Women in the history of science, 1973 to 1981

A report by the women's committee of the history of science and society, 1982

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The Council of the History of Science Society established a Committee on Women in December 1972. That committee, under the active leadership of Carolyn Merchant, prepared a lengthy report on the status of women in the field, which at present it to the Counsel at the next meeting in December 1973. The Council also approved and passed the committee's nine recommendations, reprinted here in Appendix Day. Now, nearly a decade later, the Committee has undertaken a second survey to see how far these recommendations have been acted upon, what improvements have or have not taken place in the status of women in the history of science, and what future recommendations should be made.

It is particularly timely to assess the developments from 1973 to 1982, because in the latter year a restructuring of HSS committees has also reorganized the Committee on Women. It is no longer an ad hoc standing committee but his been specifically connected with the new Committee on Research and the Profession. It is thus apparently more permanent while it has yet retained its autonomy and ability to initiate activities. The charge to the Women's Committee is to be “concerned with the status of women and related issues." Establishing current and future priorities under those general guidelines is the first order of business. Reviewing accomplishments and disappointments is one way to begin.

I. Implementation of Past Recommendations (compared to Appendix A)

A. Standing Committee on Women

In 1973 the HSS Council established a Committee on Women to "evaluate the on- going status of women, to maintain a roster, and to hear complaints." The committee has met annually, issued a roster in 1973 and is now preparing a second one, and has heard from women with grievances. In addition, the committee coordinated sessions on women in science at the annual meetings, maintained contact with similar groups through the Federation of Women's Organizations, and pursued some of the objects discussed below.

B. Equal Employment Opportunities for Women

The Committee has strongly supported the advertising of employment opportunities in the field, most effectively by its annual job survey, which follows up jobs advertised in the previous year

in the History of Science Society Newsletter and selected other sources. This regular report has been effective in keeping employment matters before the members of the society. Even though some departments have responded reluctantly or not at all, this annual job survey has been one of the Committee's most effective monitoring activities.

C. Registration of Employment Opportunities with the Committee

Only a few jobs have been registered with the Committee on Women, but the generally open advertising has minimized the need for such contact.

D. Roster of Women in the Profession

A roster prepared by the committee in 1973 has been useful for those of us called upon to identify women for positions within the society, or on its programs, or for other opportunities, as some well-worn copies attest. But for others, such as potential employers, who might use it only once and not know the individuals listed, it was perhaps less valuable. In fact, in the early days when copies were still available, the Committee members found that many employers wanted leaders to recommend individuals from the roster, which they never felt authorized to do.

E. Women Faculty and Major Programs

Most Society members probably favor the appointment of qualified women to major positions within the History of Science, including the headship of various research and archival centers, but the society has no power to do much beyond exhorting employers to affirmative action. So much has happened in the elaboration of the jurisdiction of the Equal Employment Opportunities Commission and the Department of Labor's Office of the Federal Contract Compliance Program since 1973 that employment and advancement issues are now more clearly in the realm of government than a professional society. What the society should do, and what the government will do, is uncertain.

F. Part-time Jobs, Nepotism, and Parental Leaves

The society has taken no steps with regard to part-time and part-time tenure-track jobs, abolition of anti-nepotism rules and parental leaves of absence. The movements for such concerns have themselves provide a general discussion and encourage such innovations as child-care facilities at some annual meetings. More might be done in this area.

G. Financial Aid

The committee still supports the principle that financial aid to male and female graduate students be awarded in accordance with federal regulations but has no data on the subject. Another survey on graduate students may be looking into the matter. Again, enforcement of regulations has become a government matter, at least until the present.

H. Reduced Rates for *Isis*

The council is not authorized to reduce subscription rates to subscribers who are unemployed or part-time. It does offer lower rates to students and (recently) to retirees under specified conditions.

I. Publication of Report

The 1973 report was published in brief and *Isis* and more fully in the HSS *Newsletter* (February, 1974).

II. Populations of Women

There are several sources of data on the numbers of women in the history of science. Also significant increases in the participation of women since the Women's Committee last presented its data in 1973.

A. Members of the Society, 1971 – 1980

The most straightforward data to collect is that on the gender of the HSS members listed in the 1977 and 1980 directories. The results can then be compared with that for 1971, as done in Table 1. These data indicate that the number of women in the HSS jumped to 43.3% (160 42 235) between 1971 and 1977, but his been relatively constant from 1977 to 1981. Since the overall size of the society has also increased by about one-quarter in these years, the women's percentage of the total increased only modestly, from 14.7% to 17.1%. Women have constituted about one-quarter of the society's new members since 1971 (a result akin to the recent rise, discussed below, in the proportion of women earning doctorates in the field).

Such directory listings have the major drawback, however, that they can be only a rough indicator of North American women's participation in the field. Some persons in the directory are listed by initial only or have names which do not reveal their gender; such persons were included only if their gender was known to the analyst. The data reflect for an as well as North American members, although the latter clearly dominate.

B. Doctorates Awarded in the History of Science, 1973 to 1981

In theory there are at least three ways to count the number and proportion of History of Science doctorates awarded to women since 1973, but each has such drawbacks that, even when combined, the summary can only be an approximate results. All indicate, however, that about 175 to ?? doctorates were awarded in these years by about 36 to 50 institutions and that at least 50 and perhaps as many as 87 of these went to women.

