | 5.9 | 14.2 | .6 | 1.2 | 6.0 | 15.7 | 6.6 | 15.5 |
| Western Provinces | 5,830 | 880 | 6,602 | 1,054 | 6,842 | 1,127 | 5,157 | 775 | 5,758 | 954 | 5,382 | 1,006 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.1 | 100.1 | 100.1 | 99.9 | 100.0 | 100.0 |
| Full Professor | 23.9 | 6.0 | 29.2 | 8.7 | 32.8 | 9.8 | 22.6 | 6.7 | 28.3 | 9.2 | 32.3 | 10.1 |
| Associate | 34.0 | 22.6 | 38.9 | 28.5 | 39.9 | 31.7 | 34.5 | 23.4 | 40.1 | 27.3 | 41.1 | 32.6 |
| Assistant | 34.5 | 42.4 | 26.1 | 42.4 | 23.4 | 37.7 | 34.9 | 42.7 | 25.4 | 42.0 | 22.5 | 37.9 |
| Rank below Assistant[b] | 4.3 | 15.2 | 2.6 | 9.2 | 1.7 | 8.5 | 4.4 | 14.1 | 2.7 | 9.9 | 1.7 | 7.5 |
| Rank below Preceding[c] | 2.3 | 10.6 | 1.6 | 7.1 | 2.0 | 12.0 | 2.5 | 9.8 | 1.7 | 7.1 | 2.2 | 11.8 |
| Other[d] | 1.0 | 3.2 | 1.6 | 4.1 | .2 | .3 | 1.2 | 3.4 | 1.9 | 4.4 | .2 | .1 |

(a) Excludes 1) deans and directors whose responsibilities and salaries are equivalent to deans.
2) staff not paid according to regular salary scales.
3) staff on leave of absence.
4) visiting professors.

(b) Contains lecturers and teachers with comparable faculty status (e.g., instructors in some institutions).

(c) Includes teachers below the rank of lecturers or equivalent.

(d) Refers to ungraded staff.

Source: Statistics Canada. Post Secondary Education Section. Education, Science and Culture Division. Unpublished tabulations.

TABLE 11: Percent Female of Full Time Teaching Staff[a] at Universities and Colleges, by Region, Including and Excluding Medical and Dental Personnel, Canada 1972-1973, 1975-1976 and 1977-1978.

| Rank and Region | Including Medical and Dental | | | Excluding Medical and Dental | | |
|---|---|---|---|---|---|---|
| | 1972-1973 | 1975-1976 | 1977-1978 | 1972-1973 | 1975-1976 | 1977-1978 |
| **Canada** | | | | | | |
| Full | 3.5 | 4.0 | 4.4 | 3.8 | 4.0 | 4.4 |
| Associate | 8.9 | 10.0 | 11.2 | 9.1 | 10.0 | 11.2 |
| Assistant | 14.4 | 18.6 | 20.6 | 14.7 | 19.1 | 21.3 |
| Rank below Assistant[b] | 30.3 | 32.2 | 35.7 | 30.0 | 31.9 | 35.1 |
| Rank below Preceding[c] | 44.6 | 49.4 | 53.1 | 43.0 | 49.5 | 52.7 |
| Other[d] | 20.5 | 24.4 | 26.7 | 20.3 | 24.5 | 26.7 |
| **Atlantic Region** | | | | | | |
| Full | 4.0 | 3.5 | 3.7 | 4.7 | 3.9 | 4.3 |
| Associate | 8.7 | 9.5 | 10.6 | 9.4 | 9.8 | 10.3 |
| Assistant | 13.0 | 19.4 | 23.4 | 12.9 | 20.2 | 24.0 |
| Rank below Assistant[b] | 31.6 | 30.4 | 42.1 | 32.8 | 31.4 | 40.1 |
| Rank below Preceding[c] | 57.4 | 65.8 | 61.1 | 57.8 | 67.6 | 62.0 |
| Other[d] | (f) | (f) | — | (f) | (f) | — |
| **Quebec** | | | | | | |
| Full | 3.7 | 4.4 | 5.2 | 4.2 | 4.1 | 4.8 |
| Associate | 9.3 | 10.0 | 11.6 | 9.6 | 9.7 | 11.6 |
| Assistant | 14.7 | 18.1 | 19.6 | 15.1 | 18.0 | 19.6 |
| Rank below Assistant[b] | 27.9 | 33.4 | 33.8 | 26.9 | 30.7 | 32.3 |
| Rank below Preceding[c] | — | — | — | — | — | — |
| Other[d] | 13.5 | 15.2 | 20.3 | 13.0 | 14.8 | 20.1 |
| **Ontario** | | | | | | |
| Full | 3.3 | 3.6 | 3.9 | 3.2 | 3.3 | 3.8 |
| Associate | 8.5 | 9.8 | 11.0 | 8.5 | 9.8 | 10.8 |
| Assistant | 13.9 | 17.2 | 19.7 | 14.5 | 17.6 | 20.5 |
| Rank below Assistant[b] | 29.6 | 30.9 | 31.7 | 29.9 | 31.9 | 32.7 |
| Rank below Preceding[c] | 45.3 | 50.0 | 54.2 | 45.8 | 50.0 | 55.2 |
| Other[d] | 21.5 | 29.4 | 28.7 | 23.2 | 29.4 | 28.6 |
| **Western Region** | | | | | | |
| Full | 3.7 | 4.6 | 4.7 | 4.3 | 5.1 | 5.1 |
| Associate | 9.1 | 10.5 | 11.6 | 9.2 | 10.5 | 11.9 |
| Assistant | 17.1 | 20.6 | 21.0 | 15.5 | 21.5 | 22.4 |
| Rank below Assistant[b] | 34.6 | 35.9 | 44.7 | 32.4 | 35.6 | 42.4 |
| Rank below Preceding[c] | 41.3 | 42.1 | 50.2 | 37.4 | 41.2 | 48.4 |
| Other[d] | 31.8 | 28.5 | (*) | 30.2 | 28.0 | (*) |

(a) through (d): See Table 10.
(*) Total number of cases is less than 20. Percent not calculated.
(NA) Not available at this time.

Source: Statistics Canada. Post-Secondary Education Section. Education, Science and Culture Division. Unpublished tabulations.

These special tabulations, provided by Statistics Canada Post-secondary Education Section, are used to answer two sets of questions: First, what changes have occurred in the rank distributions of male and female faculty between 1972-1973 and 1977-1978; are women compared to men still concentrated in the lower ranks? Secondly, what changes have occurred in regard to salary differences between male and female full-time teachers, both in general and specific to each rank? Tables 10 and 11 address the first question, and Tables 12 to 14 the second.

Table 10 shows the continuation of sex differences in rank throughout the 1970s, despite a general trend in upgrading male and female rank distributions. The data for men and women for Canada and by region show that between 1972-1973 and 1977-1978 the percentage in the assistant and lecturer ranks declined and the percentage of associate and full professors increased. But the basic pattern of sex differences in rank distribution is not substantially modified during that time period. Male teachers continue to be well represented in the upper ranks and female faculty continue to be found predominantly in the lower ranks. For example, in 1977-1978, 28 percent of the male teaching staff in universities and colleges in Canada held the rank of full professor compared to less than 10 percent female faculty. Around one-quarter of the men and over one-third of the women held the rank of assistant professor, and less than 10 percent of the men and over one-fourth of the women full-time faculty were ranked below assistant professor (Table 10, panel one, columns 5 and 6, 11 and 12). The sex differences in rank vary somewhat by region, but overall the pattern of the sex differences in rank remains.

Of the non-medical and dental teaching staff in the Atlantic provinces, 4 percent of the women faculty are full professors compared to 21 percent of the males; similarly, 8 percent of the female faculty in Quebec, 7 percent in Ontario, and 10 percent in the Western region are full professors compared to 25.5, 30, and 32 percent of the male teachers in these respective regions. This pattern is reversed for men and women in the lower ranks. For all areas and years, a larger proportion of women are in the ranks of lecturer and below compared to men (Table 10).

The continued concentration of women in the lower ranks and their absence from higher ranks is also shown in Table 11 which presents for each rank and region the percentage of full-time teachers who are women. Again, there are differences among the provinces, but the pattern and trends are clear. The percentage of female full professors has changed very little between 1972-1973 and 1977-1978. In 1977-1978 data, less than 6 percent of the full professors are women; between 20 and 24 percent of the assistant professors are women (depending on the area and the exclusion or inclusion of medical and dental schools; and over 40 percent of the lowest graded rank (above others) are women.

