

**A STUDY OF GENDER EQUITY IN THE
FACULTY OF ARTS AND SCIENCES,
RUTGERS UNIVERSITY-NEW BRUNSWICK**

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TABLE OF CONTENTS

	<u>Page</u>
I. Introduction	3
II. Gender and Racial Composition of Faculty, Promotion Rates, and Reasons for Leaving	5
III. Academic Salaries	13
IV. Support Structure: Start-Up Funds, Research Accounts, and Summer Salaries	20
V. Space and Physical Environment	23
VI. Leadership Opportunities	26
VII. Perceptions	30
VIII. Summary of Findings	39
IX. Recommendations	40
Meeting Dates	44
Relevant Literature	44
Acknowledgments	45
<u>Appendices:</u>	
I. Spring 2000 Interviews With Senior Faculty	
II. Charge to the FAS Committee on Gender Equity	
III. February 28, 2001 Web-Based Survey	
IV. Data Tables	
V. Cluster Hiring: A Proposal from the Life Sciences	

Note: To protect the confidentiality of our respondents we replaced the actual survey respondent numbers with S#'s. Similarly, we eliminated the distinction between Professor I and Professor II in all quotations, and used "P*" to indicate all full professors. "S" denotes respondents to the online survey and "I" denotes interview respondents.

I. INTRODUCTION

In the spring of 1999, Executive Dean Richard Foley of the Faculty of Arts and Sciences (FAS) in New Brunswick and Area Deans Patricia Roos and Michael Beals began a discussion of the status of women in the FAS.¹ They agreed to study the faculty women's status with respect to salaries, hires, start-up funds, promotion rates, research support, leadership opportunities, and general climate. During calendar year 2000, Roos gathered and compiled data for the study, assisted by Mary Gatta, then a graduate student in the Department of Sociology. The FAS Dean's office provided much of the numerical data in this report, and many FAS staff members contributed to the effort. FAS data analyzed here cover tenured and tenure-track faculty in residence during the 1999-2000 academic year.² In addition, Roos and Gatta developed a set of interview questions, and Gatta conducted interviews with 20 senior faculty members during the spring of 2000 [11 PII women, 5 PI women in rank for 10+ years, and 4 PII men (see Appendix I for details)].

On November 27, 2000, acting FAS Executive Dean Richard Falk created an ad hoc Committee on the Status of Women with the following charge (see Appendix II):

- What do the assembled data tell us about the representation of women in the FAS, across disciplinary units, and across ranks? What do they say about their conditions of work? Are there other data that we need to collect and analyze?
- What conclusions can we draw about gender equity in hiring in the FAS? What can we conclude about promotion/tenure patterns, competitive salaries, research support, monetary rewards for accomplishments, leadership and other decision-making roles, retention, climate, and other issues relevant to women's academic success?
- What needs to be done? What steps can FAS implement to ensure continued/more equitable places for women in all its units?

The Committee consisted of 10 senior faculty members including present and former deans and present and former department chairpersons representing Humanities, Social and Behavioral Sciences, and the Life and Mathematical/Physical Sciences. FAS Area Dean Michael Beals and Professor Patricia Roos—who had returned to the faculty—provided support for the Committee. At its first meeting the Committee changed its name to the FAS Gender Equity Committee.

The Committee examined the prepared data, together with related materials compiled by the Committee Chairperson, and concluded that gender equity deficiencies were present in several areas. The Committee believed a deeper and wider analysis of *all* FAS faculty women at *all* ranks was in order. It therefore developed a new web-based survey in February 2001. The 14-question survey, prepared under the auspices of the University Institutional Review Board for the Protection

¹ This effort followed up on several meetings sponsored by Dean Barbara Shailor of Douglass College to discuss faculty response to MIT's well-known March 1999 report (<http://web.mit.edu/fnl/women/women.html>).

² Comparable data are not available for the 54 FAS research professors, who are of equivalent ranks (i.e., assistant research professor, associate research professor, research professor) but who are not tenured or tenure-track.

of Human Subjects in Research, was sent to all 190 tenured and tenure-track FAS women who had been in residence in AY 1999-2000 (see Appendix III for additional details). Faculty responses to the web-based survey were anonymous. A total of 81 usable responses were received, constituting a good return rate for such a survey and indicating a high level of sensitivity to campus gender equity issues. Survey respondents are representative of the FAS faculty population of women in terms of both rank and disciplinary group (see Appendix III for details).³

In addition to the original information provided through the FAS Dean's office, interviews with senior faculty, and the spring 2001 questionnaire, the Committee's report incorporates more recent FAS personnel information as well as data on the gender distribution of doctoral degree recipients from the National Research Council (provided by the Rutgers University Office of Affirmative Action). These data are summarized in 32 tables, presented in Appendix IV, and discussed throughout this report.

The Committee analyzed two complementary types of information: numerical data and respondents' comments based on their own experiences in the FAS. Although some readers will place more weight on the numerical data than on individual reports, each data source serves as a check on the other. Many individuals' subjective reports, for example, detail subtle forms of discrimination that would be missed entirely if we relied only on numbers in the FAS database.

The Committee addresses the following questions (in sections II through VII):

- What do the basic descriptive statistics indicate?
- What does a statistical analysis of salaries reveal?
- Is non-salary support distributed equally to men and women?
- Is office and research space fairly distributed?
- Are leadership opportunities equitable?
- How do women faculty perceive gender equity in their own departments and in the FAS?

Sections VIII and IX summarize findings and present a set of recommendations.

³ Chi-square calculations for faculty rank and disciplinary group show no significant differences between the survey sample and the FAS population of women.

II. GENDER AND RACIAL COMPOSITION OF FACULTY, PROMOTION RATES, AND REASONS FOR LEAVING

Overview

Rutgers ranked among the top three public AAU institutions in the percentage of full-time faculty who were female in the fall of 1999.⁴ Within the Rutgers Faculty of Arts and Sciences (FAS), in AY 1999-2000 women constituted one-quarter of the full-time faculty, a proportion comparable to the average (26%) for all 34 public AAU institutions.⁵ In the FAS, the most balanced gender distribution was in the Humanities (39% female), while the least balanced distribution was in the Mathematical and Physical Sciences (10% female; see Table 1). The FAS Social and Behavioral Sciences faculty were 28% female and those in the Life Sciences were 21% female. All of these proportions are smaller than the shares of doctorates awarded nationally to women between 1981 and 1998. Women earned 40% of the doctorates between 1981 and 1998 in all FAS fields, 47% of the doctorates in the Humanities, 20% in the Mathematical and Physical Sciences, 50% in the Social and Behavioral Sciences, and 41% in the Life Sciences (Table 2).⁶

Among current FAS faculty, 36% of those hired during the 1990s were women (Table 3). The percentages are lower for previous decades; comparable figures are 28% for the 1980s, 26% for the 1970s, 14% for the 1960s, 19% for the 1950s, and none for the 1940s.⁷

Assistant Professors vs. Doctoral Degrees Awarded in 1998

Gender ratios in recent FAS hiring of assistant professors are close to those of national doctoral degrees awarded in the Humanities and Social and Behavioral Sciences, but not in the Life or Mathematics/Physical Sciences. Thus women constituted 42% of FAS faculty at the rank of assistant professor in 1999-2000 (Table 4)—a slightly smaller percentage than that of women completing doctoral degrees nationally in 1998 in all fields included in FAS (47%, as shown in Table 2).⁸ In the Humanities the FAS record is good; 57% of FAS assistant professors in that disciplinary group in 1999-2000 were women,⁹ whereas nationally 50% of doctorates in the Humanities were awarded to women in 1998 (Table 2). In the Social and Behavioral Sciences, 54% of FAS assistant professors in 1999-2000 were women, and 58% of doctoral degrees awarded nationally in that disciplinary group in 1998 went to women (Table 2). The share of FAS assistant professors in the Life Sciences who were women (25%), however, was far below the national

⁴ The Rutgers' office of Institutional Research and Planning provided these data. We used only those data for faculty in the assistant, associate, and full professor ranks (deleting "other" faculty). The average for all 34 public AAU institutions in the fall of 1999 was 26%. Only the U. of Oregon (33.4) and Indiana U. (31.5) exceeded Rutgers (30.1).