1. National Research Council Earned Doctorate File

Although all recipients of American doctorates (including those from Harvard) have long been required to return questionnaires to the National Research Council for its Earned

Doctorate File, it was only in 1970 that the "history and philosophy of science" was designated as a separate field.

The aggregate data (see Table 2) which include the philosophy of science and miss all those whose degrees are in departments of history, suggests a fluctuating pattern. Other data must be used to identify the pattern for the history of science.

2. Dissertations Abstracts International

Dissertations Abstracts International, which has existed under various titles since 1933, introduced a category for the History of Science intermittently and 1973, and more regularly thereafter. One advantage of this source is that persons who wish to be included under this category can be identified by name (and even subspecialty), without the philosophers of science. One can also find persons whose degrees came from history programs at a host of institutions where there are faculty but no titled programs or departments in the History of Science. The DAI also includes the graduates of those departments that no longer exist or that for some other reason (as a postal strike in Canada) did not answer this committee's Spring 1981 survey (see below). A major defect is that neither Harvard University's nor Case Western Reserve's many doctorates in the History of Science are listed. Here, as in other sources, the gender of the new doctor is not always clear from the name. (The Committee counted only those dissertations listed under "history of science" and made no attempt to cull others listed under "history General" or "European History.") Data presented in Table 3 indicate there were 182 doctorates awarded to historians of science between 1973 and 1981, of whom 57 seem to be women. This is 31.3% and relatively close to the percentage of new women members of the HSS.

By the 1970s women in history in general received about 25% of the total number of doctorates awarded; in the history of science, on the average, they did at least as well. It is not yet evident that the upsurge in 1980 marks a trend.

3. Women's Committee Questionnaire, Spring 1981

A third source of data on recent doctorates in the history of science was a questionnaire sent to those 53 departments in the history of science listed in the 1980 *Isis* directory as having programs in the field. (This omits those persons earning degrees at other places.) Although not all responded, the 37 programs at 36 universities (two at Minnesota) that did reply reported that data presented in column a of Table 3. They reveal that together these programs awarded 193 doctorates in the history of science between 1973 and 1980, of which 53 went to women (26.9%). Even this would be low, since the response from Berkeley apparently underreported its number of women (and men) doctorates (as reported to *Dissertations Abstracts*). Among institutions, the proportion of women doctorates varied widely, especially for the smaller programs (zero to 50%) but also at the larger ones (12.5% to 41.9%).

One can try to correlate different estimates of the proportion of women in the history of science by concluding that there are at least 50 to 60 women recent doctorates among the 175 to 200 doctorates awarded in the field by U.S. and Canadian universities in recent years. If we assume,

however, that the data omits people but does not include those who should not be included, then tabulating the highest number in each case yields a total of 243 recent doctorates, with 87 women, or 38.8%. Most of these recent Ph.D.'s are probably among the 83 new women members of the HSS joining between 1973 and 1980.

C. Graduate Enrollments, Spring 1981

The graduate enrollments reported to the Committee's survey average about one-third women. From this we might project that the percentage of women in the field and in the Society would continue to grow in the future. However, if one compares these percentages as reported in Table 4 with those on doctorates awarded in Table 3, one can see that the percentage of women enrolled in many departments is higher than the percentage of those actually earning doctorates in recent years (1973-1980), strikingly so at a few institutions. This may be because: 1) the program is very new; 2) the increase in women students is quite recent; 3) women are more apt to study part-time and take longer to earn a degree; or 4) the women's attrition is particularly high. The Committee on Women or the study group on graduate education may want to address further the situation of women graduate students.

III. Employment and Unemployment, 1874-1981

A. Employment

The Committee next turned to what data are available on the employment status of the women in the field.

1. Job Surveys

One good source of information on employment is the annual job survey done since 1974 (except for 1975-76) by the Committee and published in the HSS *Newsletter*. A summary of those surveys for 1974-81 is presented in Table 5. It reveals that the number of jobs advertised in the HSS *Newsletter* has risen sharply in the last several years, perhaps because the field is been expanding or because the idea of open advertising, advocated by the Committee, has taken hold in many parts of the field. Women have applied for most of these jobs but only in the last year or so have their proportion of offers paralleled their numbers of applications. The Committee hopes this trend continues.

2. Doctoral Faculties

Employment data on the faculties of programs which are produced two or more PhD's in eight years suggests that upward mobility into graduate positions has been limited. Only 10 women hold tenured or tenure-track positions, as shown in Table 6a, which is once again based on responses to the Committee's questionnaire. It reveals that six of these 10 women are in just two departments, Indiana and Pennsylvania, where one was department chair in the spring of 1981. The four other women are all tenured (to full professors and two associate professors) at four other universities (Harvard, Wisconsin, Oklahoma, and Chicago). Only two of these 10 individuals held these jobs at the time of the Committee's last survey in the spring of 1973 (see Table 6b). Thus, there has been some improvement. Comparing specific institutions over time, there has been a net increase in the last eight years, although some women who then held 10 year-track positions are no longer at their universities. The resource pool of

women is not yet fully utilized, when publication activity and NSF research grants are considered (see below).