In addition to sex differences in rank, male-female discrepancies in median salaries also persist into the late 1970s. Table 12 presents the median salaries for men and women employed as full-time teachers in Canadian universities and colleges. On the basis of data in Table 12, the percent male-female median salary ratio and the differences between median salaries of men and women are calculated and presented in Tables 13 and 14.

Table 12: Median Salaries of Full Time Teaching Staff at Canadian Universities and Colleges[a], Including and Excluding Medical and Dental Personnel, by Sex, Rank and Region, 1972-1973, 1975-1976, 1977-1978.

| Area and Rank[b] | Median Salary, Including Medical and Dental | | | | | | Median Salary, Excluding Medical and Dental | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1972-1973 | | 1975-1976 | | 1977-1978 | | 1972-1973 | | 1975-1976 | | 1977-1978 | |
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| **Canada** | | | | | | | | | | | | |
| Total | 16,452 | 13,178 | 23,150 | 18,975 | 28,049 | 22,888 | 16,000 | 13,119 | 22,681 | 18,784 | 27,665 | 22,742 |
| Full | 23,800 | 21,950 | 31,245 | 28,722 | 36,449 | 34,337 | 23,428 | 21,825 | 30,674 | 28,535 | 35,890 | 34,083 |
| Associate | 17,626 | 16,855 | 23,342 | 22,389 | 27,733 | 26,750 | 17,395 | 16,800 | 23,010 | 22,215 | 27,500 | 26,641 |
| Assistant | 14,000 | 13,300 | 18,834 | 18,121 | 22,137 | 21,386 | 13,800 | 13,244 | 18,500 | 18,000 | 21,874 | 21,274 |
| Rank Below Assistant[c] | 11,350 | 10,600 | 15,404 | 14,500 | 18,000 | 17,186 | 11,200 | 10,600 | 15,175 | 14,464 | 18,000 | 17,075 |
| Rank Below Preceding[d] | 10,000 | 9,300 | 14,497 | 13,500 | 17,000 | 16,838 | 9,900 | 9,350 | 14,425 | 13,390 | 17,007 | 16,817 |
| Other[e] | 13,500 | 12,825 | 21,830 | 18,594 | 28,842 | 24,613 | 13,183 | 12,525 | 22,307 | 19,045 | 28,842 | 24,613 |
| **Atlantic Provinces** | | | | | | | | | | | | |
| Total | 14,700 | 11,750 | 19,900 | 16,400 | 23,520 | 19,500 | 14,300 | 11,550 | 19,475 | 16,230 | 23,000 | 19,400 |
| Full | 21,750 | 20,000 | 28,100 | 26,591 | 31,800 | 29,000 | 21,338 | 20,000 | 27,663 | 26,591 | 30,709 | 29,000 |
| Associate | 16,900 | 15,989 | 21,495 | 20,547 | 24,200 | 23,650 | 16,700 | 15,796 | 21,000 | 20,451 | 23,999 | 23,365 |
| Assistant | 13,400 | 12,650 | 17,500 | 16,589 | 19,816 | 19,496 | 13,250 | 12,525 | 17,247 | 16,487 | 19,560 | 19,415 |
| Rank Below Assistant[c] | 11,000 | 10,200 | 14,400 | 13,300 | 16,000 | 15,300 | 10,900 | 10,200 | 14,075 | 13,300 | 15,860 | 15,107 |
| Rank Below Preceding[d] | 9,375 | 8,700 | 13,213 | 11,963 | 14,102 | 14,132 | 9,000 | 8,763 | 13,000 | 11,963 | 14,057 | 14,132 |
| Other[e] | X | X | 16,300* | X | — | — | X | X | 16,300* | X | — | — |
| **Quebec** | | | | | | | | | | | | |
| Total | 15,701 | 13,130 | 23,614 | 19,630 | 29,490 | 24,468 | 15,208 | 13,000 | 22,969 | 19,529 | 28,898 | 24,312 |
| Full | 22,391 | 21,400 | 31,330 | 29,338 | 36,534 | 35,226 | 22,000 | 21,370 | 30,706 | 29,364 | 36,008 | 34,857 |
| Associate | 17,130 | 16,430 | 24,720 | 24,125 | 29,915 | 28,898 | 16,859 | 16,200 | 24,280 | 23,759 | 29,618 | 28,898 |
| Assistant | 13,650 | 13,110 | 19,695 | 19,328 | 24,073 | 23,488 | 13,362 | 13,000 | 19,485 | 19,140 | 23,755 | 23,300 |
| Rank Below Assistant[c] | 10,937 | 10,333 | 16,499 | 15,420 | 20,027 | 18,774 | 10,930 | 10,413 | 16,280 | 15,427 | 20,027 | 18,741 |
| Rank Below Preceding[d] | — | — | — | — | — | — | — | — | — | — | — | — |
| Other[e] | 13,840 | 13,840 | 20,837 | 17,910 | 25,712 | 19,959 | 13,695 | 12,540 | 20,959 | 18,054 | 25,712 | 19,906 |
| **Ontario** | | | | | | | | | | | | |
| Total | 17,300 | 13,305 | 23,235 | 18,729 | 27,925 | 22,925 | 16,900 | 13,300 | 22,953 | 18,594 | 27,740 | 22,759 |
| Full | 24,760 | 22,785 | 31,393 | 28,399 | 36,982 | 34,128 | 24,431 | 22,333 | 31,017 | 28,391 | 36,615 | 33,500 |
| Associate | 18,152 | 17,000 | 22,895 | 21,729 | 27,149 | 26,442 | 17,904 | 17,000 | 22,571 | 21,653 | 26,989 | 26,168 |
| Assistant | 14,488 | 13,576 | 18,528 | 17,727 | 21,522 | 20,900 | 14,213 | 13,555 | 18,250 | 17,627 | 21,450 | 20,904 |
| Rank Below Assistant[c] | 11,950 | 11,055 | 15,275 | 14,500 | 17,707 | 16,646 | 11,672 | 11,050 | 15,067 | 14,473 | 17,755 | 16,646 |
| Rank Below Preceding[d] | 10,000 | 9,175 | 13,418 | 13,000 | 15,317 | 16,449 | 10,000 | 9,175 | 13,970 | 12,951 | 15,305 | 16,449 |
| Other[e] | 17,505 | 19,516* | 23,690 | 20,168 | 29,994 | 25,380 | 18,362 | 19,516* | 23,690 | 20,168 | 29,994 | 26,375 |
| **Western Provinces** | | | | | | | | | | | | |
| Total | 16,700 | 13,800 | 23,383 | 19,600 | 28,910 | 23,482 | 16,278 | 13,850 | 23,275 | 19,460 | 28,203 | 23,433 |
| Full | 24,252 | 22,100 | 31,841 | 29,025 | 36,382 | 34,573 | 23,824 | 22,127 | 31,118 | 29,025 | 36,101 | 34,750 |
| Associate | 17,600 | 17,400 | 23,464 | 22,585 | 27,854 | 27,012 | 17,390 | 17,400 | 23,216 | 22,500 | 27,633 | 26,756 |
| Assistant | 14,000 | 13,681 | 19,022 | 18,465 | 22,449 | 21,909 | 13,906 | 13,600 | 18,776 | 18,362 | 22,000 | 21,647 |
| Rank Below Assistant[c] | 11,000 | 10,500 | 14,842 | 14,292 | 17,461 | 17,302 | 11,000 | 10,500 | 14,725 | 14,196 | 17,432 | 17,394 |
| Rank Below Preceding[d] | 10,166 | 10,075 | 15,700 | 15,000 | 18,683 | 17,495 | 10,010 | 10,188 | 15,450 | 15,150 | 18,480 | 17,334 |
| Other[e] | 12,000 | 11,700 | 14,925 | 14,880 | 14,640* | X | 12,000 | 11,300 | 14,925 | 14,940 | 14,640* | X |

(a) Schools included may vary slightly from year to year. See Appendix I for list.
(b) Except for the total category where deans and directors are included; all ranks exclude the following:
1) deans and directors whose responsibilities and salaries are equivalent to deans;
2) staff not paid according to regular salary scales;
3) staff on leave of absence;
4) visiting professors.
(c) Contains lecturers and teachers with comparable faculty status (eg. instructors in some institutions).
(d) Includes teachers below the rank of lecturer or equivalent.
(e) Refers to ungraded staff.