⁵ By comparison, if one includes all four-year colleges and universities, 36% of full-time faculty nationally were female in the fall of 1997, as reported in the *Chronicle of Higher Education*, 9/1/00, p. 38.

⁶ Disciplinary groups in the national data provided in Table 2 include some fields without FAS equivalents.

⁷ These data on hires are not comparable and hence must be interpreted with caution (see note 'a' in Table 3).

⁸ The national figures (from the NRC) include Humanities, Social and Behavioral Sciences, Life Sciences, and Mathematics/Physical Sciences; some of the NRC fields do not have FAS departmental equivalents (as stated in note "h" in Table 2). Data on doctoral degree completion provided to us by the Rutgers Affirmative Action Office allow only two choices of comparison points: 1998 or 1981-1998. Ideally, one might use a six-year average (1992-1998) for doctoral degree awards, since assistant professors have been in that rank for up to six years.

⁹ We calculated the percentage of FAS female assistant professors in each disciplinary group from Table 5.

percentage of 1998 doctorates earned by women in that disciplinary grouping (49%). In the Mathematical and Physical Sciences, 13% of FAS assistant professors in 1999-2000 were women, while nationally 26% of 1998 doctoral degree recipients in that disciplinary group were women.

Academic Rank vs. Doctoral Degrees Awarded Since 1975

In 1999-2000, when women made up 26% of the total FAS faculty, they constituted 33% of faculty holding the rank of instructor or lecturer, 42% of the assistant professors, 32% of the associate professors, 23% of the professors I (PI), and 9% of the professors II (PII)/special professorships (Table 4). These figures compare favorably with those of all public AAU institutions in the fall of 1999. In 1999 women comprised 38% of the assistant professors in public AAU institutions, 31% of the associate professors, and 15% of full professors.¹⁰ No AAU data are available for comparison with the Rutgers PII/special professorships category.

The gender distribution of FAS faculty at each rank also accords well with figures on national production of doctoral degrees over time, except at the rank of full professor. To assess that distribution, let us assume that full professors are on average 15-21 years post-Ph.D., associate professors 7-14 years post-Ph.D., and assistant professors 0-6 years post-Ph.D. If we then take the midpoint of those distributions as points of comparison to doctoral degrees awarded, we find that women received 41% of the doctorates awarded nationally in all fields in 1997 (and 42% of FAS assistant professors in 1999-2000 were women); women received 36% of the doctorates awarded in 1990 (while 32% of FAS associate professors were women), and women received 32% of the doctorates awarded in 1982 (while women made up 17% of FAS PIs and PIIIs).¹¹

If we disaggregate the PI and PII ranks, however, pronounced gender inequity appears. In 1999-2000, the FAS had just 15 women in the PII category. Women represented only 9% of the FAS PII/special professorships (Table 4), though women received 22% of the doctorates awarded nationally in 1975.¹² As shown in Table 6, women held a very small share of FAS special professorships (8.3%) in 1999-2000. Among the four (out of 48) such FAS positions that were held by women, two held board of governors professorships, one occupied a named chair, and one a university professorship. Women held none of FAS' four endowed chairs and none of its six state of New Jersey professorships. The scarcity of women at the most senior faculty rank at Rutgers accords with the findings of a number of national studies showing that "women hold lower ranks than men after controlling for variables such as education, experience, and productivity."¹³

¹⁰ The Rutgers' office of Institutional Research and Planning provided comparable data on the 34 public AAU institutions in 1999. In comparison with other public AAU institutions, Rutgers' faculty do well (the following comparisons are for all Rutgers faculty, not just FAS): for full professors, only U.C. Berkeley, U.C. Irvine, UCLA, Indiana U. and the U. of Oregon had higher percent female rates than the comparable Rutgers figures; for associate professors, only U.C. Berkeley and U.C. Irvine had higher rates; and for assistant professors, only Indiana U., U of Oregon, and U. of Texas exceeded the Rutgers rate.

¹¹ Annual figures on women as a percentage of all doctorate recipients are from the National Science Foundation's Division of Science Resources Studies, Survey of Earned Doctorates, as reported in *Women, Minorities, and Persons With Disabilities in Science and Engineering: 2000*, Appendix B, Statistical Tables.

¹² By July 2001, six more FAS women had been promoted to professor II, raising their share to 12% (see Table 32).

¹³ U.S. Department of Education, 2000, "Salary, Promotion, and Tenure Status of Minority and Women Faculty in U.S. Colleges and Universities," p. 3. National Center for Education Statistics, Statistical Analysis Report: 1993 National Study of Postsecondary Faculty, March 2000.

Department Gender Ratios vs. Doctoral Degrees Awarded

FAS departments whose gender ratios best approximate the national pool of female doctoral degree holders include art history, chemistry, classics, economics, history, political science, sociology, and Spanish. Though the raw percentage of female faculty in some of these eight FAS departments (such as economics) appears low, in all of them the percentage of faculty who are women represents at least 80% of the national share of doctorates awarded to women in that field between 1981 and 1998 (see Tables 2 and 7).¹⁴ For example, the FAS economics department is 19% female, while women represent just 24% of the doctorates awarded in that discipline nationally between 1981 and 1998. Among FAS science departments, chemistry is an exception to the tendency for women to be under-represented, with the fraction of women on the faculty (25%) equivalent to the proportion of doctorates in chemistry earned by women between 1981 and 1998 (25%) and only slightly lower than the fraction of Ph.D.s awarded to women in 1998 (32%). Indeed, among the top 50 chemistry departments nationwide, Rutgers has the greatest number and proportion of women on its chemistry faculty and more women at the full professor rank than any other institution.¹⁵ Rutgers' art history and history departments also are remarkable in their match between proportion of female faculty and percentage of doctorates awarded nationally between 1981 and 1998 (Tables 2 and 7).

Using the same indicator, the nine FAS departments in which women are most under-represented are anthropology, computer science, genetics, Italian, mathematics, molecular biology and biochemistry, psychology, religion, and statistics. That is, in these nine departments, the percentage of women on the faculty is less than 60% of the national share of cumulative doctorates awarded between 1981 and 1998 (Tables 2 and 7). In the mathematics department, for example, six percent (4 of 70) of the faculty in 1999-2000 were women, a percentage that matches the gender distribution of mathematics doctorates awarded in the mid-1960s but that is five times smaller than the share of female doctorates awarded in that discipline in 1998, and nearly four times smaller than the share of mathematics doctoral degrees earned by women between 1981 and 1998 (Tables 2 and 7). In computer science at Rutgers, 8% (3 of 36) of the faculty in 1999-2000 were female, a percentage that accords with the gender distribution of doctorate recipients in the mid-1970s, whereas women earned 19% of the computer science doctorates between 1981 and 1998, and 22% of those awarded in 1998 (Tables 2 and 7). In the FAS statistics department, only one out of 16 faculty members in 1999-2000 was female, while women earned 26% of the doctorates in statistics between 1981 and 1998, and 29% of those awarded in 1998 (Tables 2 and 7). Among FAS social science departments, women are most under-represented in psychology, where they constituted just 26% of the faculty in 1999-2000, though women received 57% of the doctorates in psychology nationally between 1981 and 1998 (Table 2). Two of the nine departments with low representation of women are in the Life Sciences. Appendix V describes the situation of the Life Sciences in greater detail, and describes one hiring strategy proposed by the Division.

¹⁴ Such comparisons in this paragraph are not precisely equivalent, since faculty do not necessarily hold doctorates in the disciplines of departments that hire them.

¹⁵ Janice R. Long, 2000, "Women Chemists Still Rare in Academia," *Chemical & Engineering News* 78(39) 56-58.

