AC 232 The Status of Women in Linguistics 1983

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# The Status of Women in Linguistics

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## 0. Introduction

This is a report summarizing and discussing data on women in linguistics. The data primarily concern students and faculty members at academic institutions in the U.S. and Canada. The project was carried out under the auspices of the LSA Committee on the Status of Women and the Executive Committee of the LSA.

## 1. Where did the data come from?

The LSA "Survey of Students and Faculty in Linguistics" (hereafter abbreviated SSF) sent to 202 U.S. and Canadian department or program chairs in linguistics in March 1982 was the principle source of data. Representatives from 170 institutions responded. Of these, 123 reported faculty or students in linguistics. These data, thus, provide good coverage of the departments and programs in linguistics: 123 (90%) of the 137 institutions in the U.S. and Canada that grant degrees in linguistics are included (see the 1982 Directory of Programs in Linguistics). Other sources of data include: "Summary Report of Doctorate Recipients from U.S. Universities" (1955-1981) (abbreviated SRD), "Earned Degrees Conferred by Higher Educational Institutions" published by HEW Office of Education 1955-1976 (abbreviated EDC, "Digest of Education Statistics 1978-1981" (abbreviated DES, "Directory of Programs in Linguistics in the U.S. and Canada" (1980, 1982) (abbreviated DPL), "An Assessment of Research-Doctorate Programs in The U.S.: Humanities" (1982) (abbreviated ARD), and "Present and Future Needs for Specialists in Linguistics and the Uncommonly Taught Languages" (abbreviated PFN) by M.M. Levy, J.B. Carroll and A. H. Roberts, Center for Applied Linguistics, LSA, 1976 (based on 1973 data).

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2. What is covered by the data?

SSF provided data on (1) students enrolled in linguistics programs by degree (B.A., M.A., Ph.D.) and sex, (2) degrees granted by degree and sex, (3) faculty by rank (lecturer, instructor, assistant, associate, full), status (full-time, part-time), tenure (with, without) and sex. The DPL, EDC, DES, and SRD sources were used to estimate variability and reliability of the data. The ARD source was used in a rough ranking of the institutions and both ARD and SRD were used as aids in interpreting the data. PFN data (from 1973) is compared, where possible, with the present data. Research institutions listed in the 1980 DPL were contacted in order to obtain some data on linguists in less academic environments.

3. How reliable are these data?

As with most linguistic data, the clear picture we would like to present is clouded because things change and because things resist our categorization. As a check on the data reported we compared the faculty figures to data for the same year appearing in DPL 1982. For Ph.D.s granted, we compared these figures to those in SRD 1981. The data for M.A.s and B.A.s granted were compared to those appearing in DES 1980 (the 1981 data are apparently not yet available). The two sets of figures for faculty members differed by 5% or less with the exception of the number of women at the assistant professor level. The 20 linguistics departments other than those included in the top 24 reported 65% of their assistant professors were women, while the names listed in the 1982 DPL indicate that the proportion of women among assistant professors for this group is closer to 55%. The 1973 (PFN) data also indicated that women were better represented when only numbers were reported than when names had to be listed. This discrepancy may arise due to different criteria for inclusion (for example, adjunct faculty or faculty not funded by the department may have been treated differently, and it may be that these categories are more likely to be filled by women). In any case, it appears that these data may over-represent the number of women assistant professors. For the degrees granted, the figures from SSF and those from other sources differ by 1 to 8%. The discrepancies between the two sets of figures for M.A. and B.A.s arise in part because the two sets of data are from two different years. They may also differ because of differences in whether degrees in English as a Second Language were included or not. When the reports from department or program chairs separated linguistics degrees from ESL degrees we counted only degrees in linguistics. There is no way of knowing, however, whether some ESL degrees were included in some of the SSF data or not. The figures for these reliability checks appear in Table I.

The reliability of the data tends to be better for the linguistics departments than for the 'Departments of Linguistics and x' or for 'Programs' or 'Committees' in linguistics. This is because the departments showed a slightly higher response rate, involved fewer categorization problems, and had fewer missing data points. Different departments defined the terms differently: Some included as part-time those faculty members who were part-time in the university, others included those who were part-time in the department; some counted emeritus professors as part-time, while others did not list them at all. Missing data were replaced with the mean for that cell calculated across available data. The missing data most often corresponded to number of students and degrees granted presented as a total and not broken down by sex.

Other limitations of these data are that post-doctoral and other research positions are, in general, omitted, and that linguists in other departments may not be reported by the person filling out the form. Some data, however, is included on linguists at research institutions. This set of institutions, however, is not very homogeneous and the number of linguists employed is rather small.

4. What types of institutions are represented?

The ARD (1982) source was used to rank 24 institutions. (These ranks are basically by peer review of linguistics departments by linguistics faculty members of various ranks; the publication should be consulted for details). All of the 'top 12' schools responded; eleven of the 'next 12' responded. Twenty other departments who called themselves 'Linguistics Departments' or 'Departments of Linguistics' were grouped together (abbreviated "other 1x" in Table II). Ten institutions called 'Linguistics and x' (where 'x' is 'special languages', 'languages', 'English', 'ESL', etc.) were grouped (abbreviated "1x & x" in Table II). Institutions that were already included among the ranked institutions were not included in this grouping. The 37 programs or committees on linguistics were grouped (abbreviated "prog" in Table II). There were also 17 departments other than linguistics who responded that they employed linguists (e.g., sociology, anthropology, English, foreign languages). This group is abbreviated "Other" in Table II. The 16 Canadian institutions (abbreviated "Can" in Table II) were grouped. Though some data on linguists employed at research institutions is included, this report this report concerns itself chiefly with women in linguistics at academic institutions.

No Computer Science departments responded, though it is not known whether they never received the forms or whether they failed to respond to forms sent them. Certainly it is not uncommon for linguists to be employed in computer science departments. [Maggie, could you rewrite this section indicating

who got sent the forms, the criteria for being sent forms, and add as an appendix the instructions that were sent with the forms?]