B. Unemployment

1. Committee Data, 1981

When the Committee started its report, it expected to find much evidence of widespread unemployment among women in the field, especially among the young recent PhD's. This has not turned out to be the case, at least in the data on the subject that the Committee obtained from its survey of department chairs. From the data presented in Table 7, on the current employment status of the 193 PhD's who earned their degrees since 1973, only 11 or about 5.7% are actually unemployed. Unemployment is reportedly more widespread among women (7.8%) than among men (4.9%). Of those whose former chairs say they are now employed, more of the men are in what was broadly termed "non-academic" work (34 or 23.9%) than are the women (seven or 13.72%). Why there should be such distinctions is not clear, nor is much known about the actual jobs held by such persons. Some of these jobs, particularly those in archives and museums, may have been advertised in the HSS *Newsletter* and later surveyed by the Women's Committee annual report. It may well be, as these reports suggest, that the younger historians of science will be moving into new programs or new institutions and away from traditional departments.

2. National Research Council Data, 1979

These findings tend to agree with those reported by a National Research Council study of the employment status in 1979 of humanities PhD's. For those listed under the broad category "History," 1.2% of 14,200 men were unemployed and 3.3% of 2,500 women. Since this study asked the individuals concerned rather than tapping the memories of their former graduate professors, it would seem to have great reliability. Even though it is now two years old, probably the pattern is relevant.

IV. Publications and Research Grants

A. *Isis*

One subject which the 1973 Women's Committee discussed in detail with that of publications and editorial board membership of various journals in the History of Science. *Isis* received special attention as the official journal of the Society. The Committee found it did not proportionately involve women. Women had written 11.5% of the articles in *Isis* in 1968-72, were asked to write 7.6% of the book reviews, and held only one position on the editorial board. The situation for other journals was similar. It is important to see what changes have occurred, particularly in *Isis*.

In addition to analyzing the overall pattern from 1973 to 1981, it is essential to note the transfer of the editorship of *Isis* and the simultaneous shift in editorial staff in 1979. The most obvious change has been in the number of female advisory editors (see Table 8). This number has increased substantially under the new editor who had been urged by the Committee to involve more women (from a period with no women up to six or 26% in 1981). Similarly there was an important if less dramatic increase in the number of women contributors (primarily book reviewers but including all those publishing with bylines) from 12.3% on average between 1974 and 1978, to 16.8% on average

between 1979 and 1981. Strikingly different, however, are the number of articles published by women. The data on submissions, supplied by Arnold Thackray, editor of *Isis*, suggests a rise in submissions and presumably expectations. This coincides with other indicators, including the number of women in advanced positions, in the annual meeting program, receiving grants, and becoming active members (see below). Yet there has not yet been a proportionate increase in the number of women publishing major articles in *Isis*, at least. The table suggests that the number of articles published has fluctuated year-by-year but the pattern has remained surprisingly constant over time (12.2% from 1974 to 1978, and 10.8% from 1979 to 1981). Moreover, the 8.3% rate in the most recent year is discouraging. Thus, the overall record shows considerable improvement, but the type of activity is becoming a more significant factor as the number of experienced women historians increases.

B. NSF Applicants and Grantees, 1973-1981

It is hard to know which women are most likely to apply for NSF grants. Would it be the 10 women who are 10% of the faculties at the larger doctoral programs, a random selection of the 247 who are members of the HSS, or those 50 to 80 who are recent doctorates? What success rate should be expected – lower than that for men since the women tend to be younger, less experienced, and less prestigious we employed; or higher, since to persevere and overcome certain institutional constraints may be a sign of extra motivation?

Ronald Overmann, Program Director for the History and Philosophy of Science Program at the NSF, has provided the Committee with the data for 1973 to 1981 presented in Table 9, "Women and NSF." It records the number and percentage of women panelists, of women applicants, and of successful grantees for each year, 1973 to 1981. Calculations reveal that the number and percentage of women on the panel has varied markedly over these eight years from a low of zero (1974 to 1977) to a high of four (50%) in 1979, and back down to one (12.5%) in 1981. Similarly, although the number of women applicants in history (leaving philosophy aside) was rising at the time of the last survey, it subsequently plateaued and has only recently begun to rise again. There are two ways to report the women's success rate in obtaining the grants they applied for: one can either look at the percentage of applicants who were women (an average of ??) and compare it to the percentage of the grantees who were women (??), or one can calculate the percentage of women applicants who received grants (4 ??) and compare it to the percentage of man similarly successful (??). In general and for reasons that are not at all clear, women were especially successful in those years FY 1978 and FY 1979 when there were a high proportion of women on the panel and the higher applicant pool. The slip backward in 1980 has been offset by 1981 data, which shows an improvement in the proportion of women grantees.

These data also indicate that there have been about 20 to 30 women in the field who have been applying for NSF grants each year. We are not sure whether the successful women are recent PhD's (since 1973) or of an older cohort (c. 1965-73), although reading the list of recent NSF grantees suggests that the latter, at least, have been most successful. These may also be the same women who are on *Isis* editorial boards and committees and publishing their articles there. If so, there does seem to be a very active group a few years beyond their doctorates who are rarely employed on the faculties of the major doctoral institutions listed in Table 6a but are contributing a significant amount to the field's research (10% of the faculties … 6.8% of the contributions to *Isis*).