Racial and Gender Composition of Faculty

Rutgers ranked ninth in the percentage of full-time minority faculty among public AAU institutions in the fall of 1997. It ranked third among AAU public institutions in the percentage of African-American faculty; the comparable figures for Asian and Latino faculty are 15th and 13th, respectively.¹⁶

Among all four-year colleges and universities nationally, in the fall of 1997, 84% of full-time male faculty and 83% of full-time female faculty were white.¹⁷ The proportions were comparable in FAS in 1999-2000 (Table 8); the percentage of female faculty who were white (82%) was slightly smaller than the comparable proportion of male faculty (86%). While 6% of the FAS female faculty were non-Hispanic black, 3% of male faculty were so categorized. The comparable national figures in 1997 are as follows: 7% of female faculty were non-Hispanic black and 4% of male faculty were non-Hispanic black. Male FAS faculty were 4% Hispanic and 6% Asian and Pacific Islander, while female FAS faculty were 4% Hispanic and 8% Asian and Pacific Islander.

Within each racial category except Asians, gender ratios of FAS faculty in 1999-2000 were less balanced than these ratios were nationally. The racial category that includes the highest percentage of FAS women is non-Hispanic black (Table 8): over one-third (39%) of the non-Hispanic black faculty were female, as compared to 49% nationally. In the FAS, 29 percent of the Asian and Pacific Islander faculty in 1999-2000 were female, a percentage that matches the national data. Twenty-six percent of the Hispanic FAS faculty were female, as compared to 41% nationally. One-quarter of the white FAS faculty were female, as compared to 36% nationally.

Years at Rutgers and Years in Rank

In all disciplinary groups, male faculty have been at Rutgers longer than female faculty (Table 9). The largest difference in this respect occurs in the Social and Behavioral Sciences (19.9 years for men and 12.8 years for women) and the smallest difference in the Mathematical and Physical Sciences (18.7 years for men and 16.8 years for women).

When broken down by rank within disciplinary groups, there are some reversals in this pattern of gender differences (Table 9). For example, among assistant professors in the Humanities in 1999-2000, women averaged 3.7 years at Rutgers and men 2.8 years, and in the Mathematical and Physical Sciences women at the PII rank averaged 28.9 years and men 23.1 years at Rutgers. Other reversals occur in categories containing fewer than five faculty.

Years in rank at the associate professor level differ little between men and women in all FAS disciplinary groups except the Life Sciences, where men averaged 11.2 years in rank and women 8.2 years (Table 9).¹⁸ In the Humanities and in the Social and Behavioral Sciences, women had been in the rank of associate professor slightly longer than men, while in the Mathematical and Physical Sciences years in rank as associate professor were slightly more for men than for women.

¹⁶ Rutgers Fact Book, pp. 134-137; <http://oirap.rutgers.edu/instchar/factpdf/aau99.pdf>.

¹⁷ National figures on racial and gender composition of full-time faculty in this paragraph are from the Chronicle of Higher Education, 9/1/00, p. 38.

¹⁸ Figures on years in rank include all faculty earning salaries in September 1999.

FAS men in 1999-2000 averaged more years in the rank of PI than did women in the Humanities, Social and Behavioral Sciences, and Mathematical and Physical Sciences, while the pattern is reversed in the Life Sciences (Table 9).

Time since completion of the Ph.D. is longer for men than for women in all FAS disciplinary groups (with the smallest difference in this respect found in the Mathematical and Physical Sciences and the largest difference in the Social and Behavioral Sciences, as shown in Table 9).

Among FAS PII faculty, women were hired at lower ranks than men. Among those who held the rank of PII in 1999-2000, a much larger share of women than of men entered Rutgers at the assistant professor level (67% of women vs. 37% of men; see Table 10). Larger proportions of men than of women occupying the PII rank in 1999-2000 were hired as associate professors or PI, and roughly equal shares of men and women at the PI rank in 1999-2000 were hired at that rank. PII's were clustered in the Mathematical and Physical Sciences (52%); 25% were found in the Humanities, 18% in the Social and Behavioral Sciences, and just under 5% in the Life Sciences (Table 10).

In contrast, among faculty at the PI rank in 1999-2000, roughly equal shares of men (77%) and women (72%) entered Rutgers as assistant professors (Table 11). Fifteen percent of the PI men and 12% of the comparable women were hired as associate professors, and 8% of the men and 15 percent of the women were hired at the PI level.

Promotion Rates, 1997-2000

Overall FAS promotion success rates between 1997 and 2000 were approximately equal for women (79%) and men (81%), as shown in Table 12 (see also Table 13).¹⁹ The largest gender differences in promotion rates occur in the Mathematical/Physical Sciences and in the Life Sciences, though the number of cases is too small to draw definitive conclusions on these two disciplinary groupings. When broken down by rank, inequalities in promotion rates appear, but the number of cases is too small to draw firm conclusions (Table 12). Men outnumber women in tenured hiring between 1997 and 2000 by more than 2 to 1 (Table 13).

Many more men than women were considered for promotion between 1997 and 2000; 24 men and only 3 women for promotion to PII, 25 men and 9 women for PI, and 30 men and 21 women for associate professor (Table 12).

Even if there is no pronounced gender inequity in rates calculated as a percentage of those considered for promotion, inequity can occur at an earlier stage in the decisions of department chairs about when to nominate candidates for promotion. Our questionnaire responses suggest that some perceive the latter type of inequity to be a problem. For example, one woman observed: "In terms of P-I promotion, a number of us have been subtly undermined by our colleagues so that we

¹⁹ These percentages are based on relatively small numbers of cases: 38 FAS faculty applied for promotion in 1997-98, 34 did so in 1998-99, and 40 did so in 1999-2000 (112 faculty were considered for promotion between 1997 and 2000).

are more reluctant than we might be to go up for promotion” (S##).²⁰ Another writes: “. . . male colleague[s] came up a year early for tenure. I was discouraged from doing so (perhaps not in so many words, but told that generally the admin[istration] was not supporting early tenure so I shouldn’t consider it), although my book was published early and my publication record comparable” (S#).

A striking number of women who responded to the Committee’s questionnaire believe that women at Rutgers are less likely than men to achieve academic ranks commensurate with their qualifications. Forty-three percent of the questionnaire respondents believe that women faculty at Rutgers are *not* promoted at rates equal to those of male colleagues at similar stages of professional development (Q11).²¹ Forty-one percent believe that women and men at Rutgers *are* promoted at equal rates, and 16% either did not answer that question or offered an inconclusive answer. Several respondents (e.g., S##, S##, S##, S##, S##) noted the particular challenges women of color face in the promotion process.

Among those who suggest promotion rates may be equal, one writes that “women are less likely to be aggressive in seeking promotions or outside offers” but that in her “limited experience, once promotions are sought...their treatment is comparable” (S##). Some comment that they lack data to judge equality of promotion rates and base their opinions on cases in their own departments (e.g., S##, S##). One wrote that unequal promotion rates no longer seem to be a problem, though they were in the past (S##). Another who replies that promotion rates are equal states that “women in general have a more difficult time because of family issues” and she recommends that a new policy be instituted that relieves women of teaching duties during the semester when they give birth (S##).

Several respondents suggest that promotion rates may be about the same up to the ranks of associate professor or PI, but that after that there is a “glass ceiling” (e.g., S##). They express particular doubts about equity in promotions to PII (e.g, respondents S#, S#, S##, S##, S##). One person wrote that in her disciplinary group women “lose hope or burn out” before they reach PII rank (S#). Another observes that men but not women are promoted to PII “largely on the basis of department administration” (S#).

Many female faculty assert that promotion standards are higher for women than for men (S##, S##, S##, S##, and others)—e.g., “women have to do twice as much to be judged half as good” (S##), and “I have seen equal packets go forward and the male candidate is simply viewed more positively” (S##). Another writes: “[I]n my department, weaker male candidates are promoted and strong female candidates are given an exceedingly hard time” (S##). Two women link unequal promotion rates to a lack of mentors for female faculty (S## and S##). Another writes that “[t]he

²⁰ Throughout this report we use “S##” to refer to respondents interviewed in our February 2001 survey (by number); “Q” refers to question number in that survey (see Appendix III); “I” refers to senior faculty interviews; and any numbers before “I” indicate the total number of interviewees (e.g., 2I = 2 interviewees). Please note that all quotations from the surveys and interviews are printed verbatim, although we did sometimes eliminate information that in our judgment might make it easier to identify respondents.