(X) Fewer than 10 cases. Median salary not calculated according to Statistics Canada guidelines.
(*) Fewer than 20 cases.

Source: Statistics Canada. Post Secondary Education Section. Education, Science and Culture Division. Unpublished tabulations.

Inspection of Table 13 shows that in 1977-1978, male full-time teachers continue to have median salaries which are approximately 22 percent higher than those of their female colleagues. This situation exists for all regions, with some slight variation in the magnitude. Excluding teachers in medical and dental schools, the median salary of male teachers in the Atlantic region and Quebec is 19 percent higher in 1977-1978 than that of female teachers. The median salary of males in Ontario is 22 percent higher than the salaries received by females. In the Western provinces, the ratio of male to female median salaries actually increases during the six-year period from 17.5 percent to 20 percent. The ratio also rose in Quebec during that period (Table 13, columns 4 and 6).

Not only do males continue to have substantially higher median salaries than females, but in addition the actual size of the median gap increases over time. In 1972-1973, the median salary of male teachers, including medical and dental schools, was $3,274 more than the median salary for female teachers, but in 1977-1978 the excess was $5,161 (Table 14). For faculty excluding medical and dental schools, the median salaries of male teachers exceeded those of female faculty by $2,881 in 1972-1973 and by $4,923 in 1977-1978. Sex differentials in salary are lowest in the Atlantic region, with a salary gap of $3,600 in 1977-1978 (medical and dental schools excluded), and highest in Ontario, with a 1977-1978 differential of $4,981 (Table 14).

To be sure, the size of the male-female salary discrepancy in academia is very greatly influenced by the continued concentration of men in the higher ranks and women in the lower ranks. Sex differences in median salaries are far less dramatic when median salaries of men and women with the same rank are compared. Although variations exist between provinces, the male-female salary differential within each rank has for the most part decreased during the six years under investigation. By 1977-1978, the relative salary advantage of males in the assistant ranks was small, with male median salaries ranging between 1.6 and 3.7 percent higher than the salaries of identically ranked female teachers, depending on the population and region studied (Table 13). However, male-female salary discrepancies continue to be larger at the rank of full professor or below the rank of assistant, although the magnitude of the differential varies by province.[7]

A. Summary

The data presented in Tables 10 through 14 do not suggest a dramatic or even substantial alteration in the position of female academics compared to their male colleagues since the early 1970s. Despite some shifts in the rank distributions for both men and women over time, by 1977-1978 women still

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[7]The reader is cautioned against relying heavily on the Ontario data for the "other" rank category in Tables 10 to 14. Starting in 1974-1975, Ryerson Polytechnical Institute began reporting to Statistics Canada, and all of its faculty were listed as "other" rank. In 1977-1978, 82 percent of the 782 Ontario faculty in the other category were Ryerson faculty. Faculty at the Ontario Teacher Education College are also unranked (see Appendix I).

TABLE 13: Percent Ratio of Male/Female Median Salary for Full Time Teaching Staff at Canadian Universities and Colleges, Including and Excluding Medical and Dental Personnel by Rank and Region, 1972-1973, 1975-1976 and 1977-1978.

| Area and Rank[a] | Percent Ratio Male/Female Median Salary | | | | | |
|---|---|---|---|---|---|---|
| | Including Medical and Dental | | | Excluding Medical and Dental | | |
| | 1972-1973 | 1975-1976 | 1977-1978 | 1972-1973 | 1975-1976 | 1977-1978 |
| **Canada** | | | | | | |
| Total | 24.8 | 22.0 | 22.5 | 22.0 | 20.7 | 21.6 |
| Full | 8.4 | 8.9 | 6.2 | 7.3 | 7.5 | 5.3 |
| Associate | 4.6 | 4.3 | 3.7 | 3.5 | 3.6 | 3.2 |
| Assistant | 5.3 | 3.9 | 3.5 | 4.2 | 2.8 | 2.8 |
| Rank below Assistant[c] | 7.1 | 6.2 | 4.7 | 5.7 | 4.9 | 5.4 |
| Rank below Preceding[d] | 7.5 | 7.4 | 1.0 | 5.9 | 7.7 | 1.1 |
| Other[e] | 5.3 | 17.4 | 17.2 | 5.3 | 17.1 | 17.2 |
| **Atlantic Provinces** | | | | | | |
| Total | 25.1 | 21.3 | 20.6 | 23.8 | 20.0 | 18.6 |
| Full | 8.8 | 5.7 | 9.7 | 6.7 | 4.0 | 5.9 |
| Associate | 5.7 | 4.6 | 2.3 | 5.7 | 2.7 | 2.7 |
| Assistant | 5.9 | 5.5 | 1.6 | 5.8 | 4.6 | .7 |
| Rank below Assistant[c] | 7.8 | 8.3 | 4.6 | 6.9 | 5.8 | 5.0 |
| Rank below Preceding[d] | 7.8 | 10.4 | - .2 | 2.7 | 8.7 | - .5 |
| Other[e] | X | X | — | X | X | — |
| **Quebec** | | | | | | |
| Total | 19.6 | 20.3 | 20.5 | 17.0 | 17.6 | 18.9 |
| Full | 4.6 | 6.8 | 3.7 | 2.9 | 4.6 | 3.3 |
| Associate | 4.3 | 2.5 | 3.5 | 4.1 | 3.0 | 2.5 |
| Assistant | 4.1 | 1.9 | 2.5 | 2.7 | 1.8 | 2.0 |
| Rank below Assistant[c] | 5.8 | 7.0 | 6.7 | 5.9 | 5.5 | 6.9 |
| Rank below Preceding[d] | — | — | — | — | — | — |
| Other[e] | 0.0 | | 28.8 | 9.2 | 16.1 | 29.2 |
| **Ontario** | | | | | | |
| Total | 30.0 | 24.1 | 21.8 | 27.1 | 23.4 | 21.9 |
| Full | 8.7 | 10.5 | 8.4 | 9.4 | 9.2 | 9.3 |
| Associate | 6.8 | 5.4 | 2.7 | 5.3 | 4.2 | 3.1 |
| Assistant | 6.7 | 4.5 | 3.0 | 4.9 | 3.5 | 2.6 |
| Rank below Assistant[c] | 8.1 | 5.3 | 6.4 | 5.6 | 4.1 | 6.7 |
| Rank below Preceding[d] | 9.0 | 3.2 | - 6.9 | 9.0 | 7.9 | - 7.0 |
| Other[e] | -10.4* | 17.5 | 17.3 | -5.9* | 17.5 | 13.7 |
| **Western Provinces** | | | | | | |
| Total | 21.0 | 21.9 | 23.1 | 17.5 | 19.6 | 20.4 |
| Full | 9.7 | 9.7 | 6.7 | 7.7 | 7.2 | 3.9 |
| Associate | 1.1 | 3.9 | 3.0 | 0.0 | 3.2 | 3.3 |
| Assistant | 2.3 | 3.0 | 2.9 | 2.2 | 2.3 | 1.6 |
| Rank below Assistant[c] | 4.8 | 3.8 | .9 | 4.8 | 3.7 | .2 |
| Rank below Preceding[d] | .9 | 4.7 | 6.8 | -1.7 | 2.0 | 6.6 |
| Other[e] | 2.6 | .3 | X | 6.2 | 0.0 | X |

(a) through (e): See Table 12.

(X) Fewer than 10 cases. Median salary not calculated according to Statistics Canada guidelines.
(*) Fewer than 20 cases.

Source: Statistics Canada. Post Secondary Education Section. Education, Science and Culture Division. Unpublished tabulations.