We might also mention that the Committee on Women, working with several presidents, has pioneered in setting up the HSS Committee on Unaffiliated Scholars to help such persons administer NSF grants through the American Academy of Arts and Sciences. Moreover, after some initial prodding in the mid-1970s, the HPS program has supported several but not all submitted projects on the history of women in science, which is an area of particular interest to this Committee.

V. History of Science Society Participation

One subject of particular concern to the Committee on Women is the participation of women at various levels within the Society. In some ways the data presented here demonstrates that the increasing numbers of women in society affairs, such as committee memberships, were being recorded even before 1974.

As mentioned earlier, the number of women in the HSS jumped 43% between 1971 in 1980, although (because the Society was also growing rapidly) the women's percentage of total membership rose only from 14.7% to 17.1%. However, as shown in Table 10, women's participation at HSS meetings between 1974 and 1980 varied from year-to-year and location to location, but averaged 20.8%, largely because of "Works in Progress" sessions. The WIP sessions typically involve graduate students, recent doctorates, or persons submitting a paper individually rather than as part of the session. Women were far less likely to be presenting major papers (although this varied, perhaps raising when there were entire sessions devoted to the history of women in science), and even less likely to be serving as commentators or chairpersons. (One exception here was the Madison meeting in 1978, under program chair Sandra Herbert, when women were 20% of the commentators and 30% of the session chairpersons.) Continued attention to participation, involving both inclusion of submitted papers and invitations to chair sessions and joint panels, is needed.

As for participation in the activities of the Society, women have been serving on various committees since the early 1970s. The number of women and their percentage of the total have increased slightly since then. Still, most are concentrated in the Women's Committee and the Committee on Undergraduate Education, and the fact that these are large committees skews average participation figures. No woman has yet served on the Finance Committee, or curiously, on the Committee on Unaffiliated Scholars, some of whom are women (see Table 11).

Also, since the early 1970s women have been regularly on the ballot for the HSS Council and the Nominating Committee. Even before the election reforms of the early 1970s, which required two persons to be nominated for each office, women occasionally served on the Council. Since 1974, women have been well-represented on the Council, winning about their proportion of nominations (32.5% of nominees and 37.5% of those elected). The Nominating Committee results were similar: 29 of 70 nominees were women and 14 of them were elected to 35 positions from 1974 to 1981. Women, when nominated for these offices, had an apparently equal chance of election, at least until 1981. But for the higher office of vice-president (which succeeds to the presidency) neither of the two women nominated, one in 1973 and one in 1977, was elected. In what is a highly age-stratified process, the lack of senior women and highly visible positions is an obvious drawback.

Another significant factor has been in the nomination and election of a woman officer (secretary) in 1978 and again in 1982, and therefore in the inclusion of a woman on the Executive

Committee. There have been no other women executive officers in the Society in the decade under consideration.

VI. Conclusions

It is clear that certain changes have occurred since the Women's Committee wrote its first report in 1973. Certainly not all that was desired then has been accomplished or even remained an active concern of the Committee or the Society. Problems unanticipated then, such as the collapse of much of the academic job market, have loomed large since. However, the percentage of women in the field (and the Society) has continued to rise and, depending on how one counts, women are now as much as a third of the recent doctorates. Since they constitute an even higher percentage of the graduate students, participation may be expected to increase.

An especially promising finding is that women are gaining about a third of the jobs advertised in the *Newsletter* and related sources. As these young and not-so-young women remain in the field and contribute to research, they should be employed at major institutions and given positions of leadership and recognition on editorial boards, and departments, and in the Society. To a certain extent this is happening, but less than the Committee (and it is hoped, the Society) would desire. Women are on Society committees far more often than in 1973. They have also achieved a place on the Executive Committee, participated at annual meetings, received NSF grants and served on editorial boards. Still, concern about the level and type of participation remains in some areas.

What happens next is unclear. The economic forecasts for the rest of the 1980s are not encouraging to anyone. Some women, despite bleak prospects, seem determined to stay on in the field in one way or another; others will find greater opportunities elsewhere. Recognition and encouragement may be key elements in the outcome. It is hoped that the 1980s will find more experienced women at major institutions, publishing articles in *Isis*, and giving papers and serving as commentators at the regular and invited sessions of the HSS annual meetings.