²¹ It is of course impossible to ascertain the bias of non-respondents to the survey. In the unlikely event that *none* of the non-respondents perceive gender bias in promotion, that would still leave 18 percent of all FAS female faculty reporting perceptions of gender inequity in promotion patterns. Since it is unlikely that all non-respondents would have offered the same response to this question, it is reasonable to assume that a substantial percentage of women faculty perceive gender bias in promotion patterns.

mentoring/advising from my department colleagues throughout my tenure evaluation was nonexistent, and in fact actively obstructionist” (S##). Some note that women often are encouraged to take on more teaching and service duties and then are not recognized for that work (e.g., S##), while males are more likely to be promoted for service rather than publications (e.g., S##). A female P* (I) interviewee comments: “I tell my students if you are female you must start out with the idea that you have to be better than men or you won’t succeed. You can’t be as good, you have to be better.” Others offer the following comments on promotion rates they perceive to be unequal:

- “...the promotion rates to P-II appear to be blatantly inequitable.” (S##)
- “We are losing the best women all the time. Many of these women then go on and do get promoted in other institutions and have prominent careers. This is a very serious problem.” (S##)
- “In my department, when an extraordinary junior woman came up for tenure and received outstanding external reviews from the best senior scholars in her field (all male), one of my male colleagues said in the departmental discussion that ‘she couldn’t possibly be that good’ and persuaded the department to remove some of the superlative quotes from outside reviewers from the department’s narrative. [A short time later] a white male was being considered for pre-tenure review. Although he has not yet had any major publications, the departmental narrative for his case made him appear to be a stronger scholar than the woman who was up for tenure (with [several] books, and more than a dozen articles in the leading journals in the field.)” (S##)

A female full professor (I) remarks, “We promote men proportionally more than women and there are more men at the top levels of the university.” This woman also expresses regret that the Affirmative Action office was dismantled and a valuable source of data was lost.

Another full professor woman (I) points to gender bias in the preparation of promotion packets: “A big problem is promotions. I was denied promotion. ...I am convinced that if I did a legal case I would’ve won. ...they got letters from people they knew I was having disagreements with, so the letters would not be that good.Rutgers tends to be more careful with how they put together the packet for men. Because there is such an old boys network, they talk to people and say ‘I have so and so coming up for promotion in my department, can you write a letter?’ ...I almost don’t know any women at Rutgers . . . and other closely related fields who came in when I did and did not get turned down at least once for promotions, tenure, etc. Women tend to get promoted later than men.”

One senior female respondent concluded that her publication record is irrelevant to her salary and promotions. She learned that all of the quotes in her promotion report came from the one outside letter that was not positive. She says that eventually she gave up and “let the university off the hook” but that she too now is “off the hook” and owes the university and department nothing: “I owe my students something. ...I no longer believe in the university and the academic system. ...It doesn’t matter if I publish 10 books, it’s all irrelevant to my salary and promotions. It was a painful decision . . .”

At least as important as promotion *rates* are the language and tone of evaluation and the messages conveyed (S##; see also S##, quoted above). Another woman (S#) writes: “I have personally witnessed...misrepresentations of fellow female faculty (e.g., under-reporting of their grants or pub[lication]s when departmental summaries are issued) by a male chair. I have also witnessed discrimination against some female job applicants that takes on a similar tone—devaluing their achievements, and overvaluing those of male applicants, even when ‘on paper’ the female is superior to the male.” Here the perception is that males are more likely to be termed emerging “stars” even when there is little or no evidence to support such a label (S##), whereas some women who have distinguished publication records and national and international reputations feel so undervalued here that they are likely to leave.

Reasons Tenured Faculty Leave Rutgers

Among FAS faculty who left Rutgers between 1995 and 2000, much larger shares of women than men moved to other U.S. universities (36% of women and 12% of men), or to foreign universities (14% of women and 2% of men; see Table 14). Internal transfers were also more common for women (4%) than for men (1%), while departures due to retirement were much more common for men (76%) than for women (41%).

Some survey respondents suggest that women’s outside offers are less likely than those of male colleagues to yield serious responses from Rutgers administrators. One respondent (S##) to the Committee’s questionnaire writes that in the case of female faculty who receive outside offers, it takes longer for Rutgers to put together competing offers and “the process is made so humiliating that they are completely alienated and leave.” A female full professor (I) who had received many outside offers during the past decade but had not left remarked that because her outside offers were not taken seriously and because she has not been given the compensation she deserves, she recently decided that she will have to leave. Few interviewees were as positive as a female full professor (I) who commented that she has received outside job offers but has never followed up on them: “It would have to be a pretty extraordinary job to take me away from Rutgers. I feel I am very well supported. I feel the administration is very appreciative, supportive and quite frankly exemplary.” A male full professor (I) noted “a great imbalance in the number of P2 women and men” and said that several distinguished women who would now be PIIs had accepted offers from other universities while men who received offers from comparable universities did not leave: “I think there are subtle reasons why this occurs. ...Maybe it’s a lack of institutional loyalty on the part of women, maybe the academic culture is less conducive to women being here, maybe women are not appreciated in wider university circles, maybe the women are more unhappy than I realize.” Another male full professor (I) also observed that “senior women leave when they receive outside offers, while senior men do not.”

Overall, there is overwhelming evidence in the interviews and questionnaire responses that patterns of exclusion, marginalization, isolation, and discrimination contribute to the higher rates of female faculty departures to other universities.

Summary

FAS hiring of female faculty has increased in each of the past five decades, so that by AY 1999-2000 the percentage of female assistant professors had nearly caught up with the proportion completing doctorates nationally. The Humanities have a particularly strong record in this respect, while there is much room for improvement in the Mathematical/Physical and Life Sciences. Women are most seriously under-represented on the faculty of the nine (out of 36) departments in which the percentage of women on the faculty is less than 60% of the share of cumulative doctorates awarded between 1981 and 1998 (Tables 2 and 7). Faculty gender ratios are most skewed at the senior ranks (PI and especially PII). In all FAS disciplinary groups, time since completion of the Ph.D. and time in rank are longer for men than for women. While overall promotion rates between 1997 and 2000 were approximately equal for men and women, the percentage of all promotion candidates who are women decreases sharply with increasing rank. Questionnaire respondents noted gender inequalities in the timing of promotion nominations (with men more likely to be encouraged to apply for early promotion), and in the tone and content of narratives in promotion packets (e.g., undervaluing women's scholarship, teaching and service contributions). Women faculty who leave Rutgers are much more likely than men to do so in order to move to other U.S. or foreign universities rather than to retire. Questionnaire responses suggest that marginalization, isolation and discrimination contribute to the higher rates of female faculty departures to other universities. If these gender climate issues can be addressed, the recent equity gains evident in numeric indicators are likely to continue to grow impressively.

III. ACADEMIC SALARIES

In this section we consider sex differences in compensation and academic rank. A number of national surveys, and studies of specific universities, have shown that women faculty are paid, on average, less than male faculty; and that women faculty are less likely to be found in the higher-paid academic ranks than are male faculty. Is this also true at Rutgers? If so, to what extent can this be explained by factors other than sex per se? To answer these questions, we begin by considering some basic descriptive statistics. These provide a general overview of sex differences in pay and academic rank. We then present a set of formal statistical analyses, aimed at estimating the extent to which earnings and academic rank at Rutgers are independently affected by sex per se (as opposed to other factors).

Basic descriptive statistics

We begin our discussion of simple descriptive statistics with Table 5. This shows average salary for women and men (and the female-male earnings ratio) by academic discipline group and rank. It shows, for example, that in the Humanities, female faculty earn an average of \$75,641, which is about 85 percent of the male average (\$88,763). However, these salary differences virtually disappear once one looks within each academic rank: for example, for assistant professors, pay of female and male faculty is virtually identical (\$52,325 and \$52,408, respectively). Clearly, then, most of the sex difference in average salary in the Humanities as a whole (all ranks combined) is a function of the greater representation of men, relative to women, in higher-paid academic ranks. For example, almost 60 percent (91) of the 153 male Humanities faculty hold the rank of PI or PII,

vs. less than 40 percent (38) of the 99 female Humanities faculty. A similar pattern is observed for Mathematical and Physical Sciences. In the Social and Behavioral Sciences and the Life Sciences, average female and male pay is approximately the same in some ranks (e.g., assistant professors in the Social and Behavioral Sciences) but not others (e.g., faculty at the rank of associate professor in the Life Sciences and PII in the Social and Behavioral Sciences).