## 5. Summary of Results.

Table II is a summary of the data from SSF (1982). The top table shows how women are represented as a percent of the totals, by category of institution. The middle table shows women as percentages of totals (as above) in larger groups. The bottom table shows numbers of women in these categories. The numbers in parentheses in the two upper tables are those for which the total number of women is 10 or fewer. The column headed "N" indicates the number of institutions in each category. Faculty totals are full-time plus one-half of part-time personnel. Table III shows the breakdown of the variables not shown in Table II (tenure and status). Unless otherwise noted, the specifics discussed below pertain to the grouped data for the 123 responding institutions. Since this report is intended for linguists, the general results appear at the beginning of each section, with the statistical support for these claims in later paragraphs.

### 5.1 FACULTY.

There are more than three times as many male as female faculty members. There are more full professors than associate professors than assistant professors for men, while this distribution is reversed for women: women are much better represented at lower than at higher ranks. Women are proportionately better represented at the assistant than at the associate professor level, except for the top-ranked schools where women assistant professors are more rare than at other institutions. Part-time assistant professors are more likely to be women than men. This was also true in 1973 (PFN).

A 4-way analysis of variance performed on the number of faculty members with the factors of sex, status, rank (all four), and tenure revealed that all four main effects and all interactions were highly significant ($p<.0001$). Since, as seen in Table II, tenure is highly correlated with rank, the tenured and non-tenured positions within each rank were summed. Full-time equivalents were estimated by adding the full-time and one-half of the part-time positions. Since there was much confusion among the respondents as to whether T.A.s were lecturers or not, the lecturer rank was omitted in the following analysis. A two-way analysis of variance was then performed on the factors of sex and rank (assistant, associate, full). Both main effects and their interaction were highly significant ($p<.0004$ in all cases).

Another two-way analysis of variance was performed with the factors of sex and rank (associate and assistant only) in order to see if women are better represented at the assistant than at the associate level. The interaction of sex and rank is significant ($F(1,122)=32.4$, $p<.0001$), with a greater proportion of women represented at the assistant than at the associate professor level. While this interaction is significant for all the linguistics departments and programs grouped together, this pattern did not appear to be characteristic of all the different types of departments. Therefore, separate analyses of variance were conducted for the seven department types to test the sex-rank interaction. The interaction was found to be significant, with a greater proportion of women at the assistant than at the associate level, for the Canadian institutions, the 20 unranked linguistics departments, and the 37 linguistics programs. However, the interaction was not significant for the 'top 12' institutions, the 'next 12', the 10 'linguistics and x' departments, nor for the grouping of the 'top 24' departments. This indicates that for these latter groups, women are equally represented at the assistant and associate levels.

## 5.2 STUDENTS.

It was noted in 1973 (PFN) that women were increasing in numbers and in proportion among students and recent graduates. This trend also appears in the present data. A majority of B.A. students are women, and a majority of the B.A. degrees granted are to women. More than half of all M.A. students are women, and more than half of the M.A.s are granted to women. More than half of the Ph.D. students are women, and nearly half of the Ph.D.s granted are to women. Women are in the majority of Ph.D. students in departments of linguistics and X. Nearly all linguistics Ph.D. students who are in departments other than linguistics are women. A majority of Ph.D.s granted by linguistics programs and by Canadian institutions went to women. Women are not as well represented among those receiving Ph.D.s from the top ranked schools as among those those receiving them from other schools. There was a trend in this direction in the 1973 (PFN) data.

A three-way analysis of variance on the number of students with the factors of sex, student status (enrolled or graduating) and degree (B.A., M.A. and Ph.D.) was performed. All main effects were highly significant ($p<.0001$ in all cases), as were all interactions ($p<.002$ in all cases). Specifically, the interaction of sex and level was highly significant ($p<.0001$), with women more highly represented among students enrolled than among those graduating. The interaction of sex and degree was also highly significant ($p<.0001$), such that women were better represented at the lower than at the higher degree levels. The interaction of degree and student status was also significant ($F(2,244)=6.4$, $p=.002$): the ratios of students to degrees

granted differed by degree. This interaction indicates, as expected, that there are more students enrolled per graduating student for Ph.D. programs than for B.A. programs. There was also a significant 3-way interaction of sex, degree and student status ($F(2,244)=7.0$, $p=.0011$). Note the fact that some institutions do not have M.A. students but may award an M.A. as a terminal degree, which complicates the interpretation of some of these data.

Because this report is especially concerned with the status of women in professional programs, the following analyses were conducted on the Ph.D. students only. When a two-way analysis of variance was performed on the Ph.D.s only using the factors of sex and student status, sex was nearly significant ($p=.054$) (there are more women than men among Ph.D. students). Student status was, again, highly significant ($p<.0001$), with 6.8 times as many Ph.D. students enrolled as graduating. Sex interacted significantly with student status ($p=.024$): for women the enrolled to degree ratio is 8.1; for men it is 5.7. This difference is probably due to the increase in the proportion of women in Ph.D. programs in the past ten years (SRD) and to the fact that women tend to take about one year longer than men to finish a Ph.D. program (SRD). Note that it may also be true that women are more likely to be supported by their own sources than are men (SRD), which explain, in part, why it takes them longer to finish. Spouse support is not as important a factor as one might think since women in linguistics are far less likely to be married than are men (PFN, SRD).

## 5.3 STUDENT/FACULTY RATIOS.

There are 1.4 times as many women as men in the field. There is an average of 4.8 students per faculty member, with 11.4 female students per female faculty member, and 2.3 male students per male faculty member. When only Ph.D. students are considered, the ratio of women students to women professors is 2.1, for men students to men professors it is .6. Women are better represented among Ph.D. students than among assistant professors.

A two-way analysis of variance on the factors of sex and level (student or faculty) was performed. All main effects and interactions were highly significant ($p<.0001$). Another two-way analysis of variance was performed using only the Ph.D. students with the factors of sex and level. Sex and its interaction with level were both highly significant ($p<.0001$), showing that there is a greater concentration of men at the faculty than at the student level. A two-way analysis of variance on Ph.D. students and Assistant professors with the factors of sex and level revealed, again, a significant interaction of sex and level ($F(1,122)=7.3$, $p=.008$). That is, as noted, women are better represented among Ph.D. students than among Assistant

Professors. This effect holds for all groupings where 90 or more institutions are included, though the trend is apparent everywhere. It is a significant effect for the group of linguistics programs ($F(1,36)=5.0$, $p=.0317$). As a further note, there are 6.1 female Ph.D. students for every female assistant professor, 3.6 male Ph.D. students for every male assistant professor, 9.1 female Ph.D. students for every female associate professor, 1.9 male Ph.D. students for every male associate professor, 15.0 female Ph.D. students for every female full professor, and 1.4 male Ph.D. students for every male full professor.