TABLE 14: Difference in Male/Female Median Salaries for Full Time Teaching Staff at Canadian Universities and Colleges, Including and Excluding Medical and Dental Personnel by Rank and Region, 1972-1973, 1975-1976 and 1977-1978.

| Area and Region | Difference, (Male-Female) Median Salaries | | | | | |
|---|---|---|---|---|---|---|
| | Including Medical and Dental | | | Excluding Medical and Dental | | |
| | 1972-1973 | 1975-1976 | 1977-1978 | 1972-1973 | 1975-1976 | 1977-1978 |
| **Canada** | | | | | | |
| Total | 3,274 | 4,175 | 5,161 | 2,881 | 3,897 | 4,923 |
| Full | 1,850 | 2,523 | 2,112 | 1,603 | 2,139 | 1,807 |
| Associate | 771 | 953 | 983 | 595 | 795 | 859 |
| Assistant | 700 | 713 | 751 | 556 | 500 | 600 |
| Rank below Assistant(c) | 750 | 904 | 814 | 600 | 711 | 925 |
| Rank below Preceding(d) | 700 | 997 | 162 | 550 | 1,035 | 190 |
| Other(e) | 675 | 3,236 | 4,229 | 658 | 3,262 | 4,229 |
| **Atlantic Provinces** | | | | | | |
| Total | 2,950 | 3,500 | 4,020 | 2,750 | 3,245 | 3,600 |
| Full | 1,750 | 1,509 | 2,800 | 1,338 | 1,072 | 1,709 |
| Associate | 911 | 948 | 550 | 904 | 549 | 634 |
| Assistant | 750 | 911 | 320 | 725 | 760 | 145 |
| Rank below Assistant(c) | 800 | 1,100 | 700 | 700 | 775 | 753 |
| Rank below Preceding(d) | 675 | 1,250 | - 30 | 237 | 1,037 | - 75 |
| Other(e) | X | X | — | X | X | — |
| **Quebec** | | | | | | |
| Total | 2,571 | 3,984 | 5,022 | 2,208 | 3,167 | 4,586 |
| Full | 991 | 1,992 | 1,308 | 630 | 1,342 | 1,151 |
| Associate | 700 | 595 | 1,017 | 659 | 521 | 720 |
| Assistant | 540 | 367 | 585 | 362 | 345 | 455 |
| Rank below Assistant(c) | 604 | 1,079 | 1,253 | 517 | 853 | 1,286 |
| Rank below Preceding(d) | — | — | | — | — | — |
| Other(e) | 0 | 2,927 | 5,753 | 1,155 | 2,905 | 5,806 |
| **Ontario** | | | | | | |
| Total | 3,995 | 4,506 | 5,000 | 3,600 | 4,359 | 4,981 |
| Full | 1,975 | 2,994 | 2,854 | 2,098 | 2,626 | 3,115 |
| Associate | 1,152 | 1,166 | 707 | 904 | 918 | 821 |
| Assistant | 912 | 801 | 622 | 658 | 623 | 545 |
| Rank below Assistant(c) | 895 | 775 | 1,061 | 622 | 594 | 1,109 |
| Rank below Preceding(d) | 825 | 418 | -1,132 | 825 | 1,019 | -1,144 |
| Other(e) | -2,011* | 3,522 | 4,414 | -1,154* | 3,522 | 3,619 |
| **Western Provinces** | | | | | | |
| Total | 2,900 | 4,283 | 5,428 | 2,428 | 3,815 | 4,770 |
| Full | 2,152 | 2,816 | 2,309 | 1,697 | 2,093 | 1,351 |
| Associate | 200 | 879 | 822 | - 10 | 716 | 879 |
| Assistant | 319 | 557 | 640 | 306 | 414 | 353 |
| Rank below Assistant(c) | 500 | 550 | 159 | 500 | 527 | 38 |
| Rank below Preceding(d) | 91 | 700 | 1,188 | - 178 | 300 | 1,146 |
| Other(e) | 300 | 45 | X | 700 | - 15 | X |

(a) through (e): See Table 12.

(X) Fewer than 10 cases. Median salary not calculated according to Statistics Canada guidelines.
(*) Fewer than 20 cases.

Source: Statistics Canada. Post Secondary Education Section. Education, Science and Culture Division. Unpublished tabulations.

remained concentrated in the junior ranks and conspicuously absent from the senior rank of full professor. In contrast, male academics are still far more likely to hold associate or full professorships. Since salary scales are tied to rank, the persistence of these sex differences in rank in turn contributes to the stability of salary differentials between male and female university teachers throughout the 1970s. In 1972-1973, the median salary of male faculty at Canadian universities and colleges was 25 percent higher than the median salary received by female faculty (Table 13, column 1). During the next six years, the differential declined to 22 percent. Further, the actual median salary gap -- or the cost borne by women for such male-female salary differentials -- actually increased during the 1970s, and by 1977-1978 the median salary of male faculty in Canada was roughly $5,000 more than the median salary of female faculty (Table 14).

Such sex differences in median salaries substantially diminish when sex differences in rank are taken into account. Indeed, analyses presented in this and previous sections indicate that the sex difference in rank is an important source of the large overall salary differentials between male and female academicians. Irrespective of the role which additional objective and subjective factors may play in affecting male and female salaries, male-female salary discrepancies now and in the future will diminish only to the extent that sex differences in rank diminish as well.

## V. Conclusion

Throughout the 1970s and culminating with International Women's Year in 1975, interest in the status of female faculty surfaced again and again as universities and colleges observed substantial sex differences in the characteristics and salaries of full-time faculty. The results of university investigations into these sex differences are remarkably consistent. Compared to their male colleagues, female academicians are numerically and proportionately a small population, representing 14 percent of the full-time teaching staff in Canada. Women are concentrated in the lower ranks and are paid less than men. In some universities these disparities can be explained by sex differences in other characteristics such as type of degree, recency of appointment, and field of study. A substantial portion of the salary inequities of male and female teachers is caused by the concentration of women in the lower ranks where, ceteris paribus, salaries are lower than in the upper ranks. But even so, sex differentials in salary exist which cannot always be explained by sex differences in rank, age, highest degree earned, years in rank, and a variety of other factors known to influence pay scales. In some instances the persistence of these salary differentials can be attributed to sex discrimination by which women are systematically paid less than men.

The increased attention paid by university administrators and special committees to the documentation and removal of male-female inequalities minimally suggests that the 1970s was a time of change and progress in the status of female academicians. Is this indeed the case? Have female faculty increased or decreased their share of academic positions over time? Do rank differentials between male and female teachers persist or narrow during the 1970s? Do men and women become more similar with respect to other characteristics? Do salary differentials narrow? Why or why not? What evidence is there for the persistence of salary differentials by sex irrespective of male-female differences in rank, highest degree, years since award of degree, and age? These are the questions raised in this report.

Published and unpublished data from Statistics Canada on full-time teachers in universities and colleges are used to answer these questions. An analysis of 1972-1973 and 1975-1976 data, with a limited update to 1977-1978, reveals that the social concern during the early to mid-1970s over the status of female academicians has not been accompanied by a substantial change in the location of women within the university system and/or by much eradication in male-female differences with respect to rank, salary, and other characteristics. By the mid-1970s women are still very much a minority on academic teaching staff, constituting only 14 percent of the full-time teachers. Compared to men, by 1975-1976 female faculty are still concentrated

in the lower ranks, still disproportionately have master's degrees as the highest earned degree, and have received their last highest earned degree more recently. Relative to their overall representation on university academic staff, women are underrepresented in certain fields such as engineering and mathematics, physical sciences, and the social sciences. They are concentrated in the fields of education, fine arts, and the health professions and occupations, where they are found primarily in nursing.

Sizeable salary differences between men and women also remain over the 1970s. Unpublished data appearing in Tables 12 to 14 show that in 1972-1973 the median salary of male faculty was 25 percent higher than the median salary received by full-time female teachers; in 1975-1976 and in 1977-1978, the male median salary was approximately 22 percent higher. Furthermore, because salary levels have increased during the 1970s, the dollar amount of the discrepancies between male and female teachers has increased from approximately $3,250 in 1972-1973 to about $4,200 in 1975-1976 to roughly $5,000 in 1977-1978 (Tables 6 and 14).

Direct standardization shows that over two-thirds of this sex differential in median salaries for 1972-1973 and 1975-1976 reflects differences between men and women with respect to rank. But sex differences in rank by no means account for all of the income discrepancies between male and female full-time teachers either in 1972-1973 or 1975-1976. For the most part male teachers receive higher median salaries compared to women even when the rank of the sexes is the same. Sex differences in salary also persist when men and women of similar highest earned degree, field, age or recency of receipt of degree are compared. There is little change in the relative magnitude of these sex differentials in salary by rank and type of degree between 1972-1973 and 1975-1976, and only a moderate decline in sex differentials in salary by age, recency of degree, and field over the four-year period.