The statistics in Table 5 are, of course, averages: within any given category (e.g., associate professors in the Humanities), some men make more than the male average, while others make less, and likewise for women. Table 15 shows that there is considerable variation around these averages. The conventional statistical measure of variation around the average is the "standard deviation"; as shown in Table 15, the standard deviation around the mean for any given category of faculty is frequently large. For example, for male faculty in the Social and Behavioral Sciences, mean earnings are \$88,476, but the standard deviation around this average is \$22,385 (or about 25 percent of the actual level of earnings).

Tables 5 and 15 are concerned with "base salary." For regular academic-year faculty, this is academic-year pay. For persons whose titles—e.g., dean or department chair—carry calendar-year salaries, this is calendar-year pay. However, some faculty receive supplemental pay over and beyond base salary. This is shown in Table 16, which considers not only base salary but also both (a) the sum of base and "discretionary" salary and (b) "total calendar-year" salary. "Discretionary" salary refers to dean-provided summer salary. Total calendar-year salary refers to base salary plus dean-provided summer salary plus summer salary provided via external grants.²²

Table 16 shows that in most cases, the ratio of female to male pay is about the same regardless of which salary concept is considered. For example, among all Social and Behavioral Sciences faculty, women's average base salary is 80.8 percent of the male average; women's average base plus discretionary salary is also 80.5 percent of the male figure; and for total calendar year salary, the women's average is 81.5 percent of the men's average. The one clear exception is in the Mathematical and Physical Sciences, where the female-male ratio is about 95 percent for both base salary and base plus discretionary salary, but only 90.3 percent for total calendar-year salary.

Table 17 focuses on summer salaries provided via either decanal discretion or external grants. In general, men are more likely to receive such salary supplements than are women, both overall and within broad disciplinary categories (e.g., the Life, Mathematical and Physical Sciences).

Table 18 focuses on one potentially important component of salary, and thus of sex-related salary differences: so-called merit increases in salary. These are of two kinds: regular FASIP increases, granted to individual faculty in recognition of outstanding scholarship, teaching and service under the University's regular annual cycle of faculty review; and "out-of-cycle" merit increases, granted to individual faculty in response to an outside offer or other unusual circumstances. The picture here, with respect to gender, is mixed. Both in the Humanities and in the Social and Behavioral Sciences, women are less likely than men to receive either FASIP or out-of-cycle increases;

²² We provide information on calendar year salaries primarily for completeness. Because our interest is in evaluating gender equity, we focus on those salary measures that result from institutional discretion: (1) base salary and (2) base salary plus decanal-level discretionary salary. Summer funding through grants is determined instead by principal investigators.

whereas in the Life Sciences and Mathematical and Physical Sciences, women are more likely to receive either FASIP or out-of-cycle increases than are men.

This review of simple descriptive statistics has demonstrated that, in numerous and important categories (e.g., broad disciplinary categories), female faculty are paid less, and are less likely to occupy highly paid academic ranks, than are male faculty. It is clear that these differences in pay and academic rank are *related* to sex; but are they necessarily *attributable* to sex per se? Correlation does not always imply causation, and a moment's thought suggests that some of the sex-related differences in pay and academic rank noted thus far may be the result of factors other than of sex per se.

Some possible alternative explanations are highlighted in Table 9, which tabulates characteristics (years at Rutgers and years since the Ph.D.) for faculty by broad disciplinary group. It is instructive to note that, in each broad disciplinary group, on average female faculty have been at Rutgers for fewer years and are more "junior" (in the sense of having received the Ph.D. more recently) than are male faculty. For example, on average, male Humanities faculty have been at Rutgers for 19.2 years and have held the Ph.D. for 23.6 years, as opposed to 15.1 years and 18.5 years, respectively, for women Humanities faculty. Likewise, among Social and Behavioral Science faculty, male faculty have been at Rutgers for 7.1 more years (19.9 years vs. 12.8) and have held the Ph.D. for 8.3 more years (24.0 years vs. 15.7) than female faculty.

Thus, men and women faculty at Rutgers receive different pay, on average; but they are also different in terms of other factors (e.g., years at Rutgers and years since the Ph.D.) that may well affect pay either directly or indirectly. By their nature, simple descriptive statistics cannot determine the relative impact of each kind of factor. To address this particularly complicated question, we therefore turn to a more complex form of statistical analysis.

Female-Male Pay Differentials, 1999-2000

To investigate whether female and male faculty *with similar qualifications* receive similar pay, we used a statistical technique known as regression analysis. This is a procedure for analyzing the relationship between an outcome (the "dependent variable") and a set of so-called explanatory factors (the "independent variables"). Regression analysis yields a quantitative measure of the relation, other things being equal, between the outcome of interest (in our case, earnings) and each of the individual explanatory factors (e.g., characteristics such as years since receipt of the Ph.D.); and it also yields a measure of the statistical significance²³ of each such relationship. Of particular interest in the present context, regression analysis will indicate the amount (if any) by which female

²³ A regression result is said to be "statistically significant" if it is unlikely to be the result of random or chance factors. Thus, the term "statistical significance" refers not to the sheer magnitude of a result, but rather to the strength of the evidence concerning whether the result can be attributed to mere chance. For example, suppose an analysis finds that female faculty are paid \$1,000 less per year than are male faculty who are the same in terms of the explanatory factors considered in the analysis. If the results indicate that this \$1,000 salary difference is "statistically significant," then the results constitute strong evidence that female faculty are paid less than otherwise similar male faculty. Equivalently, if the \$1,000 salary difference is statistically significant at conventional test levels, then it is unlikely (a probability of 0.05 or less) that a difference at least as large as this would be observed because of random or chance factors if there were no genuine sex difference in how otherwise-similar faculty are paid.

faculty are paid less (or more) than male faculty who are the same in terms of the factors considered in the analysis.²⁴

For our analyses, we consider three different definitions of “pay” (i.e., three different dependent variables), all of which refer to the academic year 1999-2000: base salary; base salary plus decanal-level discretionary pay; and base salary plus decanal-level discretionary pay plus external grant money. An individual’s base salary is his or her academic or calendar year salary, depending on the academic title.²⁵ “Discretionary” pay consists of decanal payments (made in July or August 1999 and/or June 2000) from state funds, internal grant funds, and funds from the central administration.

We use a relatively small number of explanatory variables because the computerized data available to us are somewhat limited in scope: indicators for sex and race; indicators for academic department; years since receipt of the Ph.D.; years at Rutgers; and age.²⁶ For ease of reference, we refer to these factors as our “basic” variables. Finally, in some of our analyses (but not others), we have added, to the basic variables, a set of indicators for academic rank (i.e., PII, PI, associate professor, assistant professor). For ease of reference, we refer to these indicators as “rank” variables.

Although we focus on sex differences in pay, we also include variables for race in order to consider the possibility of race-related pay differences.²⁷ We include indicators for academic department to reflect the well-known fact that job market conditions vary considerably across disciplines (for example, starting salaries for scientists generally exceed starting salaries for Humanities faculty). We include “years” variables (years since receipt of Ph.D., years at Rutgers, age) because these variables reflect, albeit indirectly, the accumulation of experience and productivity that occurs as faculty move along their career paths: in general, faculty who are younger, have been at Rutgers for less time, or have only recently received their Ph.D. are likely to have acquired less experience and to have been generally less productive (in terms of teaching, research, and service) than more senior faculty, and are therefore likely to be paid less.

²⁴ Similarly, regression analysis of pay will indicate the quantitative relation between pay and each of the other factors (besides sex) considered in the analysis. For example, it will indicate the amount (if any) by which an additional year of service is associated with extra pay, for faculty who are the same in terms of the other factors considered in the analysis; also, the analysis will indicate the statistical significance of this relationship.