## 5.4 WOMEN AS FACULTY MEMBERS.

One might expect the number of Ph.D.s granted to women to be a good predictor of the number of women Assistant professors. The numbers of Ph.D.s granted in any one year, however, are rather small, and not necessarily representative of the proportions of men and women in the pool of applicants for any job. However, DPL reveals that on the average assistant professors got their degrees 3.7 years ago, the associate professors got their degrees 8.7 years ago, and full professors got their degrees 16.2 years ago. If one considers the percentage of Ph.Ds in linguistics granted to women over a 3 year period centered at intervals 4, 9, and 16 years before the date of the present data collection (i.e., in 1978, 1973, and 1966, respectively), one would predict (from figures in EDC and DES) that 41% of assistant professors; 35% of associate professors and 27% of full professors to be women, if women were represented in proportion to their availability. As can be seen in Table II, women do not appear to be represented in proportion to their availability among associate and full professors. In 1973 (PFN) it appeared that hiring had not kept pace with the increasing numbers of women linguists on the job market. Now, however, hiring at the assistant professor level seems to have caught up (except at the more highly ranked institutions). Discrepancies between availability of women and appointments of women at associate and full professor levels remain, however, at all groupings of institutions examined.

It is not likely that these disparities are a result of women choosing to depend on a spouse for income rather than seeking employment themselves. Recent data (SRD 1981) indicate that 94.8 percent of the women polled, and 96.6 of the men polled plan employment after graduation. Further, data in SRD (1981) and in PFN indicate that women Ph.D.s in linguistics are far more likely to be single than are men (in 1973 nearly half of the women were single, while less than one-sixth of the men were). Thus, it is not likely that women are under- and unemployed by choice.

Women are no better represented at the assistant level than at the associate level in the 'top 12' schools even though their availability has greatly increased in recent years. Numbers of women Ph.D.s produced has increased at all schools, including these 'top 12' institutions. It is more likely that institutions are choosing not to hire women than that women are turning down positions or not applying to the highly ranked institutions.

### 5.5 Research Institutions.

There are 26 research institutions listed in the DPL 1982. Some of these institutions are purely academic, some are academic affiliates, some are staffed by people whose main affiliation is at an academic institution already covered in this report, some are purely industrial/business groups. The factors of "academic freedom" and "financial reward" can be expected to vary greatly among this diverse set of institutions. The subset of 16 institutions appearing in the 1980 DPL were asked how many full-time employees had degrees in linguistics and of those how many were women. Of these 16 institutions, 4 reported no linguists (Bolt, Beranek, and Newman; General Motors; Sperry Univac; SRI International). The institutions who employed no linguists tended to be the more "for-profit" and less academic of the institutions. Some wrote that none of their employees had degrees in linguistics, but were, nonetheless, linguists. Seven institutions employ linguists who were not also affiliated with academic institutions included in the SSF data. The largest employer of linguists of the research institutions (and perhaps the largest employer of linguists in the U.S. or Canada) is SIL, which employs 64 linguists who are not affiliated elsewhere. Of these 64 linguists, 17 (or 27%) are women. This is a little better representation than at the academic institutions already discussed. The other 6 research institutions that employ linguists report a total of 15 linguists, of whom 7 are women. At present there are apparently not many linguists employed outside academic institutions, but opportunities for linguists may be growing in this area. It does not appear that the opportunities are any better for male than for female linguists.

## 6. DISCUSSION

These data indicate that while women are well-represented in the field, they are concentrated at the lower levels of rank among professors, institutions and degrees offered. We are particularly concerned about the trend for the more highly ranked schools to produce slightly fewer women Ph.D.s than elsewhere and to hire them much less often than elsewhere. This is especially distressing since these schools also tend to be the largest in terms of numbers of students, degrees granted and numbers of linguists employed.

We believe that most people want to treat others fairly and that the above patterns of discrimination are not the result of conscious decisions to try to exclude women from the field. The discriminatory patterns in our data reflect, we feel, a discriminatory society that has led to different treatment and expectations of males and females from birth. It is therefore difficult to point out exactly where discrimination comes in. Is it, for example, in hiring and promotion decisions or in committee assignments and course loads? Or is it in the writing of the job description? Is it in advising students, calling on them in class, or writing letters of recommendation for them? We believe that (1) responsibility for change rests with the entire community, that (2) most people in our field are interested in providing equal opportunities for all members to make their best contribution, and that (3) pervasive subtle discrimination can do as much damage, if not more damage than, isolated incidents of overt discrimination. Therefore we wish to discuss in more detail some of the patterns of subtle social and professional discrimination and their effect on women. Members of minority groups likely encounter many of the same problems we describe. We hope that the discussion of these issues will heighten awareness of these problems and lead to changes in behavior and in attitudes.

Discrimination in our society is severe and wide-spread. No environment is immune from the pressures of wider societal patterns. Denials and superficial dismissals will not make the problems go away. It may be tempting to shrug off some of these problems as merely showing oversensitivity on the part of women, and no doubt many women are by now overly sensitive. Still, we owe it to ourselves and to the field to consider how subtle aspects of our behavior and attitudes may affect the discriminatory patterns that may prevent half the members of the linguistic community from making their best contribution to the field.

## 6.1 WHAT IS SUBTLE DISCRIMINATION?

Subtle discrimination consists of patterns of actions that are not intended to be discriminatory yet that result in undermining the image of women to themselves and to others. Appendix I of this report is a description of subtle discrimination and associated problems. The report was prepared by Mary Rowe, Special Assistant to the President at MIT.

## 6.2 WHAT SOCIAL PROBLEMS DO WOMEN FACE?

In a field where the faculty is predominantly male and the students are predominantly female, both students and faculty should pay particular attention to romantic attractions that may be complicated by the asymmetry of one party's power over the

career of the other. Women students may in some ways be at an advantage by being attractive to male faculty members. At the same time, the extra attention can be a serious disadvantage if it is based more on their physical rather than their professional qualities, or if other students and faculty members assume that this is the case. A further disadvantage for women is that they may be left out, or choose to avoid informal social encounters with male faculty members for fear of possible repercussions, or rumors.