Overall, the profile of female university and college teachers in relation to that of men remains unchanged during the 1970s. To be sure, salaries and rank improve over time for both men and women. But the sex differences continue to exist whereby women earn less than men, are found in the lower ranks, have lower educational certification, and are absent from the physical and applied sciences. In conjunction with the similar results of the early Robson and Lapointe (1971) and Adam (1971) reports which analyzed mid- and late-1960s data, the relative stability of this profile indicates that the recent attention paid to the status of female faculty has not had an impact sufficient to alter the position of female academics in Canadian universities and colleges.

# APPENDIX I

## Statistics Canada Data

The data presented and analyzed in this report are provided by Statistics Canada, Post-secondary Education Section, Education, Science and Culture Division. The data all pertain to full-time teaching staff for whom salary data are given and who are in Canadian universities and colleges which are considered to be publicly recognized degree-granting institutions. The schools represented in this data set are presented in Chart A for the years 1972-1973, 1975-1976, and 1977-1978. This list was derived by the author based on information provided in Catalogue 81-241 (Teachers in Universities. Part I. Salaries General. 1972-1973 to 1974-1975) or supplied by the Statistics Canada Post-secondary Education Section. The number of schools is not constant over the years in question. The general trend has been for an increase in the number of schools reporting to Statistics Canada. In this regard, the reader should be aware that 1974-1975 was the first year for which Ryerson Polytechnical Institute submitted data to Statistics Canada. This would not be more noteworthy than the inclusion of any other school between 1972-1973 and 1975-1976 were it not for the fact that all the staff at this institution are classified in the "other" rank category. This procedure probably has little overall impact on data for all of Canada; but it underlies the substantial upswing after 1972-1973 in the percentage of Ontario faculty who are in the "other" rank category. In 1977-1978, for example, 645 faculty out of 782 in the "other" category were from Ryerson.

Data for 1972-1973 and 1975-1976 which appear in Tables 1 to 9 are taken from two Statistics Canada publications (Statistics Canada. Education, Science and Culture Division. Post-secondary Education Section. Teachers in Universities. Part I and Part II, 1972-1973 to 1974-1975. Catalogues 81-241 and 81-242) and from unpublished tabulations which have since appeared in a 1975-1976 update of the earlier reports (Statistics Canada. Teachers in Universities 1975-1976. Catalogue 81-241). In addition to the increased number of reporting institutions over the period, there are slight changes in the population considered. In 1972-1973, the data exclude all teachers who were reported as being on either sabbatical leave or leave without pay. In 1975-1976, only those teachers who were reported as being on leave without pay were omitted. Again, the data used refer only to those persons for whom salary data are published. Statistics Canada excluded from their tabulations those staff who were not paid on a regular salary scale, such as the "coopérants militaires" and some teachers in denominational institutions. As described by the above Statistics Canada publication (Catalogue 81-241, page 8), salary data have the following characteristics:

> "The basis for all salary figures . . . is the annual rate of salary as of October 1 of the academic year reported by the responding institutions. It includes additional payments for administrative functions and other types of honoraria but excludes fringe benefits, overtime pay, compensation for additional courses, etc. The salaries of individuals who are employed on a full-time basis for a period of less than 12 months have been adjusted to an annual rate of pay.
>
> Median salaries were determined using salaries rounded to the nearest $50. The median salary was not calculated if the number of persons in the distribution was less than ten."

Data appearing in Tables 10 to 14 very slightly in population coverage and procedures from the above. Persons are excluded if they are: 1) deans and directors with equivalent responsibilities and salaries; 2) staff not paid according to regular salary scales (e.g., coopérants militaires and some teachers in denominational institutions); 3) staff on leave of absence; and 4) visiting professors (normally included in the "other" rank category). However, notwithstanding these criteria of exclusion, deans and directors equivalent to deans are included in the total salary figures -- but not in those presented by rank. For all ranks and totals, data include assistant and associate deans, vice-deans, directors not equivalent to deans, department heads, and chairmen. Median salaries are calculated without rounding to the nearest $50; but they are not calculated if the number of persons is less than ten.

APPENDIX I

Chart A

List of Reporting Institutions

| Institution | 1972-1973 | 1975-1976 | 1977-1978 |
|---|---|---|---|
| **Atlantic Provinces** | | | |
| Memorial University of Newfoundland | * | * | * |
| University of Prince Edward Island | * | * | * |
| Acadia University | * | * | * |
| Acadia Divinity College | * | * | * |
| Atlantic School of Theology | * | * | * |
| College Sainte-Anne | * | * | * |
| Dalhousie University | * | * | * |
| University of King's College | * | * | * |
| Mount Saint Vincent University | * | * | * |
| Nova Scotia College of Art and Design | * | * | * |
| Nova Scotia Technical College | * | * | * |
| St. Francis Xavier University | * | * | * |
| St. Mary's University | * | * | * |
| College of Cape Breton(1) | — | * | * |
| Mount Allison University | * | * | * |
| University of New Brunswick | * | * | * |
| Universite de Moncton | * | * | * |
| College de Bathurst | * | * | N/R |
| College Jesus-Marie | * | N/R | N/R |
| College Saint-Louis/Maillet | * | * | N/R |
| St. Thomas University | * | * | * |
| **Quebec** | | | |
| Bishop's University | * | * | * |
| McGill University | * | * | * |
| Montreal Diocesan Theological College | * | * | N/R |
| Presbyterian College of Montreal | * | N/R | N/R |
| United Theological College | N/R | N/R | N/R |
| Concordia University(2) | — | * | * |
| Sir George Williams University | * | * | * |
| Loyola College | * | * | * |
| Universite de Montreal | * | * | * |
| Ecole Polytechnique | * | * | * |
| Ecole des Hautes Etudes Commerciales | * | * | * |
| Universite du Quebec | * | * | * |
| Universite Laval | * | * | * |
| Universite de Sherbrooke | * | * | * |
| College Militaire Royal de St-Jean(3) | * | * | * |
| **Ontario** | | | |
| Brock University | * | * | * |
| Carleton University | * | * | * |
| University of Guelph | * | * | * |
| Lakehead University | * | * | * |

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| Institutions | 1972-1973 | 1975-1976 | 1977-1978 |
|---|---|---|---|
| Laurentian University/Universite Laurentienne | * | * | * |
| Algoma College | * | N/R | * |
| Nipissing College | * | * | * |
| College de Hearst | * | * | * |
| McMaster University | * | * | * |
| McMaster Divinity College | * | * | * |
| Universite d'Ottawa/University of Ottawa | * | * | * |
| Queen's University | * | * | * |
| Queen's Theological College | * | * | * |
| University of Toronto | * | * | * |
| St. Michael's College | * | * | * |
| Trinity College | * | * | * |
| Victoria University | * | * | * |
| Knox College | * | * | * |
| Wycliffe College | * | * | * |
| Ontario Institute for Studies in Education | * | * | * |
| Trent University | * | * | * |
| University of Waterloo | * | * | * |
| St. Jerome's College | * | * | * |
| Conrad Grebel College | N/S | * | * |
| Renison College | N/S | * | * |
| St. Paul's College | N/S | * | * |
| University of Western Ontario | * | * | * |
| Brescia College | * | * | * |
| Huron College | * | * | * |
| King's College | * | * | * |
| University of Windsor | * | * | * |
| York University | * | * | * |
| Regis College(4) | * | * | * |
| Wilfrid Laurier University(5) | * | * | * |
| Royal Military College | * | * | * |
| College dominicain de philosophie et theologie | * | * | * |
| Ontario Bible College | * | * | * |
| Ryerson Polytechnical Institute | N/S | * | * |
| Universite Saint-Paul (6) | * | * | * |
| St. Augustine's College (6) | * | * | * |
| Ontario Teacher Education College | * | * | * |
| **Western Provinces** | | | |
| Brandon University | * | * | * |
| University of Manitoba | * | * | * |
| College Saint-Boniface | N/R | N/R | N/R |
| St. Andrew's College | N/R | N/R | N/R |
| Canadian Nazarene College | * | * | * |
| Canadian Mennonite Bible College | * | * | * |
| University of Winnipeg | * | * | * |
| Mennonite Brethern College of Arts | * | * | * |
| University of Saskatchewan | * | * | * |
| College of Emmanuel and St. Chad | * | * | * |
| Lutheran Theological Seminary | * | * | * |
| St. Andrew's College | * | * | * |
| St. Thomas More College | * | * | * |

| Institution | 1972-1973 | 1975-1976 | 1977-1978 |
|---|---|---|---|
| University of Regina | — | * | * |
| Campion College | N/R | * | * |
| Luther College | * | * | * |
| Canadian Bible College | N/R | * | N/R |
| Notre Dame College of Canada | * | * | * |
| University of Alberta | * | * | * |
| Canadian Union College | N/R | * | * |
| University of Calgary | * | * | * |
| University of Lethbridge | * | * | * |
| Newman Theological College | * | * | * |
| University of British Columbia | * | * | * |
| Vancouver School of Theology | * | * | * |
| Notre Dame University of Nelson | * | * | N/R |
| Northwest Baptist Theological College | * | N/R | * |
| Royal Roads Military College(3) | * | * | * |
| Seminary of Christ the King | * | * | * |
| Simon Fraser University | * | * | * |
| University of Victoria | * | * | * |