²⁵ Thus, for faculty members who are department chairs or hold other calendar-year appointments, the base salary typically refers to calendar-year salary; for most faculty, this refers to academic-year salary.

²⁶ To allow for the well-documented tendency of earnings to grow at a decreasing rate with respect to factors such as years of experience, we also included variables measuring the square of years since the Ph.D., the square of years at Rutgers, and the square of age. To allow for possible interactions among these “years” variables, we also included a set of interaction terms (the product of years at Rutgers and age, the product of years at Rutgers and years since the Ph.D., and the product of years since the Ph.D. and age).

²⁷ Our results for race are not dissimilar to our results for gender. Specifically, for our “basic” regression model of salary (base salary, without taking account of variables for academic rank) we find no evidence of racial differentials in pay for faculty who are similar in terms of years since the Ph.D., service at Rutgers, academic discipline, etc. The percentage and dollar differentials, which favor blacks relative to otherwise similar whites but are not statistically significant, are 2.0% and \$1,478, respectively. When academic rank variables are added to this regression, the salary differentials favoring blacks rise to 9.0% and \$7,632, both of which are statistically significant at $p < .002$. In contrast, in our analyses of rank (defined either in terms of three categories or four), we find statistically significant racial differentials in academic rank that are adverse to black faculty relative to otherwise-similar white faculty. We find no evidence of differentials relative to white in either salary or academic rank for either Hispanics or Asians.

Inclusion of basic variables like these in analyses of academic salaries is generally uncontroversial. In contrast, the question of whether to include rank variables is much more complicated. It is certainly true that academic rank may reflect certain hard-to-measure factors (e.g., publications and other forms of scholarly productivity) that may affect pay. Since our computerized data do not, in fact, contain direct measures of these factors, it could be argued that the only way to represent them in our analysis is to do so indirectly, by including variables for academic rank.

On the other hand, academic rank may also be affected by discrimination (particularly when there is discrimination in access to higher academic ranks). If so, then including rank variables will understate the extent of salary discrimination. That is because an analysis of salary in which rank variables are included will only measure sex differences in pay for faculty who are the same in terms of the other variables in the analysis (department, years since Ph.D., etc.) *and* hold the same rank. Thus, such analyses will indicate only the extent of "unequal pay for 'equal work,'" i.e., will indicate only the magnitude of sex-related pay differences for people who are the same in terms of all other variables *and are in the same rank*. By the same token, such analyses therefore will not reflect any of the impact on salary of any "unequal access to better-paid work," i.e., a sex-related difference in the likelihood of holding a better-paid rank for persons who are the same in terms of all other variables.

For these reasons, we present two sets of analyses: one set in which rank variables are not included, another in which they are included. The former kind of analysis may ignore potentially important factors (e.g., publications) that might be reflected in faculty members' rank but are not otherwise reflected (or are not fully reflected) in the other "basic" variables included in the analysis. The latter kind of analysis may ignore the impact of sex differences in ranking.

Our results are summarized in Table 19. To see how the entries in the table may be interpreted, first consider the entry in column (A) of row 1. This presents our regression estimate of the female-male difference in base salary, expressed in dollars, when only the basic variables are included in the analysis. In this analysis, the estimated sex difference in salary was -\$2971, implying that, on average, female faculty receive \$2,971 less salary than male faculty who are the same in terms of the basic variables (race, department, years since Ph.D., etc.). However, the \$2,971 salary difference in this analysis is not statistically significant at conventional test levels. In other words, this is relatively weak evidence to support a claim that women are paid less than otherwise-similar male faculty.

The entry in column (B) of row 1 presents the estimated female-male base salary pay difference expressed in percentage terms (rather than in terms of dollars). Here the estimated female-male basic salary difference is about 3.2 percent. Again, however, this difference is not statistically significant at conventional test levels.

Thus, the entries in columns (A) and (B) of row 1 refer to analyses of sex differences in base salary, taking account of the "basic" variables only. Other entries in the first row of the table report results of further analyses (which also take account of the basic variables only): the entries in columns (C) and (D) refer to analyses of base salary plus discretionary compensation; those in columns (E) and (F) pertain to analyses of base salary plus discretionary pay plus grant money. Relative to the

results in columns (A) and (B), the sex differences in these further analyses are somewhat larger in magnitude, and those in columns (D), (E) and (F) are significant at conventional test levels. These data indicate that that once discretionary dollars are included, gender inequities are significant: women experience a significant 3.5% pay disadvantage relative to men. The disadvantage increases slightly to 4.3% once grant dollars are included (Table 19).

The analyses summarized in the second row of Table 19 are identical to the analyses in the first row save for one: in the second row, the rank variables are included. In all of these analyses, the estimated female-male pay differences are very small (in both dollar and percentage terms) and none is statistically significant.

All in all, we conclude that these results do not provide strong evidence to support the view that female faculty are paid less than otherwise-similar male faculty.²⁸ After taking account of only the limited set of "basic" variables considered in these analyses, one obtains sex differentials in basic salary – the first of our three definitions of compensation – that are relatively small and are not statistically significant.

Sex differentials in our two broader definitions of pay are somewhat larger, and are generally statistically significant. However, these results have ambiguous implications regarding differential compensation of female and male faculty in FAS. In some cases, decausal "discretionary" payments are used simply to supplement "base" salary.²⁹ In other cases, such payments are made for additional work.³⁰ Thus, our results for the second of our three definitions of compensation (i.e., salary plus discretionary payments) could be interpreted as indicating either (1) that male faculty are paid more than are female faculty who are similar in terms of our basic variables, or (2) that male faculty do somewhat more work (and therefore receive somewhat more pay) than do female faculty who are similar in terms of our basic variables. Some of our data, however, suggests that the second of these possibilities is probably not correct. Table 17 shows that in each of the years 1998 to 2000, the proportion of male faculty receiving discretionary summer salary was considerably higher (by about one-third) than the comparable proportion of female faculty. Also, from supplementary analyses (data not provided in tabular form) we know that among those actually receiving such pay, men were more likely to receive it as salary enhancement, whereas women earned it for additional work performed. These data, however, are not definitive because (1) they show simple sex differences, while the regression analyses take into account factors other than sex, and (2) we are not entirely confident about how reliably we can code discretionary earnings into extra salary vs. compensation for performed work. Also, grant payments (the component added to basic salary and discretionary payments to yield our third concept of compensation) may differ as between otherwise-similar male and female faculty; but this may be a consequence of external granting agencies' practices rather than the University's own decisions on pay. Finally, it should be noted that the list of variables that we have been able to take into account

²⁸ Because of the problems (noted in the text) concerning analyses that include variables for academic rank, we focus on the results for analyses that use only the basic variables.

²⁹ For example, such payments have been made to faculty as guaranteed summer money if no grant support is received, as a FASIP payment, as a response to an outside offer, or as a sum payable for a fixed term (e.g., for three years) offered as a recruitment inducement.

³⁰ For example, such payments have been made as a flat-rate sum to compensate for teaching an additional course; for work in the Honors Program; or for work as dean, center director, department chair or vice-chair, or undergraduate director.

(department, years since the Ph.D., etc.) is limited. It is therefore possible that introducing additional variables into the analyses might reduce the magnitude and statistical significance of the results.

Academic ranking, 1999-2000

We have also investigated sex differences in academic ranking using a statistical technique, ordered probit analysis, which is similar in nature to regression analysis. Here, the dependent variable is academic rank and the independent variables, once again, are the "basic" variables considered in our analyses of salary (e.g., years at Rutgers, years since Ph.D., age, academic department, and race and sex). Our rationale for including these variables is straightforward: promotion (and therefore a higher rank) may come faster in some disciplines than in others; persons with more years of service or more post-Ph.D. experience are more likely to occupy higher ranks; and so on.

Our dependent variable is, of course, academic rank, which we have defined in two different ways: using either three categories ("three-category rank"), i.e., assistant professor, associate professor, and full professor; or four categories ("four-category rank"), i.e., assistant professor, associate professor, PI, and PII.