The predominantly male faculty and predominantly female student population leads to other problems. The old boy network is not a perverse scheme dreamed up by men in order to exclude women, it just happens to work that way. Because gender identification is so strong in our society, it is easier for a student to choose a role model of the same sex. Similarly, a faculty member can identify better with a student of the same sex. Further, habits of social interactions may make communication easier for same-sex interactions. This provides for inertia in the system: the perpetuation of past patterns of discrimination. It also puts women at a disadvantage: it makes it difficult for female students to have access to appropriate role models and to gain the advantages of a same-sex mentor who is also famous and powerful enough to help further the student's career. It also makes it difficult for female faculty members who may feel overwhelmed by the demands of female students looking for advice and/or role models. Still another disadvantage for women related to sex imbalances is that they will be judged in class, in job interviews and for promotion decisions by male standards: lack of aggressiveness may put them at a disadvantage, while the same behaviors seen as "forceful" in a man may be viewed negatively when used by a woman.

## 6.3 WHAT PROFESSIONAL PROBLEMS DO WOMEN FACE?

### 6.3.1 Students.

Women students may be less likely to be supported by departmental funds (SRD, 1981 showed this for the category that includes linguistics but does not show data on linguistics as a separate group). This overt discrimination may arise from more subtle forms such as equating aggressive verbal behavior as a sign of competence, or confusing confidence with competence. Comments on student papers may also differ systematically with the sex of the author: "this work is sloppy" on a male's paper may appear as "you are sloppy" on a female's. Men students may receive more encouragement to publish their papers than women. Women may be given T.A. assignments that involve xeroxing, stapling and proofreading, while men may lead recitation sections. Areas of linguistics that seem to be populated by women may be viewed as inferior areas and turn into female ghettos. When letters of recommendation are written for a woman,

the writer may focus on how well she gets along with people, while letters for a man may include details of his work and results. Frustrated women who leave the field may be blamed for their lack of interest. Frustrated men at MIT have said they cannot leave the field because the field would suffer.

### 6.3.2 Faculty.

Women faculty face many of these same problems, yet they in general do not have the peer support that women students have. They may be the only female faculty member and often are the only female junior faculty member. They may be overrun by male and female students seeking a sympathetic ear. At the same time this sympathetic ear may be viewed as a lack of the aggressiveness needed to change the field. On the other hand, if she is as aggressive as a male colleague, a female faculty member may be labeled "hostile". Women faculty members may be given larger course loads, or the introductory courses with larger enrollments. Women are more likely to be offered and to accept smaller salaries and part-time positions, and may be viewed as second-class citizens because of it. Women may spend a lot of their time serving as the token woman on every committee, time that is often not rewarded at tenure decision time. Women may be viewed as not as good as men because there are so few of them on the faculty: if one in ten linguists are exceptional, a faculty consisting of 13 male faculty members and 2 female members (a typical ratio for the 'top 12' schools) will be 6.5 times as likely to find that truly brilliant linguist to be a male as to be a female. What is more, those two female faculty members are more likely to be at the beginning of their careers than are the males and they are more likely to be part-time. This is not to say that evil forces have conspired to create this situation: it has arisen from the usual economic and social forces and changes. But it is important to point out examples of how our perceptions and expectations may be formed, so that we can treat all people as individuals and work consciously for the good of our field rather than unconsciously for the good of the status quo.

## 7. RECOMMENDATIONS

### 7.1 FOR FACULTY MEMBERS

Call this report to the attention of students, especially to undergraduates considering graduate school in linguistics.

In a meeting or class discussion, if someone has something to say, make sure (s)he has a chance to say it without interruption. Some people talk louder and longer than others and may have to be asked to allow others to finish speaking.

Intervene in communication patterns among men and women that exclude women. Pay particular attention to classroom interaction during the first few weeks of class since habits of communicative interaction are often formed at this time.

Recognize the fact that professional competence is NOT a correlate of a high degree of assertiveness and a confrontational style of interaction. Watch for and respond to nonverbal cues that indicate readiness to participate in a discussion. Do not ridicule women who have adopted a 'masculine' style.

Use student evaluations as a source of feedback on real or perceived differential treatment of male and female students.

Include women in informal discussions and introduce them to visiting scientists.

Discuss academic and career goals with women, nominate them for awards and prizes, encourage them to do research and to publish their work, recommend them for jobs.

Provide and promote formal and informal training in verbal and written presentations.

In reviewing articles, in making hiring and promotional decisions, in reading and writing letters of recommendation, consider how something is said, what is said, and the relative contributions of each.

Try to ascertain the causes for any sex-related differences in evaluations, financial support, and T.A. assignments.

Women faculty members should realize that if they agree to represent "the woman's view" on every committee, the department may never feel obliged to hire another woman.

7.2 FOR STUDENTS.

Consider the data in this report when choosing a school. The employability of graduates does not differ significantly for the top 12 schools compared to the next 12 schools: at the time of graduation 65% (s.d. = 8) of new Ph.D.s from the 'top 12' schools have employment commitments; 66% (s.d. = 9) of them from the 'next 12' schools do. For employment at academic institutions these figures are 36% (s.d. = 13) for the 'top 12' schools and 32% (s.d. = 14) for the 'next 12'. Yet the discriminatory patterns are much less strongly marked at the group of schools ranked 13-24 than at the top 12. Consider also that the rankings by peer review are often based not on the current status of a department, but on its status perhaps a decade ago. Thus we cannot equate the peer review ranking with present quality of a department. Further, as scientists we are

expected to be objective and unbiased in our work. If clear patterns of lack of objectivity and bias in dealing with attributes of individuals that cannot be changed (such as sex, -- neither the social nor the physical correlates can be easily changed anyway), can we be sure that the professional work of those involved is not also pervaded with bias and lack of objectivity? Of course, each institution needs to be examined individually and evaluated in terms of the needs and interests of each student. As an aside to students, we would also like to note that 66% of new Ph.D.s polled said they expected an academic job, while only about 30% of them reported getting them.