(1) College of Cape Breton was founded in 1974 from Xavier College and the Nova Scotia Eastern Institute of Technology.
(2) Concordia was formed in 1974-75 from Sir George Williams University and Loyola College.
(3) Affiliated with Royal Military College.
(4) Affiliated with St. Mary's University, Halifax.
(5) Formerly Waterloo Lutheran University until November, 1973.
(6) Affiliated with University of Ottawa.
* Reported.
— Did not exist.
N/R Not reported.
N/S Not surveyed.

APPENDIX II

## Analytic Techniques: Index of Dissimilarity, Direct Stantardization, and Percent Male-Female Ratio

### The Index of Dissimilarity

The index of dissimilarity is a summary statistic used to measure the difference, or the dissimilarity, between two percentage distributions. It is one of the measures based on family of Lorenz curves (see Duncan and Duncan, 1955), and it is calculated from the formula: $D = \frac{1}{2}\sum_{i}(X_i - Y_i)$ where X is the percentage distribution of one population, Y is the percentage distribution of the second, and i refers to the categories of the variables in question (e.g., rank, highest earned degree or field). The index of dissimilarity ranges in value from zero, indicating no dissimilarity between two percentage distributions to 100, indicating maximum dissimilarity. The index is sensitive to the number of categories used, generally becoming larger with increasing categories. For that reason, comparisons of indices where the number of categories change are not valid.

Although it does not have an interpretation grounded in inferential statistics (see Cortese, Falk, and Cohen, 1976), the index is used to indicate the percentage of one population that would have to shift categories of a given variable for the distribution to be similar to that of a second population with which comparisons are being made. For example, in Table 2, an index of 30 is calculated from the comparison of the rank distributions of male and female faculty in 1975-1976. This index indicates that 30 percent of the female faculty would have to change their rank for their rank distribution to be identical to that of male faculty. Since the index is not unidirectional, the reverse interpretation can be given as well -- notably that 30 percent of the male faculty in 1975-1976 would have to change their rank for the male rank distribution to be identical to that of female academicians. The wording of the interpretation depends on the population selected as the basis of comparison.

### Direct Standardization

Standardization is a method which compares two or more populations with respect to a particular phenomenon after controlling for differences in population composition which might confound such a comparison. It is used extensively in demography where the interest is often on comparing birth or death rates between two countries or between regions of a country. Because a

crude (or overall) birth or death rate is a weighted sum of age-specific birth or death rates, a crude birth or death rate for a given population will be determined not only by the actual birth or death behaviour of a population but also by its age composition. Thus, two populations may have different crude birth or death rates not because they differ in terms of natality or mortality, but because they have different age structures. If the central interest is on the comparison of the reproductive or mortality characteristics of given populations, it is imperative to remove, or control for, the differences in age structure. This is most easily accomplished by allowing each population to keep its own age-specific birth or death rates and recalculating what the crude birth or death rates would be if all the populations had the same age structure. Mathematically, this is equivalent to multiplying each age-specific rate by an assigned distribution of weights, representing the standard age structure chosen, and then summing the products to obtain a crude overall rate.

Because it involves multiplying a series of values by an assigned distribution of weights, this procedure is not limited to birth rates, death rates, and age composition. In this report, the standardization technique is used to show what the salary of men and women would be if they had the same rank, highest degree, field, age, and years since highest degree composition. Again the logic of calculation is relatively straightforward. Each population is assigned the median salary observed for each category of a given variable, for example, rank. However, because the intent is to remove, or control for, the differences between the two populations with respect to rank composition, a standard distribution of weights which remains the same for both male and female populations is applied to the rank-specific salaries, and a new median salary is calculated from summing the derived products.

The formula for direct standardization of rates is:

$$\text{Standardized rate} = \sum(P_i \times c_i)$$

where Pi is the proportion of persons in the ith category of trait I of the population chosen as a standard and $c_i$ is the specific rate for persons in the ith category of trait I in the given population (see Kitagawa, 1964: 298). Normally when medians are used instead of rates, a modified formula for percent distributions should be used to recalculate the distribution of the variable from which the median is derived (see Kitagawa, 1964: 312). Then a new median is calculated from this standardized distribution. However, because the raw data on salary distributions are not available, this recalculation of the standardized salary distributions is not possible, and the formula for rates, in which the medians are considered to be rates, is used. As will be discussed below, this introduces some error into the computations.

As an example of the application of this procedure, consider the data in Table A for rank distributions and for salary by rank (columns 1 to 4) for 1975-1976. The data show that men are paid more than women faculty, but also that men are more likely to be in the higher ranks. Thus the question arises as to whether or not, and to what extent, the overall crude salary differentials between men and women reflect the differences in rank composition. In order to answer this question, it is useful to calculate what

the salaries of women and men would be if they had exactly the same rank composition. This means that a given rank distribution must be chosen, and applied as weights to each of the ranks for which salary information is given (columns 3 and 4). In this case, the observed rank distribution of men is chosen as the standard, and the weights are applied to the rank-specific median income of women (column 6 = column (1) X column 4). Summing the products in column 6 gives the salary which female academicians would receive if they had their own rank-specific salaries, but the rank distribution of males.

Earlier it was mentioned that the inability to recalculate medians from a standardized salary distribution results in some error. Table A shows the extent of this error. Normally multiplying the male rank distribution in the column 1 by column 3 should produce for males a median salary of $23,000, and similarly for females, multiplying column 2 by column 4 should produce an observed salary of $18,800. This property exists by definition in the formula for direct standardization; it simply indicates that a crude rate is the composite of category-specific rates weighted by the distribution of the population over all categories. However, we see from column 5 for males that multiplying the rank-specific median salaries by the proportion of males in each rank results in a salary of $23,596.6, not $23,000. Likewise, multiplying column 2 and 4 results in a salary of $19,023.0, not $18,800 as presented in Table A. This error exists because of the rounding procedures used by Statistics Canada (see Appendix I) and the unavailability of raw data. In relation to the median salaries produced by Statistics Canada, the error is not very large. For males a discrepancy of $596.60 results in a 2.6 percent error; for females a discrepancy of $223 produces an error of 1.2 percent. Table B presents the range of error for median salaries calculated from other characteristics.

Data presented in Table B also are used to determine the extent to which sex differences in composition underlie the observed sex differentials in median salary. For example, Table B shows that in 1972-1973, the median salary of male teachers was $17,222.20 and that of female faculty was $13,559.60, producing a gap of $3,862.60 to the advantage of males. Column 1 of Table B indicates that if female full-time faculty has the same rank distribution as men, but their own within rank median salaries, the female median salary would be $16,073.20, or $2,513.16 higher than it is calculated to be in column 3. This $2,513.16 can be interpreted in several ways. It represents the cost to women of having a rank distribution which is dissimilar from that of men. Thus, when divided by the actual salary gap between men and women, it indicates the portion of the sex differences in salary which are due to sex differences in rank. That is, if $2,513.16 is divided by $3,662.60 and the dividend multiplied by 100, a figure of 69 is obtained. Keeping in mind the error involved in the calculations, this figure indicates that approximately 69 percent of the salary gap between male and female academicians reflects different rank distributions. To state the matter somewhat differently, if men and women had the same percentage distributions across rank, the differences in median salaries in 1972-1973 would be reduced by over two-thirds. Data in Table 5 in the text is based on such calculations.

Percent Male-Female Ratio

This measure relates the median salary of male full-time teachers to that of female faculty by use of the following formula: $\frac{S_m - S_f}{S_f} \times 100$, where $S_m$ is the median salary of males and $S_f$ is the median salary of females. The measure thus indicates how much higher, in percentage points, the male median salary is compared to the female median salary.