Our results are summarized in Table 20, which reports the "sex difference" coefficient in each of two ordered probit analyses of rank. The first analysis uses the three-category definition of rank. Here the sex difference coefficient is small and not statistically significant at conventional test levels. The next column presents the female-male coefficient obtained in our four-category analysis of rank; here the coefficient is larger and is statistically significant at conventional test levels.

Thus, although there is no credible evidence to suggest that women are disadvantaged with respect to ranking *when ranking is defined in terms of the usual three categories* (assistant, associate or full professor), the results of our *four-category* analysis suggest a significant female disadvantage in ranking. The crucial difference between the three- and four-category definitions is, of course, that the four-category definition highlights the very highest rank (PII) whereas the three-category definition does not. Thus, with respect to ranking, we conclude that the results suggest that female faculty are less likely to occupy the very highest rank than are male faculty who are the same in terms of the variables we have considered. An important caveat should be kept in mind, however: the list of variables that we have been able to take into account (department, years since the Ph.D., etc.) is limited. Thus, not only for our analyses of compensation but also for our analyses of academic rank, the results might change if additional variables were included in the analyses.³¹

³¹ We would have liked to include valid measures of productivity, had such data been available. We have no expectation that FAS women have notably stronger, or weaker, scholarly production, but without appropriate data we cannot address productivity effects on the small gender differences in earnings we did find. We also recognize that measuring productivity is extremely difficult: sheer counts, for example, fail to address quality, prestige of journal or press, and long-term influence on field.

Summary

The statistical analysis of salaries shows a \$2,971 (3.2%) pay disadvantage in base pay for women, a dollar difference that is slightly lower than the conventional cutoff for statistical significance ($p=.05$). A statistically significant pay differential of \$3,346 (3.5%) appears when discretionary pay is included in the analysis. When an additional control for rank is added, however, these salary differences disappear. How to interpret the effect of rank then becomes the question. When our analysis distinguishes between PI and PII, serious questions arise about whether women faculty enjoy the same access to higher academic ranks as do men faculty with similar characteristics. We therefore suggest that, as a first priority, further attention be paid to possible gender differences in hiring and promotion into the higher academic ranks.

IV. SUPPORT STRUCTURE: START-UP FUNDS, RESEARCH ACCOUNTS, AND SUMMER SALARIES

Although start-up funds, research accounts, and summer salaries can play a vital role in recruiting and retaining women faculty, the very fact that such supplemental funds are tied to individual contract negotiations, which are shielded from systemic scrutiny, may work against the likelihood of gender equity in this domain. Indeed, standard operating procedures in making these awards, coupled with the institutional interests of deans and department chairs, make it harder to ensure gender equity in the disbursement of these funds.

Allocation of start-up funds, research accounts, and summer stipends fall within the discretion of deans working in conjunction with department chairs to recruit or retain faculty. Like salary decisions, these supplemental funds are distributed to individuals on the basis of their unique requirements. Market pressure in the field of expertise, competing offers, costs of research equipment, level of individual accomplishment, negotiating skills of the candidate, intensity of support from the hiring chair and department, and enthusiasm of the dean can all influence the decision to offer supplemental monies as well as the amount and kind of supplemental money offered. Beyond such “individualistic” factors, the allocation of supplemental funds are also structured by the fiscal constraints of the Dean’s Office.

The data show that fewer women (67) than men (143) in FAS receive internal research funds or that the mean research fund for a woman (\$9,325) in FAS is \$2,041 less than that of a male faculty member (\$11,366; see Table 21). Although the number of women receiving research accounts is less than half (46%) the number of men, between 1998 and 2000 a higher percentage of women faculty had research accounts than men: 35% of women faculty compared to 26% of male faculty had research accounts (Table 22). The average difference in funding for female and male faculty is due to a substantial difference among assistant professors: 23 women at the rank of assistant professor had research accounts compared to only 10 male assistant professors (Table 21). At all other ranks, more men received research accounts than women. At the level of associate professor, 29 men were funded compared to 18 women; at the professor rank, 49 men were funded compared to 21 women; and among PII and special professors, 54 men were funded, compared to 5 women. Differences in size of research accounts were skewed more by discipline group than by rank. While the median male faculty research account in the Humanities and Social and Behavioral

Sciences was less than \$1000 greater than their female counterparts, the male median in the Life Sciences was over \$20,000 greater than the women's median research account in the Life Sciences.

In 1997, FAS began to move away from renewable research accounts, substituting one-time "start-up" funds awarded at the time of hire that can be spent over a fixed-year period. The Dean's Office committed some start-up funds to all new hires from 1998-2000, which could be used to cover computer and other office or laboratory equipment and to launch and sustain research agendas. During this period, 32 women and 57 men received start-up funds. The magnitude of the start-up awards to men and to women differed substantially across ranks and disciplines. Women faculty received on average 63% (\$47,748) of the start-up funds accorded to their male counterparts (\$76,354; Table 23; see also Table 24). While women assistant professors received on average 84% of their male counterparts' start-up allocation, women full professors received only 44% on average of the start-up funds given to their male counterparts. At the associate professor level, both mean and median distributions appear to favor women, with women faculty receiving 104% of the start-up award of equivalent men. This apparent reversal of the trends found at assistant and full professor ranks is due in part to the small number of women faculty (3) hired at associate professor rank, combined with the fact that some of the women joining the faculty at this rank were in the Life and Physical Sciences where start-up costs are significantly higher than in the Humanities or Social and Behavioral Sciences. When discipline is controlled for, women in the Humanities received on average 63% (\$14,076) of the start up funds awarded to men (\$22, 397). In the Social and Behavioral Sciences, women received 89% (\$29,530) of the average start-up funds award to men (\$33,352). In the Life, Mathematical and Physical Sciences, the small numbers of women hired in these fields skew both the gender mean and the gender median in start-up funds. While the male mean (\$131,844) and median (\$66,000) have been computed on the basis of 27 hires; the female mean (\$237,088) and median (\$206,862) are computed on the basis of 4 hires. To illustrate the extent to which the small number of women can distort the means and medians, it is useful to consider that the maximum start-up fund awarded to a woman faculty member was in the \$400,000 range, while the maximum award for a male faculty member was over \$800,000.

Summer salary supplements are awarded for a variety of reasons. Funds awarded at the discretion of the Dean's Office include stipends for administrative appointments, compensation for special assignments, as well as salary enhancements. Faculty may also earn summer salary supplements through grant funding. In 1998, 9% of the FAS faculty were awarded summer salaries through discretionary funds, while 25% of the faculty received grant-supported summer stipends (Table 17). In 1999, 11% received stipends from discretionary FAS funds, and 26% received grant-funded stipends. In 2000, discretionary funds provided summer supplements for 11% of FAS faculty, while grant funds provided summer salary supplements for 23% of the FAS faculty.³² Male faculty were awarded summer stipends from discretionary funds more frequently than women faculty. In 1998 the male-female ratio for discretionary summer salaries was 5:1; 55 men and 11 women received discretionary summer supplements (the male-female faculty ratio was 3:1). In 1999 and 2000, gender disparity in summer stipends decreased to a 4:1 male-female ratio (65 to 15 and 67 to 18, respectively). Over the three-year period, the percentage of male and female faculty receiving discretionary summer stipends increased. While 10% of the male faculty and 6% of the female faculty received summer salary supplements in 1998, the equivalent figures for 1999 and 2000

³² Note that these figures are for faculty members still in residence in FAS in AY 1999-2000. Some of the data in this and the following paragraphs were produced for the Committee, but are not provided separately in tabular form.

were 12 and 8, and 12 and 10, respectively (see Table 17). Across all three years, male faculty were more likely than female faculty to receive discretionary summer funds as a means of salary enhancement: supplementary analyses showed that approximately two-thirds of the women and about one-half of the men received summer stipends for performing additional work; the remainder received it as salary enhancement.