### 7.3 TO DEPARTMENTS AS A WHOLE

Consider these data and the sources of patterns of discrimination. Keep them in mind when hiring and promotion decisions are made.

Consider the problems for faculty and for students created by the fact that most students are women while most faculty members are men.

Promote open discussion between women and men of these and related issues.

Establish formal grievance procedures that address both overt and subtle inequities.

Actively recruit female faculty.

Maintain records on students that leave the department or the field in order to assess reasons for departure.

Encourage the visibility of women faculty and students at conferences.

When a colleague engages in inappropriate behavior, recognize that it is everyone's responsibility to speak out, even though it may feel awkward and may possibly offend someone.

Consider why some areas within linguistics or within a department are comprised almost entirely of men or of women. Consider also the causes of differing status among various sub-fields.

As linguists, we should be attuned to differences between what we say and how we say it. Study hedges and markers of uncertainty. Study propaganda or persuasive writing styles and evaluate articles, books, letters of recommendation, student papers in these terms. Rewrite a famous article omitting embedded assertions and adding hedges. Resubmit for publication.

Students and faculty members may be interested in two publications by Susan Goldhor concerning women in academia, "How to get a job", and "How to keep a job". These can be obtained by sending $1 and a self-addressed envelope to Dr. Susan Goldhor, NEFC, Hampshire College, Amherst, MA 01002.

TABLE I. Comparison of data from two sources.

Women as a percent of total faculty personnel at 20 linguistics departments other than 'top 24'. Part-time personnel are counted equally with full-time since there is no way of determining this status from DPL.

| | ASSISTANT | ASSOCIATE | FULL |
|---|---|---|---|
| SSF | 67 | 18 | 13 |
| DPL 1982 | 57 | 20 | 15 |

Degrees granted to women (all U.S. institutions). Parentheses indicate 1979-80 figures since the 1980-81 figures are apparently not yet available. Some TEFL/TESL degrees may be included in the SSFdata.

| | B.A. | M.A. | Ph.D. |
|---|---|---|---|
| NUMBERS OF WOMEN | | | |
| SSF | 323 | 354 | 76 |
| DES (BA, MA), SRD (PHD) | (418) | (314) | 78 |
| PERCENT WOMEN (OF TOTAL) | | | |
| SSF | 71 | 68 | 45 |
| DES (BA, MA), SRD (PHD) | 76 | 60 | 44 |

TABLE II

WOMEN AS A PERCENTAGE OF TOTALS. Faculty figures represent percent women of total personnel, counting part-time personnel as one-half person. Parentheses indicate figures for which the total number of women is 10 or fewer. The column headed "N" indicates the number of institutions included in each group. The abbreviations used for the various groupings are explained in section 4.

| | | FACULTY | | | STUDENTS | | | DEGREES GRANTED | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GROUP | N | ASST | ASSC | FULL | BA | MA | PHD | BA | MA | PHD |
| top 12 | 12 | (25) | (26) | 12 | 76 | 51 | 53 | 68 | 55 | 37 |
| next 12 | 11 | 53 | (26) | (7) | 55 | 60 | 57 | 76 | 63 | 49 |
| other 1x | 20 | 65 | (18) | (14) | 68 | 60 | 60 | 70 | 74 | (39) |
| 1x & x | 10 | (36) | (8) | (20) | 60 | 73 | 78 | 72 | 77 | (50) |
| prog | 37 | 40 | 21 | 13 | 64 | 70 | 61 | 73 | 71 | 67 |
| other | 17 | 44 | (23) | (14) | 63 | 85 | (91) | 72 | (63) | - |
| Can | 16 | 38 | 21 | (4) | 78 | 67 | 56 | 78 | 77 | (71) |
| top 24 | 23 | 40 | 26 | 9 | 68 | 57 | 55 | 71 | 61 | 43 |
| " + 1x | 43 | 49 | 23 | 10 | 68 | 59 | 55 | 70 | 65 | 42 |
| " +1x&x | 53 | 47 | 20 | 11 | 65 | 63 | 56 | 70 | 67 | 43 |
| " +prog | 90 | 44 | 21 | 12 | 65 | 64 | 56 | 71 | 68 | 45 |
| all US | 107 | 44 | 21 | 12 | 65 | 65 | 56 | 71 | 68 | 45 |
| " +Can | 123 | 43 | 21 | 11 | 68 | 66 | 56 | 73 | 68 | 47 |

NUMBERS OF WOMEN. Faculty figures represent number of full time personnel plus one half of each half-time person.

| | | FACULTY | | | STUDENTS | | | DEGREES GRANTED | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | ASST | ASSC | FULL | BA | MA | PHD | BA | MA | PHD |
| top | 12 | 6.5 | 9 | 10.5 | 275 | 62 | 252 | 71 | 37 | 23 |
| next | 11 | 16 | 9 | 6 | 108 | 170 | 266 | 42 | 109 | 30 |
| 1x | 20 | 20.5 | 9.5 | 7 | 337 | 226 | 68 | 85 | 92 | 9 |
| 1x & x | 10 | 6 | 1.5 | 6 | 304 | 229 | 14 | 31 | 54 | 2 |
| Prog | 37 | 39 | 28 | 11 | 340 | 151 | 23 | 68 | 52 | 12 |
| Other | 17 | 13 | 5.5 | 3.5 | 116 | 85 | 10 | 26 | 10 | 0 |
| Can | 16 | 12.5 | 13 | 2 | 586 | 134 | 57 | 107 | 30 | 10 |
| TOTALS | 123 | 114 | 76 | 46 | 2066 | 1057 | 690 | 430 | 384 | 86 |

TABLE III. Full-time/part-time employment and tenure.

| | ASSISTANT | ASSOCIATE | FULL |
|---|---|---|---|
| % full-time, of women | 88 | 94 | 88 |
| , of men | 92 | 90 | 91 |
| of part-time, % women | 62 | 15 | 17 |
| % with tenure, of women | 23 | 94 | 96 |
| , of men | 29 | 94 | 99 |

## APPENDIX I

This report originally appeared as "Saturn's Rings Phenomena: micro-inequities and unequal opportunity in the American Economy" in the Proceedings of the National Science Foundation Conference on Women's Leadership and Authority, University of California, Santa Cruz, 1977. It has also appeared in "Barriers to Equality in Academia: Women in Computer Science at MIT", prepared by female graduate students and research staff in the Laboratory for Computer Science and the Artificial Intelligence Laboratory at MIT.