APPENDIX A
RECOMMENDATIONS OF THE HSS COMMITTEE ON WOMEN
(1973)

1. The Council shall establish a Standing Committee on Women to evaluate the on-going status of women, to maintain a roster, and to hear complaints. The committee should be composed of both women and men and at a minimum should include a tenured faculty woman, a nontenured or part-time faculty woman, a female graduate student and a woman representing archival and major research institutions.
2. Since employment opportunities often depend de facto on word-of-mouth communication among members of the profession and females do not usually form a part of this network, the society should openly and actively support equal employment opportunity and advancement for all female historians of science and graduate students.
3. This commitment shall be evidenced in part by the registration of <u>all</u> available employment opportunities with the Standing Committee on Women.
4. The roster of women in the profession should be used to aid in identifying women for positions such as:
   a. Officers and Committees of the History of Science Society and the International Congress.
   b. Program arrangers and chair people for professional meetings.
   c. Presentation of invited papers.
   d. Editorial boards of professional journals.
5. The society should commit itself to the correction of the extremely low ratio of women faculty in its major history of science programs by insistence upon the recruitment of qualified women from the professional pool for consideration and filling faculty positions, at all levels, as openings in the various departments occur. Women should be named to head its major research and archival centers.
6. The society should pass the following resolutions:

   Be it resolved that:

   a. Members of the profession should cooperate within their own universities and other institutions of employment in the establishment of fully legitimate part-time positions for both men and women leading to advancement and tenure and caring pro-rated benefits.
   b. Members of the profession should support the abolition of anti-nepotism rules within their own institutions and aided replacing them by conflict of interest rules.
   c. Members should support the establishment of maternal-paternal leaves with no loss of status upon resumption of work.

7. The faculty of graduate programs in the history of science should ensure that equal financial aid opportunities in compliance with Federal Government regulations are being provided for their female and male graduate students.
8. *Isis* should offer reduced subscription rates to those members of the profession who are unemployed or employed part-time.
9. The report and recommendations of this committee should be published in *Isis* as the official journal of the History of Science Society.

Table 1. HSS Members, by Gender, in 1971, 1977, 1980

Year	Total Members	Women	% of Total
1971	1,115	164	14.7%
1977	1,410	235	16.7%
1980	1,443	247	17.1%

The above data was compiled from the published directories of the years identified. Those whose names could not be gender-identified were not counted.

Table 2: National Research Council Data on Recent Doctorates in the History and Philosophy of Science

Year	Total	Women	Percent Women
FY1920-FY1972	74	10	13.5%
FY1973-FY1976	125	39	31.2%
FY1977	29	5	17.2%
FY1978	25	7	28.0%
FY1979	28	6	21.4%
FY1980	21	10	46.6%
TOTALS	302	77	25.5%

The above data is compiled from the National Research Council, *Doctorates Awarded from 1920-1971 by Subfield of Doctorate, Sex and Decade* (1973) and Doctorate Recipients from United States Universities Summary Reports, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, and 1980.

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TABLE 3. PhDs Awarded in History of Science, by Institution and Gender, 1973 - June 1981

	a Reported to Women's Committee Survey			b Reported in Dissertation Abstracts (Vols. 33[4]-41[6])			Maximum Reported Women
	Total	Women	Percent	Total	Women	Percent	
Harvard	31	13	41.9%	NA	NA	NA	13
Wisconsin	24	3	12.5%	17	1	[illegible]	3
Princeton	24	3	12.5%	13	2	15.4%	3
Indiana	24	7	29.2%	11	3		7
Johns Hopkins	16	5	31.3%	16	3	18.8%	5
U. Pennsylvania	15	5	33.3%	9	5	.	5
Yale[1]				10	5	50.0%	5
Toronto[1]				10	3	30.0%	3
New Hampshire[2]	8	2	25.0%	1	1	100.0%	2
Cornell	8	3	37.5%	1	1	100.0%	3
Oregon State	7	2	28.6%	6	2	33.3%	2
Oklahoma	6	2	33.3%	5	0	0.0%	2
U. Washington[1]				6	4	66.7%	4
Chicago[3]	4	2	50.0%	7	0	0.0%	2
Pittsburgh[4]	4	0	0.0%	4	0	0.0%	0
Texas - Austin	4	1	25.0%	3	1	33.3%	1
Brown[1]				4	2	50.0%	2
Kansas[1]				4	3	75.0%	3
New York U.[1]				4	2	50.0%	2
Calif. - Berkeley	3	1	33.3%	6	4	66.7%	4
UCLA	3	1	33.3%	3	0	0.0%	1
Duke[5]				3	1	33.3%	1
UC-San Francisco	2	1	50.0%	2	1	50.0%	1
Case-Western Reserve	2	0	0.0%				0
Minnesota	2	0	0.0%	1	0	0.0%	0
U. No. Carolina[5]				2	2	100.0%	2
CUNY[1]				2	1	50.0%	1
Columbia[1]				2	1	50.0%	1

(continued)

TABLE 3 (continued)

Maryland	1	0	0.0%	2	1	50.0%	1
Notre Dame[1]				2	1	50.0%	1
Stanford[1]				2	1	50.0%	1
5 others[6] (1 each)	5	1	20.0%	2	1	50.0%	1
5 others[7] (1 each)				5	5	100.0%	5
17 others[8] (1 each)				17	0	0.0%	0
TOTALS	193	52	26.[illegible]%	182	57	31.3%	87

NOTE: Footnotes refer to data (or lack of data) in the "Reported to Women's Committee Survey" column only.

[1]No response

[2]Psychology Department only

[3]Conceptual Foundations Program only

[4]1980-81 only

[5]Combined program with faculty from the U. of North Carolina, North Carolina State U., and Duke

[6]Kansas State, California-Santa Barbara, SUNY-Stony Brook, Michigan, W. Virginia

[7]Kent State, Louisville, Northern Arizona, Rice, Rutgers

[8]American U., Arizona, Boston U., Bryn Mawr College, Fordham, Illinois, Kentucky, Miami U., U. Mass, Northern Colorado, Northwestern, Ohio State, Princeton Theological Seminary, Purdue, SUNY-Buffalo, Syracuse U., Washington U.