APPENDIX II

TABLE A: Standardization of Salaries for Differences in Rank, Male and Female Full Time Teachers in Canadian Universities and Colleges, 1975/1976.

| Rank | Rank Distributions[a] | | Median Salary | | Products of | |
|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | col 1 x col 3 | col 1 x col 4 |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Total | 1.001 | 1.000 | 23,000 | 18,800 | | |
| Full | .264 | .070 | 31,450 | 29,050 | 8302.8 | 7669.2 |
| Associate | .346 | .237 | 23,350 | 22,400 | 8079.1 | 7750.4 |
| Assistant | .271 | .381 | 18,850 | 18,150 | 5108.4 | 4918.6 |
| One Rank Below Assistant | .052 | .151 | 15,400 | 14,500 | 800.8 | 754.0 |
| Other | .068 | .161 | 19,200 | 16,000 | 1305.6 | 1088.0 |
| Calculated Salary | | | | | 23,596.6 | 22,180.2 |

(a) Expressed as proportions.

Source: Tables 2 and 6.

APPENDIX II

TABLE B: Standardized Female Median Salary[a], and Error in Recalculated Male and Female Median Salaries for Full Time Teachers in Canadian Universities and Colleges, 1972-1973 and 1975-1976.

| Year and Characteristic | Standardized Female Median Salary[a] | Recalculated Median Salary[b] | | Percent Error Relative to Statistics Canada Median Salary[c] | |
|---|---|---|---|---|---|
| | | Male | Female | Male | Female |
| 1972-1973 | | | | | |
| Rank | 16,073.20 | 17,222.20 | 13,559.60 | [illegible] | 3.1 |
| Highest Earned Degree | 14,123.70 | 16,442.28 | 13,195.08 | .3 | .3 |
| Field | 13,116.50 | 16,505.98 | 13,224.62 | 6.5 | .6 |
| Age[d] | 13,623.65 | 17,204.80 | 13,577.85 | 4.9 | 3.3 |
| Years Since Highest Earned Degree[e] | 13,796.82 | 17,235.45 | 13,589.68 | 5.1 | 3.3 |
| 1975-1976 | | | | | |
| Rank | 22,180.25 | 23,596.65 | 19,022.95 | 2.6 | 1.2 |
| Highest Earned Degree | 19,821.15 | 23,033.10 | 18,684.75 | .1 | - .6 |
| Field | 19,145.30 | 23,068.01 | 18,888.62 | .3 | .5 |
| Age[d] | 19,536.68 | 23,725.3 | 19,189.20 | 3.2 | 2.1 |
| Years Since Highest Earned Degree[e] | 19,711.55 | 23,380.61 | 19,123.78 | 1.7 | 1.7 |

(a) The male distributions for each given characteristic is used as the standard population distribution.
(b) Assumes for each sex the actual distribution of each characteristic and the within category median salary observed in Tables 2 and 6.
(c) According to Statistics Canada tabulations the male median salary was $16,400 in 1972-1973 and $23,000 in 1975-1976. The median salary for females was $13,150 in 1972-1973 and $18,800 in 1975-1976.
(d) Excludes persons for whom no age was reported.
(e) Excludes persons for whom no data are given, or who had no degree or whose highest degree was received 45 or more years ago.

Source: Tables 2 and 6.

# APPENDIX III

## Miscellaneous Tables

APPENDIX III

TABLE A: Numbers of Full Time Teachers in Canadian Universities and Colleges, by Rank, Sex and Field, 1972-1973 and 1975-1976.

| Year and Field | Total[a] | | Rank and Sex | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Full Professor | | Associate Professor | | Assistant Professor | | One Rank Below Assistant | |
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 1972-1973 | | | | | | | | | | |
| Total | 22,584 | 3,338 | 5,193 | 194 | 6,750 | 657 | 7,902 | 1,336 | 1,914 | 833 |
| Education | 1,864 | 493 | 302 | 29 | 573 | 107 | 723 | 186 | 192 | 133 |
| Fine and Applied Arts | 779 | 161 | 98 | 7 | 221 | 35 | 315 | 65 | 116 | 39 |
| Humanities and Related | 4,206 | 853 | 883 | 48 | 1,211 | 171 | 1,547 | 357 | 494 | 216 |
| Social Sciences and Related | 5,214 | 592 | 1,064 | 35 | 1,446 | 111 | 2,088 | 275 | 546 | 135 |
| Agricultural and Biological Sciences | 1,599 | 302 | 471 | 28 | 518 | 81 | 485 | 109 | 73 | 52 |
| Engineering and Applied Sciences | 1,950 | 19 | 528 | --- | 750 | 5 | 545 | 10 | 96 | 2 |
| Health Professions and Occupations | 2,721 | 663 | 746 | 36 | 790 | 105 | 942 | 258 | 189 | 215 |
| Mathematics and Physical Sciences | 3,544 | 148 | 923 | 6 | 1,163 | 33 | 1,164 | 55 | 186 | 34 |
| Other | 707 | 107 | 178 | 5 | 78 | 12 | 93 | 21 | 22 | 7 |
| 1975-1976 | | | | | | | | | | |
| Total | 25,751 | 4,186 | 6,794 | 292 | 8,903 | 994 | 6,975 | 1,595 | 1,330 | 630 |
| Education | 2,396 | 722 | 391 | 44 | 814 | 141 | 739 | 311 | 223 | 115 |
| Fine and Applied Arts | 921 | 216 | 153 | 15 | 293 | 51 | 308 | 81 | 82 | 31 |
| Humanities and Related | 4,398 | 869 | 1,094 | 58 | 1,668 | 266 | 1,249 | 349 | 244 | 106 |
| Social Sciences and Related | 6,191 | 821 | 1,490 | 56 | 2,036 | 197 | 1,943 | 341 | 407 | 124 |
| Agricultural and Biological Sciences | 1,884 | 344 | 658 | 45 | 660 | 114 | 441 | 98 | 54 | 33 |
| Engineering and Applied Sciences | 2,185 | 20 | 738 | 2 | 849 | 5 | 382 | 7 | 61 | 1 |
| Health Professions and Occupations | 3,223 | 900 | 971 | 62 | 1,044 | 173 | 1,005 | 352 | 139 | 198 |
| Mathematics and Physical Sciences | 3,946 | 145 | 1,229 | 6 | 1,514 | 42 | 876 | 47 | 110 | 16 |
| Other | 607 | 149 | 70 | 4 | 25 | 5 | 32 | 9 | 10 | 6 |

(a) Includes the category "Other", which refers to visitors, ungraded staff, and those teachers whose rank is more than one level below assistant.

Source: Statistics Canada. Teachers in Universities. Part I. Salaries General. 1972-1973 to 1974-1975. (Catalogue 81-241).

Statistics Canada. Post-secondary Education Section. Education, Science and Culture Division. Unpublished tabulations.

APPENDIX III

Table B: Percent Distribution of Field for Teachers in Universities by Rank and Sex, Canada 1972-1973 and 1975-1976.