## APPENDIX II

Sample of forms sent and instructions given. [Maggie, please add this]

## III.2 Mary Rowe -- Subtle Discrimination

I believe that subtle discrimination is a major barrier to equal opportunity -- and can cause serious damage, for the following reasons.

- Subtle discrimination often leads to more explicit discrimination. Thus, ignoring women is a habit that may lead to overlooking a woman who might be the best-qualified person for a job or promotion or to underpaying women.

- Because the provocation for discrimination -- one's gender -- cannot be changed and has nothing to do with one's work, one inevitably feels helpless.

- Subtle discrimination takes up the victim's time. Sorting out what is happening and dealing with one's pain and anger take time. Extra time is also demanded of many women and men to help other women deal with the pain caused by subtle discrimination.

- Discrimination prevents people from doing work that is as good as they are capable of doing. If a secretary or graduate student is unreasonably overloaded with menial work for a supervisor, the overloaded person may be prevented from doing the kind of excellent work that prepares her for promotion. Subtle forms of discrimination can cause much damage before it is recognized.

- Subtle discrimination is particularly powerful as negative reinforcement because it is hard to identify. This means that these inequities are hard for a victim to "turn off." It also means that frequent victims, like women, experience a range of emotions from legitimate anger to paranoia. The experience of being uncertain about whether one was insulted causes displaced and misplaced anger. It also causes one to ignore some real insults, so that they persist.

- Subtle discrimination often is not *intentional*, even when objective observers would agree that it exists and that an injury really took place. This is another reason it is hard for a victim to respond to it. We are all socialized to believe that *intent* to injure is an important part of injury, and it is certainly critical to our dealing with injuries at the hands of others. Faced with a subtly discriminatory act, the victim may not be certain of the motives of the aggressor and may be unwilling to start a fight where none was intended. When uncertain about motives, most victims at times do not get angry when they should, which perpetuates the injuries and may weaken the victim's self-image. At other times, they protest when no injury was *consciously* intended, even though it occurred. The latter situation can be salutary for all concerned, especially if the aggressor reacts by acknowledging an unconscious intent to injure. However, sometimes the aggressor is so totally unaware of aggressing that, even though observers agree that an injury took place, he may respond with anger, feelings of betrayal or bewilderment, or worse.

- Subtle discrimination seems petty, in a world where redress by the less powerful often seems heavy-handed or too clumsy. Unionization, going to court, and appeal to the President's office may seem heavy weapons against subtle discrimination. The perceived lack of *appropriate* weights of redress helps perpetuate subtle discrimination.

- Subtle discrimination of some types may have a negative Pygmalion quality. That is, the expectation of poor performance, or the lack of expectation of good performance, may by

itself do damage because students and employees have a strong tendency to do what is expected of them. As Sartre noted throughout his book on anti-Semitism, the anti-Semite creates the Jew.

The question is frequently raised whether subtle discrimination does not just "happen to everyone?" Are we not just describing the general inhumanities of large organizations? Frequently, I will talk with a powerful white male who openly says "I harass everybody, Mary. I don't discriminate." Let me raise here hypotheses as to why subtle discrimination might be worse for women in paid employment (especially for women in traditionally male employment), than for the average white man. Some hypotheses as to why subtle discrimination may do more damage to women are analogous to the hypotheses as to why they do damage at all.

- "General" harassment often takes specifically sexist forms when applied to women. One might say to a man "Your work on this experiment has been inexcusably sloppy; you'll never make it that way!" When addressed to a woman, the same criticism might come out as "My God, you think no better than my wife; go home and have babies!" The harassment of women piles up in allusions to sex roles. Like the dripping of water, endless drops in one place have profound effects.

- Discrimination often is perpetuated by more powerful people -- most of whom are male -- against less powerful people -- most of whom are female. Since less powerful people by definition have less influence, it is difficult for them to stand up against discriminators who happen to be their supervisors or advisors.

- Some traditional white, male environments support and reinforce certain kinds of discriminatory behavior, like the telling of aggressive and humiliating dirty jokes in a lab.

- Men may overlook some sexist behavior because it is so "normal." Many male supervisors are acutely uncomfortable around secretaries and consequently ignore them, but neither they nor male bystanders notice this. Pornography on walls, sexist jokes, and the use of sex in advertisements and announcements are so ubiquitous that many people do not consciously notice it.

- Women in non-traditional positions have a more acute role-modeling problem, because they witness subtle discrimination against others like themselves. Disproportionately more women see people "like them" put down or ignored by their superiors. In most work environments, the principal, same-sex role models for women are clerical and hourly workers, who are the groups that most frequently report subtle discrimination. This inadvertent role-modeling is made stronger because nearly all women are at one time or another assumed to be clerical workers (or waitresses or saleswomen, depending on the situation). A young female engineer says "I am constantly being taken for what I am not. I constantly feel a struggle to develop my own self image, but it is not affirmed by most of the world around me, as it is for my male colleagues."

- It is harder for women to find mentors to help them deal with subtle discrimination. There are so few senior women in most organizations that junior members of most communities cannot find as many high-status, same-sex mentors as white males can find. Sometimes,

higher-status women try to compensate by spending extra time as same-sex mentors. However, it is inevitable that the burden of dealing with discrimination falls on women who are already disproportionately drained of energy by caring for others.

- It is particularly difficult to find an *appropriate* mentor when one has been the victim of sexist discrimination. Listeners of the opposite sex may not understand. Listeners of the same sex may be so discouraged, angry, or full of denial that they are worse than useless. I believe that it is often more difficult for women to find adequate help in dealing with the minutiae of sexism than for average members of the community to deal with "general inhumanities."

I believe there are many reasons why the problem of subtle discrimination for women goes beyond the *general* inhumanities of large organizations. This point may become clearer to male readers if they imagine being a child-care worker in a large, conservative, inner-city, day-care system. The "general harassment" might include questions and comments about your sexuality. You might hate always being asked by visitors why you are there. Other white males might find you odd. Women might distrust your skills, simply because you are male. You might find the constant assumption that women care for children better than men to be very oppressive -- the advertisements, the jokes, the pictures on the walls, the fathers deprived of custody. Since you might in fact *be* inept in some ways at the beginning, this criticism might hinder your professional development. You might be very sensitive to the just run-of-the-mill anger of your cross-sex supervisor. You might have no one like yourself to turn to.