The data in Table 3 in the first three columns was self-reported by the departments and programs listed in the 1980 Isis directory. The data from Dissertation Abstracts reflects those dissertations specifically under "History of Science" and is taken from Volumes 33^4 to 41^6.

TABLE 4. History of Science Graduate Enrollments, Spring, 1981, By Gender

	Totals	Women	Percent
Indiana	49	15	30.6%
Harvard	34	13	38.2%
Pennsylvania	33	17	51.5%
Wisconsin	30	12	40.0%
Pittsburgh	21	5	23.8%
Johns Hopkins	16	3	18.8%
Maryland	13	4	30.8%
Princeton	9	2	22.2%
Oklahoma	9	3	33.3%
Chicago	8	3	37.5%
New Hampshire	7	3	42.9% (Psychology Dept.)
Case-Western Reserve	6	5	83.3%
UC Berkeley	6	0	0
UC Los Angeles	6	4	66.7%
UC San Francisco	5	3	60.0%
Iowa State	4	0	0
Minnesota	4	2	50.0%
Oregon State	4	0	0
UC Santa Barbara	3	2	66.7%
West Virginia	3	2	66.7%
Cornell	2	2	100.0%
Illinois	2	1	50.0%
SUNY Stony Brook	2	1	50.0%
Auburn	1	0	0
Kansas State	1	0	0
Michigan	1	0	0
Texas	1	0	0
UC Davis	1	0	0
Houston	0	0	0
MA degrees only			
RPI	17	5	29.4%
Notre Dame	5	0	0
U. Washington	5	4	80.0%
Poly. Inst. of NY	4	1	25.0%
Montana	2	1	50.0%

TABLE 4, continued

	Totals	Women	Percent
TOTALS	314	113	36.0%

TABLE 5. Job Survey Data, 1974-81

Jobs advert. for years	No. Jobs		Applicants Total	Applicants Women	Applicants Percent	Accept. Offers Total	Accept. Offers Women	Accept. Offers Percent
1974-75	22	TT[1]	464	70	15.1%	20	2	10.0%
		Tmp.[1]	86	8	9.3%	4	0	0
1975-76 (no survey)								
1976-77	24	TT	267	51	19.1%	15	5	33.3%
		Tmp.	317[2]	89	28.1%			
1977-78	15		252	64	25.4%	8	1	12.5%
1978-79	21		661	110	16.7%	14	3	1.4%
1979-80	46	TT	745	151	20.[illegible]%	16	4	25.0%
		Tmp.	186	48	25.8%	13	6	46.2%
		Total	931	199	21.4%	29	10	34.[illegible]%
1980-81	61	TT	1,438	259	18.0%	25	8	32.0%
		Tmp.	179[3]	56	31.3%	12	4	33.3%
		Total	1,617	315	19.5%	37	12	32.4%

[1] TT = tenure track; Tmp. = temporary

[2] No gender given for 43 others

[3] No gender given for 16 others

The data are based on the report of the Women's Committee Job Survey, as published in the HSS Newsletter.

TABLE 6a. Women Faculty in Doctoral Programs in History of Science (which produced two or more PhDs since 1973), Spring 1981

Institutions in 1973 Report	Chair	Full Prof.	Assoc. Prof.	Asst. Prof.	Total Women	Total Faculty	Percent Women	Other Women Temp./Adj./ Visiting
Cornell	0	0	0	0	0	2	0.0%	1
Harvard	0	1	0	0	1	6	16.7%	2
Indiana	0	1	1	1	3	10	30.0%	1
Johns Hopkins	0	0	0	0	0	4	0.0%	
Princeton	0	0	0	0	0	4	0.0%	0
UC-Berkeley	0	0	0	0	0	3	0.0%	1
UCLA	0	0	0	0	0	[illegible]	0.0%	0
Chicago	0	1	0	0	1	17	5.9%	0
Oklahoma	0	0	1	0	1	6	16.7%	0
Pennsylvania	1	1	0	2	3	9	33.3%	
Pittsburgh	0	0	0	0	0	6	0.0%	1
Toronto[1]								
Wisconsin	0	0	1	0	1	13	7.7%	0
Case-Western	0	0	0	0	0	2	0.0%	2
Yale[1]								
Other Institutions								
New Hampshire	0	0	0	0	0	2	0.0%	0
Oregon State	0	0	0	0	0	3	0.0%	0
U.Washington[1]								
Texas-Austin	0	0	0	0	0	1	0.0%	0
Brown[1]								
Kansas[1]								
New York U.[1]								
Duke/U. of NC/NC State	0	1	0	0	1	9	11.0%	
UC-San Francisco	0	0	0	0	0	2	0.0%	2
Minnesota	0	0	0	0	0	6	0.0%	1
TOTALS	1	[illegible]	3	3	11	109	10.0%	11

[1]No Response

The data was taken from responses to the survey conducted by the Women's Committee.