| Year and Field | Rank and Sex | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total[a] | | Full Professor | | Associate Professor | | Assistant Professor | | One Rank Below Assistant | |
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 1972-1973 | | | | | | | | | | |
| Total, All Fields | 100.0 | 100.0 | 100.1 | 100.0 | 100.0 | 99.9 | 100.0 | 100.0 | 100.0 | 99.9 |
| Education | 8.3 | 14.8 | 5.8 | 15.0 | 8.5 | 15.8 | 9.2 | 13.9 | 10.0 | 16.0 |
| Fine and Applied Arts | 3.4 | 4.8 | 1.9 | 3.6 | 3.3 | 5.3 | 4.0 | 4.9 | 6.1 | 4.7 |
| Humanities and Related | 18.6 | 25.6 | 17.0 | 24.7 | 17.9 | 26.0 | 19.6 | 26.7 | 25.8 | 25.9 |
| Social Sciences and Related | 23.1 | 17.7 | 20.5 | 18.0 | 21.4 | 16.9 | 26.4 | 20.6 | 28.5 | 16.2 |
| Agricultural and Biological Sciences | 7.1 | 9.0 | 9.1 | 14.4 | 7.7 | 12.3 | 6.1 | 8.2 | 3.8 | 6.2 |
| Engineering and Applied Sciences | 8.6 | .6 | 10.2 | ----- | 11.1 | .8 | 6.9 | .7 | 5.0 | .2 |
| Health Professions and Occupations | 12.1 | 19.9 | 14.4 | 18.6 | 11.7 | 16.0 | 11.9 | 19.3 | 9.9 | 25.8 |
| Mathematics and Physical Sciences | 15.7 | 4.4 | 17.8 | 3.1 | 17.2 | 5.0 | 14.7 | 4.1 | 9.7 | 4.1 |
| Other | 3.1 | 3.2 | 3.4 | 2.6 | 1.2 | 1.8 | 1.2 | 1.6 | 1.2 | .8 |
| Index of Dissimilarity | 24.7 | | 28.2 | | 27.0 | | 22.6 | | 21.8 | |
| 1975-1976 | | | | | | | | | | |
| Total, All Fields | 100.0 | 100.1 | 100.0 | 100.0 | 99.9 | 100.0 | 100.1 | 100.1 | 100.0 | 100.0 |
| Education | 9.3 | 17.2 | 5.8 | 15.1 | 9.1 | 14.2 | 10.6 | 19.5 | 16.8 | 18.3 |
| Fine and Applied Arts | 3.6 | 5.2 | 2.2 | 5.1 | 3.3 | 5.1 | 4.4 | 5.1 | 6.2 | 4.9 |
| Humanities and Related | 17.1 | 20.8 | 16.1 | 19.9 | 18.7 | 26.8 | 17.9 | 21.9 | 18.3 | 16.8 |
| Social Sciences and Related | 24.0 | 19.6 | 21.9 | 19.2 | 22.9 | 19.8 | 27.9 | 21.4 | 30.6 | 19.7 |
| Agricultural and Biological Sciences | 7.3 | 8.2 | 9.7 | 15.4 | 7.4 | 11.5 | 6.3 | 6.1 | 4.1 | 5.2 |
| Engineering and Applied Sciences | 8.5 | .5 | 10.9 | .7 | 9.5 | .5 | 5.5 | .4 | 4.6 | .2 |
| Health Professions and Occupations | 12.5 | 21.5 | 14.3 | 21.2 | 11.7 | 17.4 | 14.4 | 22.1 | 10.4 | 31.4 |
| Mathematics and Physical Sciences | 15.3 | 3.5 | 18.1 | 2.0 | 17.0 | 4.2 | 12.6 | 3.0 | 8.3 | 2.5 |
| Other | 2.4 | 3.6 | 1.0 | 1.4 | .3 | .5 | .5 | .6 | .7 | 1.0 |
| Index of Dissimilarity | 2 | | 29.0 | | 25.0 | | 21.4 | | 23.9 | |

(a) Includes the "Other" category which refers to visitors, ungraded staff and those teachers whose rank is more than one rank below assistant professor.

APPENDIX III -- TABLE C: Salaries of Teachers in Universities by Highest Earned Degree, Years since Award[a] and Sex, Canada 1972-1973 and 1975-1976.

| Sex and Years since Award of Highest Degree | Year[b] and Highest Earned Degree | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1972-1973 | | | | | 1975-1976 | | | | |
| | Total[c] | Doctorate | Masters | Professional Degree | Bachelors | Total | Doctorate | Masters | Professional Degree | Bachelors |
| **Male** | | | | | | | | | | |
| 0 - 4 | 13,650 | 14,250 | 12,200 | 16,475 | 10,600 | 18,400 | 18,900 | 16,850 | 20,000 | 15,200 |
| 5 - 9 | 16,000 | 17,050 | 13,850 | 18,000 | 12,800 | 21,350 | 22,400 | 19,000 | 24,000 | 17,250 |
| 10 - 14 | 19,100 | 20,450 | 16,450 | 19,500 | 14,800 | 25,000 | 26,100 | 21,700 | 25,925 | 20,025 |
| 15 - 19 | 21,700 | 23,350 | 18,625 | 22,900 | 17,300 | 28,300 | 29,900 | 24,900 | 28,150 | 23,575 |
| 20 - 24 | 23,225 | 25,100 | 20,925 | 24,550 | 18,350 | 30,900 | 32,800 | 27,200 | 32,150 | 25,150 |
| 25 - 29 | 24,025 | 25,175 | 22,550 | 26,450 | 20,425 | 31,975 | 34,650 | 30,000 | 34,450 | 26,625 |
| 30 - 34 | 23,750 | 25,400 | 21,775 | 27,650 | 20,525 | 32,950 | 34,075 | 32,150 | 35,200 | 29,400 |
| 35 - 39 | 24,150 | 25,800 | 22,750 | 30,550 | 21,550 | 32,450 | 33,800 | 29,450 | 37,600 | 29,050 |
| 40 - 44 | 23,000 | 23,000 | 25,625 | X | 20,825 | 32,150 | 35,075 | 34,550* | X | 32,150 |
| **Female** | | | | | | | | | | |
| 0 - 4 | 12,150 | 13,650 | 11,500 | 12,200* | 9,925 | 16,500 | 18,100 | 16,000 | 16,750 | 14,100 |
| 5 - 9 | 13,225 | 15,625 | 12,750 | 14,550* | 10,850 | 18,750 | 20,900 | 17,800 | 20,450 | 15,700 |
| 10 - 14 | 15,150 | 18,000 | 14,400 | 16,500* | 12,450 | 21,075 | 23,850 | 20,200 | 21,200 | 17,550 |
| 15 - 19 | 15,975 | 18,100 | 15,700 | X | 12,750 | 22,600 | 25,900 | 22,050 | 24,550* | 18,800 |
| 20 - 24 | 15,975 | 17,675 | 16,050 | 15,300* | 13,850 | 23,225 | 25,575 | 22,400 | X | 19,900 |
| 25 - 29 | 15,000 | 18,500 | 14,525 | X | 13,000 | 21,825 | 28,350 | 21,825 | 22,975* | 19,050 |
| 30 - 34 | 16,800 | X | 15,375* | X | 15,650* | 22,150 | X | 20,650 | X | 22,350* |
| 35 - 39 | 15,800 | X | 17,500* | X | 13,250* | 23,550 | X | 23,050* | X | 22,125* |
| 40 - 44 | 18,500 | X | 16,500* | X | X | 22,925* | X | X | X | X |
| **Percent Male/Female Median Salaries** | | | | | | | | | | |
| 0 - 4 | 12.3 | 4.4 | 6.1 | 35.0 | 6.8 | 11.5 | 4.4 | 5.3 | 19.4 | 7.8 |
| 5 - 9 | 21.0 | 9.1 | 8.6 | 23.7 | 18.0 | 13.9 | 7.2 | 6.7 | 17.4 | 9.9 |
| 10 - 14 | 26.1 | 13.6 | 14.2 | 18.2 | 18.9 | 18.6 | 9.4 | 7.4 | 22.3 | 14.1 |
| 15 - 19 | 35.8 | 29.0 | 18.6 | X | 35.7 | 25.2 | 15.4 | 12.9 | 14.7 | 25.4 |
| 20 - 24 | 45.4 | 42.0 | 30.4 | 60.5 | 32.5 | 33.0 | 28.2 | 21.4 | X | 26.4 |
| 25 - 29 | 60.2 | 36.1 | 55.2 | X | 57.1 | 46.5 | 22.2 | 37.5 | 49.9 | 39.8 |
| 30 - 34 | 41.4 | X | 41.6* | X | 31.2* | 48.8 | X | 55.7 | X | 31.5* |
| 35 - 39 | 52.8 | X | 30.0* | X | 62.6* | 37.8 | X | 27.8* | X | 31.3* |
| 40 - 44 | 24.3 | X | 55.3* | X | X | 40.2* | X | X | X | X |

(a) Data for 45 plus, no degree and not reported are omitted from this table.
(b) Refers to year data collected, not to the year in which the degree was earned.
(c) Includes "Other" degrees besides those of Doctorate, Masters, Professional and Bachelor degrees. Data is not given separately for this "Other" degree category because of small numbers.
(X) Fewer than 10 cases. Median salary not calculated according to Statistics Canada guidelines.
(*) Median salary based on fewer than 20 cases.

Source: Statistics Canada. Teachers in Universities. Part II. Salaries Related to Experience. 1972-1973 to 1974-75. Table 2A (Catalogue 81-242). Statistics Canada. Post secondary Education Section. Education, Science and Culture Division. Unpublished tabulations 1975-1976.

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