In summary, I believe that subtly discriminatory behavior causes pain and, for women, the pain often occurs in an environment they cannot easily control, evade, or ameliorate. Continued experience of destructive situations which cannot be improved can start unhappy cycles of behavior ranging from declining self-esteem to withdrawal, resignation, poor work, fantasies of violence, and so on. At the very least, it takes a lot of energy to deal with an environment perceived as hostile, or to continue to deny the difficulties.

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The Status of Women in Linguistics

1. Where did the data come from?

The LSA $$Survey of Students and Faculty in Linguistics$$ ($$SSF$$) sent to 202 U.S. and Canadian department or program chairs in linguistics in March 1982 was the principle source of data. Representatives from 170 institutions responded. Of these, 123 reported faculty or students in lingusitcs. This is a very high response rate: there are only 123 institutions listed in the 1982 Directory of Programs that offer B. A.s or higher in linguistics. Other sources of data include: $$Summary Report of Doctorate Recipients from U.S. Universities$$ (1955-1981) ($$SRD$$), $$Directory of Programs in Lingustics in the U.S. and Canada$$ (1980, 1982) ($$DPL$$), and $$An Assessment of Research-Doctorate Programs in The U.S.: Humanities$$ (1982) ($$ARD$$).

2. What is covered by the data?

$$SSF$$ provided data on (1) students enrolled by degree (B.A., M.A., Ph.D.) and sex, (2) degrees granted by degree and sex, (3) faculty by rank (lecturer, instructor, assistant, associate, full), status (full-time, part-time), tenure (with, without) and sex. The $$DPL$$ and $$SRD$$ sources were used to estimate variabilty and reliability of the data. The $$ARD$$ source was used in a rough ranking of the institutions and both $$ARD$$ and $$SRD$$ were used as aids in interpreting the data.

3. How reliable are these data?

As with most linguistic data, the clear picture we would like to present is clouded because things change and because things resist our categorization. The data obtained were within 5% of those obtained through other sources with the exception of the number of women at the assistant professor level. The 20 linguistics departments other than those included in the top 24 reported 65% of their assistant professors were women, while the names listed in the 1982 $$DPL$$ indicate that the proportion of women among assistant professors for this group is closer to 55%. The reliability of the data tends to be better for the lingusitics departments than for the 'Departments of Linguistics and x' or for 'Programs' or 'Committees' in linguistics. This is because the departments showed a slightly higher response rate, involved fewer categorization problems, and had fewer missing data points. Different departments defined the terms differently: Some included as part-time those faculty members who were part-time in the university, others included those who were part-time in the department; some counted emeritus professors as part-time, while others did not list them at all. Missing data was replaced with the mean for that cell calculated across available data. The missing data most often corresponded to number of students and degrees granted presented as a total and not broken down by sex. A further problem with these data is that post-doctoral and other research positions may be entirely neglected and that linguists in other departments may be missed by the person filling out the form.

4. What types of institutions are represented?

The $$ARD$$ source was used to rank 24 institutions. (These ranks are basically based on peer review; the publication should be consulted for details). All of the 'top 12' schools responded; eleven of the 'next 12' responded. Other departmets who called themselves 'Linguistics Departments' or 'Departments of Linguistics' were grouped together. Ten institutions called 'Linguistics and x' (where 'x' is 'special languages', 'languages', 'English', 'ESL', etc.) were grouped. The 37 programs or committees on linguistics were grouped. There were also 17 departments other than linguistics who responded that they
employed linguists (e.g., sociology, anthropology, English, foreign languages). No Computer Science departments responded, though it is not known whether they never received the forms or whether they failed to respond to forms sent them. Certainly it is not uncommon for linguists to be employed in computer science departments.

5. Summary of Results.

Table I shows the numbers of women (total, at bottom, and as a percent of the total, at the top) among faculty, students and degrees granted. The numbers in parentheses are those for which the total number of women is 10 or fewer. At the far right are the total number of Ph.Ds granted and faculty employed. Faculty totals are full-time plus one-half of part-time personnel. Table II shows the breakdown of the variables not shown in Table I (tenure and status). Unless otherwise noted, the specifics discussed below pertain to the 123 responding institutions as a group.

FACULTY. A 4-way analysis of variance was performed on the factors of sex, status, rank (all four), and tenure. All main effects and all interactions were highly significant ($p<.0001$). Since, as seen in Table II, tenure is highly correlated with rank, the tenured and non-tenured positions were summed. Full-time equivalents were estimated by adding the full-time and one-half of the part-time positions. Since there was much confusion among the respondants as to whether T.A.s were lecturers or not, this level was deleted from the factor of rank. A two-way analysis of variance was then performed on the factors of sex and rank (assistant, associate, full). Again, all main and interacting effects were highly significant ($p<.0004$ in all cases). This is not too surprising. These effects can be explained in Enlgish as follows. There are more than three times as many male as female faculty members; there are more full professors than associate professors than assistant professors; and women are much better represented at the lower than at higher ranks. A two-way analysis of variance was performed with the factors of sex and rank (associate and assistant) in order to see if the situation is getting better. That is, are women better represented at the assistant than at the associate level? That the interaction of sex and rank is significant ($p<.002$) and that the proportion of women at the assistant level is greater than at the associate level indicate that things do appear to be getting better in general. This effect holds for the 20 linguistics departments, the 37 linguistics programs, and for the Canadian institutions. It does not hold for the top 12 institutions, nor for the next 12 (though in the second case there is a trend in this direction), nor for the 10 departments of 'Linguistics and x'.