TABLE 6b. Female Faculty in 15 Major History of Science Programs (April 1973)

University	Faculty	Number of Full-Time Women	Part-time and Adjunct Women
1. Cornell	3	None	None
2. Harvard	8	2 (1 Assoc. Prof. 1 Asst. Prof.)	None
3. Indiana	8 + 1 adjunct	1 Assoc. Prof.	None
4. Johns Hopkins	4 + 1 adjunct	None	None
5. Princeton	5	None	1 visiting
6. UC-Berkeley	2 + 7 adjunct	None	1 adjunct
7. UCLA	3	None	None
8. U. of Chicago	2 + 5 adjunct	None	None
9. U. of Oklahoma	5	None	1 irregular part-time lecturer
10. U. of Pennsylvania	3 + 2 part-time lecturers, 1 adjunct prof.	None	1 part-time lecturer
11. U. of Pittsburgh	13	None	None
12. U. of Toronto	5	1 Asst. Prof.	1 Assoc. Prof.
13. U. of Wisconsin	(10)*	(None)	(None)
14. Case Western Reserve	3 + 3 adjunct	None	2 (1 Assoc. Prof., 1 full-time)
15. Yale University	4	None	3 unpaid research associates
TOTALS	78 Dept. members 20 adjuncts 98 associated faculty	4 Dept. members	7 associated faculty 3 research associates

$$\frac{\text{Female Dept. members}}{\text{Total Dept. members}} = \frac{4}{78} = 5.1\%$$

$$\frac{\text{Total associated females}}{\text{Total associated faculty}} = \frac{11}{98} = 11.2\%$$

*Data taken from university catalogue after three requests were unanswered.

TABLE 7. Unemployment and Non-Academic Employment of Recent Doctorates, by Doctoral Institutions and by Sex.

	Men			Women		
	Doctorates	Unemployed	non-academic employment	Doctorates	Unemployed	non-academic employment
Harvard	18	1	5	13	2	2
Indiana	17	0	5	7	0	0
Princeton	21	1	3	3	0	0
Wisconsin	21	1	1	3	1	1
Johns Hopkins	11	0	2	5	0	1
Pennsylvania	10	0	5	5	0	2
New Hampshire	6	0	3	2	0	0
Cornell	5	1	1	3	1	0
Oregon State	5	0	1	2	0	1
Oklahoma	4	0	3	2	0	0
Pittsburgh	4	1	0	0	0	0
Chicago (CFP)	2	0	0	2	0	0
Texas	4					
Berkeley	2	0	1	1	0	0
UCLA	2	0	1	1	0	0
UC-San Fran.	1	1	0	1	0	0
Case-Western	2	0	0	0	0	0
Minnesota	2	1	1	0	0	0
Kansas State	1	0	1	0	0	0
UC-Santa Barb.	1	0	0	0	0	0
SUNY Stony Brk.	0	0	0	1	0	0
Michigan	1	0	0	0	0	0
Maryland	1	0	0	0	0	0
West Virginia	1	0	1	0	0	0
UC-Davis	0	0	0	0	0	0
U. Washington	0	0	0	0	0	0
VPI & SU	0	0	0	0	0	0

Poly Inst. of NY[1]						
Illinois	0	0	0	0	0	0
Auburn	0	0	0	0	0	0
Notre Dame	0	0	0	0	0	0
Houston[2]						
RPI[2]						
Iowa State[2]						
TOTALS	142	7(4.9%)	34(23.9%)	51	4(7.8%)	7(13.7%)

[1]Masters degree only; no data

[2]No graduates

The above data were reported by the departments and programs of institutions listed in the 1980 Isis Directory.

TABLE 8. Women's Participation in Isis, 1974-1981

Year[1]	Advisory Editors[2]			Contributors[3]			Submission of Papers[4]			Pub. of Articles[5]		
	total	women	percent	total	women	percent	total	women	percent	total	women	percent
1974	18	1	5.5%	145	21	14.5%	107	12	11.2%	17	2	11.8%
1975	18	1	5.5%	169	16	9.5%	76	8	10.5%	19	2	10.5%
1976	15	0	0	163	16	9.8%	69	7	10.1%	23	0	0
1977	14	0	0	202	31	15.3%	90	8	8.9%	23	7	30.4%
1978	12	0	0	188	23	12.2%	77	10	13.0%	24	2	8.3%
1979	24	4	16.7%	249	39	15.7%	95	18	18.9%		3	15.[illegible]%
1980	24	4	16.7%	239	38	15.9%	102	19	18.6%		1	8.3%
1981	23	6	26.1%	257	48	18.7%	87	18	20.7%		1	8.3%

[1] Robert Multhauf, editor, 1974-1978 above; Arnold Thackray, 1979--

[2] As indicated in December issue of Isis for each year.

[3] These figures include all contributors identified as such in the directory at the end of each issue. Authors of articles (also listed separately above), book reviewers, and publishers of other short notes are typically included.

[4] This data was compiled by the Isis staff and includes only those whose gender could be identified. This information cannot be simply compared to the list of published articles because some material was published in other form, such as research notes.

[5] Lists only major articles listed as such in individual tables of contents.