STUDENTS. A three-way analysis of variance on the factors of sex, level (student or degree granted) and degree (B.A., M.A. and Ph.D.) was performed. All main and interacting effects were significant ($p<.002$ in all cases). There are nearly twice as many female as male students; more students are (of course) enrolled than are granted

degrees in a given year; the ratio of students to degree granted is larger for men than women; there are larger numbers of students at the lower degree levels; women are better represented among the lower degree levels than at the Ph.D. level; the student enrolled to degree granted ratio is higher for Ph.D.s than for the B.A. and M.A.s (the M.A. is complicated by the fact that some places do not have M.A. students but may award an M.A. as a terminal degree); and the percent of women granted degrees is greater than the percent of women enrolled for the B.A. and M.A. but not for the Ph.D. When a two-way analysis of variance was performed on the Ph.D.s only using the factors of sex and level, sex was nearly significant (p=.054) (there are more women than men among Ph.D. students). Level was, of course, highly significant (p<.0001): there are 6.8 times as many Ph.D. students as degrees granted. Sex interacted significantly with level (p=.024): for women the enrolled to degree ratio is 8.1; for men it is 5.7. This is probably due to the increase in the proportion of women in Ph.D. programs in the past ten years ($$SRD$$) and to the fact that women are more likely to be supported by their own sources and to take about one year longer than men to finish a Ph.D. program ($$SRD$$). The interaction of sex and level was not strong; there is a lot of variability among the schools. It only began to be significant when the number of schools included in the analysis was greater than 50.

STUDENT/FACULTY RATIOS.

A two-way analysis of variance on the factors of sex and level (student or faculty) was performed. All main effects and interactions were highly significant (p<.0001). There are 1.4 times as many women as men in the field; 4.8 students per faculty member; 11.4 female students per female faculty member and 2.3 male students per male faculty member. A two-way analysis of variance was performed using only the Ph.D. students with the factors of sex and level. Sex and its interaction with level are both highly significant (p<.0001): there are 1.4 times as many men as women among faculty and Ph.D. students; the ratio of women students to women professors is 2.1, for men students to men professors it is .6. A two-way analysis of variance on Ph.D. students and Assistant professors with the factors of sex and level revealed, again, a significant interaction of sex and level (p=.008): women are much better represented among Ph.D. students than among Assistant Professors. This effect holds for all groupings where 90 or more institutions are included, though the trend is apparent everywhere. It is also a significant effect for the group of linguistics programs (p=.032). As a further note, the Ph.D. student to faculty ratio for associate professors is 9.1 for women, 1.9 for men; for full professors the ratios are 15.0 for women and 1.4 for men.

WOMEN AS FACULTY MEMBERS

Since 38% of the Ph.D.s in Linguistics granted in the past ten years have been to women, one might expect the number of Ph.D.s granted to be a good predictor of the number of Assistant professors to be found among the faculty members. The numbers of Ph.D.s granted in any one year, however, are rather small, and not necessarily representative of the proportions of men and women in the pool of applicants for any job. However, $$DPL$$ reveals that on the average assistant professors (whether male or female) got their degrees 7.2 years ago, the associate professors got their degrees 12.2 years ago (whether male or female), and full professors go their degrees 19.5 years ago if they are men and 20.4 years ago if they are women. [fill in data] If one considers the percentage of Ph.Ds in linguistics granted to women over a 4 year period centered at

intervals 7, 12, and 20 years ago, women do not appear to be represented in proportion to their availability among associate and full professors. Recent data ($$SRD$$ 1981) indicate that 94.8 percent of the women polled, 96.6 of the men polled plan employment after graduation.

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SUMMARY REPORT ON THE STATUS OF WOMEN IN LINGUISTICS

This report is intended to be an advertisement for a fuller report available upon request by sending $1 for postage and handling to .... The data are based principally on the LSA %%Survey of Students and Faculty in Linguistics%% sent to 202 U.S. and Canadian department or program chairs in linguistics in March 1982. Other sources include: %%Summary Report of Doctorate Recipients from U.S. Universities%% (1955-1981), %%Directory of Programs in Linguistics in the U.S. and Canada%% (1980, 1982), and %%An Assessment of Research-Doctorate Programs in The U.S.: Humanities%% (1982).

FACULTY. There are more than three times as many male as female faculty members teaching linguistics in the U.S. and Canada. Most faculty members are full professors, of which 89% are men. At the assistant professor level women appear to be represented in proportion to their availability %%except among the more highly ranked schools%%. Women may be systematically under-represented in Canadian institutions and in program in linguistics. Women are %%not represented in proportion to their availability among associate professors, nor among full professors%%.

STUDENTS. %%There are nearly twice as many female students as male students.%% There are slightly more women than men among Ph.D. students, and women form a strong majority among B.A. and M.A. students. The proportion of women among Ph.D. students seems to be increasing.

STUDENT/FACULTY RATIOS. There are 1.4 times as many women as men in the field: %%for every female faculty member there are 11.4 female students%%; %%for every male faculty member there are 4.8 male students%%.

%%The sex imbalances increase with the rank of the school%%. Note that the top 43% of the linguistics departments employ 60% of the linguists and grant 83% of the Ph.D.s.

%%We recommend that departments consider these data in hiring and in promotion decisions%%. We are particularly concerned about the trend that the so-called top schools are those that are producing most Ph.D.s and employing most linguists and yet in general show no sign of improvement in discriminatory patterns over the past 12 years or so.

We also recommend that departments consider the problems related to the fact that %%most students are women while most faculty members are male%%. Women students may, for example, have trouble gaining access to the faculty members who are most likely to serve as their role models or who have special insights and advice to offer on the issues they will face as professional women. Further, women faculty may be overrun by students. In departments that value research more than training of students, this may play a negative role in decisions relating to the promotion of female faculty members.

We further recommend that %%students%% consider these data in choosing a school: %%the employability of graduates does not differ significantly for the top 12 schools compared to the next 12 schools%%, yet the discriminatory patterns are much less strongly marked at the group of

schools ranked 13-24 than at the top 12. Of course each school needs to be examined individually in making such a decision. A further note to students:
consider that 66% of new Ph.D.s polled expect an academic job, while only about 30% of them get them. %%We urge faculty members to call this report and the more detailed one to the attention of their students, particularly undergraduate students%%.

This project was carried out by Patti Jo Price with the help of: Vickie Bergvall, Martha Danly, Sarah Hawkins, S. Jay Keyser, Mary Laughren, Lori Levin, Andrea Levitt, Edith Maxwell, Lise Menn, Karin Nilsson, Loraine Obler, Maggie Reynolds, Stefanie Shattuck-Hufnagel, Lisa Travis, Anne Zaenen.