TABLE 9. NSF - History and Philosophy of Science Program Data on Women Panelists, Applicants and Grantees

FY	Panelists-HPS[1] Total	Panelists-HPS[1] Women	Panelists-HPS[1] Percent		Applicants Total	Applicants Women	Applicants Percent	Grantees Total	Grantees Women	Grantees Percent
1973	6	1	16.7%							
1974	6	0	0	HPS[2]	262	28	10.7%	120	13	10.8%
1975	6	0	0	H[2]	148	22	14.9%	73	9	12.3%
1976	6	0	0	HPS	156	16	10.3%	56	7	12.5%
				H	105	15	14.3%	44	7	15.9%
				HPS[3]	25	NA	NA	11	NA	NA
1977	6	0	0	HPS	154	22	14.3%	67	9	13.4%
				H	110	20	18.2%	49	8	16.3%
1978	6	3	50.0%	HPS	148	25	16.9%	69	11	15.9%
				H	108	20	18.5%	50	8	16.0%
1979	8	4	50.0%	HPS	190	31	16.3%	70	14	20.0%
				H	121	NA	NA	44	11	25.0%
1980	10	1	10.0%	HPS	162	22	13.6%	69	10	14.5%
				H	106	NA	NA	47	6	12.8%
1981	8	1	12.5%	HPS	165	31	18.8%	57	14	24.6%
				H	115	27	23.5%	44	13	29.5%

[1]HPS = History & Philosophy of Science [2]1973-1975 [3]3-month transition quarter when FY changed to October start

The above data was compiled from NSF reports supplied by Ron Overmann.

TABLE 10. History of Science Society Annual Meeting Programs, 1974-1981.

	Works in Progress			Symposia			Commentators			Session Chairpersons			Totals		
	Total	Women	Percent	Total	Women	Percent	Total	Women	Percent	Total	Women	Percent	Total	Women	Percent
1974 Norwalk	35	9	25.7%	29	4	13.8%	19	3	15.8%	17	1	5.9%	100	17	17.0%
1975 Atlanta	38	8	21.1%	46	12	26.1%	13	2	15.4%	20	2	10.0%	117	24	20.6%
1976 Phila.	42	6	14.3%	57	15	26.3%	9	1	11.1%	21	3	14.3%	129	25	19.4%
1977 Dallas	19	3	15.8%	38	6	15.8%	11	1	9.1%	15	3	20.0%	83	13	15.7%
1978 Madison	47	16	34.0%	55	5	9.1%	10	2	20.0%	20	6	30.0%	132	29	22.0%
1979 New York	50	17	34.0%	55	10	18.2%	16	1	6.3%	22	2	9.1%	143	30	21.0%
1980 Toronto	29	14	48.3%	42	7	16.7%	8	0	0	14	1	7.1%	93	22	23.7%
1981 Los Angeles	30	14	46.7%	36	8	22.2%	11	0	0	20	4	20.0%	97	26	26.8%
TOTALS	290	87	30.0%	358	67	18.7%	97	10	10.3%	149	22	14.8%	894	186	20.8%

TABLE 11. History of Science Society Committees, 1974-1981.

	1974		1975		1976		1977		1978		1979		1980		1981		1982	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Exec.	0	6	0	5	0	5	0	5	1	5	1	4	1	4	1	4	1	4
Council	5	10	6	9	6	9	6	9	5	10	6	9	6	9	5	10	5	10
Com.	2	3	2	3	2	3	3	2	3	2	2	3	2	3	2	3	0	5
USNC	1	7							1	6	1	6	1	5	2	4		
Isis	0	5	0	5	1	4	1	4	1	3	1	3	2	3	1	3	2	2
Finance									0	3	0	4	0	5	0	4		
Women	5	2	10	4					10	4	10	4	10	0	10	0	9	0
C.U.E.	1	5					3	9	3	8	3	9	3	11	4	10		
Schuman	2	1	1	2	1	2	1	2	0	2	1	1	2	1	2	1	1	2
Pfizer	1	2	1	2							1	2	1	2	2	1		

Data are from the annual list of Officers and Committee Members.

TABLE 12. History of Science Society, Nominations and Elections.

HSS Council

		Nominated		Elected		
Year	Total	Women	%Total Nom.	Total	Women	%Total Elected
1974	10	4	40%	5	3	60%
1975	10	2	20%	5	1	20%
1976	10	3	30%	5	2	40%
1977	10	5	50%	5	2	40%
1978	10	5	50%	5	2	40%
1979	10	2	20%	5	2	40%
1980	10	2	20%	5	1	20%
1981	10	3	30%	5	2	40%
TOTALS	80	26	32.5%	40	15	37.5%

HSS Nominating Committee

		Nominated		Elected		
Year	Total	Women	%Total Nom.	Total	Women	%Total Elected
1975	10	6	60%	5	3	60%
1976	10	3	30%	5	2	40%
1977	10	4	40%	5	3	60%
1978	10	5	50%	5	2	40%
1979	10	5	50%	5	2	40%
1980	10	4	40%	5	2	40%
1981	10	2	20%	5	0	0
TOTALS	70	29	41.4%	35	14	40%

This information was compiled from the HSS Newsletter's annual reports on elections.