When the distribution of discretionary summer salaries is broken down by discipline, the disparity between men and women is far smaller in the Humanities than in the Social and Behavioral Sciences or in Mathematical/Physical and Life Sciences. In 1998, 1999, and 2000 in Humanities disciplines, although men received just over twice as many summer stipends as women (22 men and 9 women in 1998, 23 men and 10 women in 1999, and 16 men and 7 women in 2000), the ratio of males to females in the Humanities as a whole was 1.5 to 1 (153 to 99). In the Social and Behavioral Sciences, the gender disparity in discretionary summer funds was greater. In 1998, 15 men and 1 woman received summer stipends, in 1999, 15 men and 3 women received summer funding from the FAS Dean's Office, and in 2000, 13 men and 7 women were awarded summer salary supplements from discretionary monies. Thus where the male-female faculty ratio approximates 2.5:1 (137 to 54), the male-female ratio in distribution of discretionary summer money ranged from a high of 15:1 in 1998 to nearly 2 to 1 in 2000. In Mathematical/Physical and Life Sciences, the gender disparity was also stark. In 1998, 18 men and 1 woman, in 1999, 27 men and 2 women, and in 2000, 38 men and 4 women received summer salary supplements from the FAS Dean's Office. In the FAS disciplines with the highest male-female ratio, 7:1 (263 to 37), the male-female ratio in discretionary summer funds ranged from 18:1 in 1998 to 9.5:1 in 2000. In both the Social and Behavioral Science disciplines and the Mathematical/Physical/Life Sciences, discretionary summer funds heighten rather than diminish gender inequities in salary, a finding supported by the regression analysis of faculty base and discretionary salaries, which indicated that women faculty experience a statistically significant pay disadvantage of 3.5% (see Table 19).

Comparing the gender distribution of discretionary summer salaries with those of grant-funded summer salaries can be instructive in illuminating patterns of bias. Between 1998 and 2000, summer salaries from grant funds, which depend upon the initiative of individual faculty members and decisions of outside funding agencies, do not replicate the degree of gender inequity manifested in the distribution of discretionary summer stipends. While discretionary summer funds advantaged male faculty in all disciplinary groups, a higher percentage of women than men in the Social and Behavioral Sciences secured external summer funding and women in Mathematical/Physical, and Life Sciences came very close to achieving parity with men in grant-supported summer salaries. In 1998, 159 men and 29 women received summer salary supplements from grants. In 1999, 164 men and 26 women received grant-funded summer stipends; and in 2000, 146 men and 28 women received summer supplements from grants. The male-female ratio in grant support was 5:1 in 1998 and 2000, and 6:1 in 1999. Grant funding for summer salaries was concentrated in Mathematical/Physical/Life Sciences. Given the marked under-representation of women on the faculty in these disciplines (7:1 male to female), it is not surprising that the number of men receiving grant funding exceeds the number of women. It is noteworthy, however that the percentage of women with grant-funds for summer salary is remarkably close to the percentage for men with grant-supported summer salaries in these fields. In 1998, 51% (135 of 263) of the men and 46% (17 of 37) of the women in the Sciences received summer stipends from grants. Comparable figures for 1999 and 2000 were 55% vs. 41%, and 50% vs. 49%, respectively. Within

the Humanities and the Social and Behavioral Sciences, the number of faculty with grant-support for summer salary was much lower. In the Social and Behavioral Sciences, a higher percentage of women than men received grant-funded summer stipends across all three years. In 1998, 19% (10 of 54) of the women compared to 15% (20 of 137) of the men in Social and Behavioral Science departments received grant-funded summer salaries. Comparable figures for 1999 and 2000 were 19% vs. 14% and 17% vs. 11%, respectively. In the Humanities, although small in number, an almost equal percentage of men and women received grant-funded summer salary in 1998: 2.6% (4 of 153) of men and 2% (2 of 99) women. In 1999 and 2000, the numbers were small: one woman and one male had grant-funded summer stipends in 1999, and in 2000 one woman and no men.

The pattern for distributing research accounts, start-up funds, and discretionary summer stipends advantages senior male faculty. More senior men than women receive research accounts as might be expected in a faculty where men constitute 68% of associate professors, 77% of the PI rank, and 91% of the PII/special professorships (Table 4). From the perspective of gender equity, however, persistent disparities in size of research accounts (on average, \$2,041 less for women than for men; Table 21) and start-up funds (women, on average, receive 62% of the funds awarded to their male counterparts) should be a cause for concern. Equally troubling, is the extensive advantage that men have in access to discretionary summer salaries funded by the FAS Dean's Office.

Summary

An analysis of the gender distributions of research accounts, startup funds, and discretionary summer stipends reveals various forms of inequities:

- The average research account for women faculty was more than \$2,000 less than the male average.
- Women faculty received on average 63% of the start-up funds awarded to their male counterparts. While women assistant professors received 84% of their male counterparts' start-up package, women full professors received only 44% of the start-up funds given to male full professors.
- The proportion of male faculty receiving discretionary summer salaries was approximately 33% greater than the proportion of women faculty receiving discretionary summer stipends. From 1998-2000, of the faculty receiving summer salaries, 46% of the men and 31% of the women were awarded the discretionary funds as salary enhancement, while 54% of the men and 69% of the women received summer stipends for performing additional work.
- Gender inequities in the distribution of discretionary summer salaries contribute to a statistically significant pay disadvantage of 3.5% for women faculty.

V. SPACE AND PHYSICAL ENVIRONMENT

The Committee did not have access to quantitative data about square footage of office and laboratory space for FAS faculty. The spring 2001 faculty survey, however, highlighted three

issues related to space: adequacy of office, research, and graduate space. Faculty responses are summarized below.

Office Space

The survey asked three questions:

- "Relative to others in your department, have you been allocated OFFICE SPACE adequate in size and location to carry out your research and/or teaching duties in the department and university"? (Q1; see Appendix III)
- "Have you requested upgrades to your office SPACE in the past"? (Q1)
- "If yes, was the response to that request, adequate, somewhat adequate, inadequate, not applicable"? (Q1)

A substantial majority (81%) of survey respondents stated that their office space was adequate. Among those who believed that space was inadequate, only 35% initiated a request for space improvement from the administration. Instructors/assistant professors were least likely to request better space (18% of instructors/assistant professors, compared with 39%, 33%, and 67% of associate, PI, and PII, respectively). This situation may reflect concerns that such requests would affect promotions or it might simply be an inadequate understanding of what is a reasonable request to the administration. Of the 28 people who answered the third part of Q1, two-thirds replied that the administrative response was at least "somewhat adequate," and one-third viewed it as "inadequate".

Survey respondents reported a wide range of reactions to their concerns about office space:

- "I requested a larger office, and was accommodated by the FAS Dean's Office" (S##).³³
- "I am not sure that deplorable lack of office space is worse because I am a woman, but I am 100% certain that being alone in the building is more nerve-wracking. I do not feel safe, and yet I have no place else to do my work" (S##).
- "When I began several years ago heading [a major] project with [substantial external funding], chair refused to give me extra space. I began to work with male colleague from another unit . . . and received some space within his unit. [Later I received] additional independent space" (S##).
- "I was then offered a better office the following year only to be told before moving in that it was to be given to junior male professor who was hired after me. I was given a better office than [my previous one], but the message regarding how little I was valued was very clear" (S##).
- "It took me a long time to realize that I COULD ask for better office space. Once I did, I got a different office once one became available" (S##).

³³ See footnote 20 for definitions of "S##" and "I".

Laboratory Space

Laboratory space is crucial to some faculty, particularly science faculty. The survey asked the following questions:

- "Relative to others in your department have you been allocated adequate LABORATORY SPACE to conduct your research, keeping in mind the total resources available to your department and your own external funding"? (Q2; see Appendix 3)
- "Do you share this SPACE with other faculty or staff"? (Q2)

Approximately one-fifth of the respondents reported that they used a laboratory. Of these, 14 had their own laboratory space, and seven shared with one or more researchers. Although some reported buildings in dire need of renovation, most found their research space to be adequate. As one respondent noted: "The problems are that it is in terrible shape physically—in need of better lighting, new carpeting, the ceiling is falling down in places or missing tiles altogether, and the temperature is erratic (some rooms boiling hot, others ice cold)" (S#).

Graduate Student Space

Graduate students are often closely connected to faculty research programs and therefore the quality of their work environment may affect faculty research, as well as student progress and productivity. We asked faculty about space allotted to their graduate students: "Are your graduate students allocated adequate office SPACE AND RESOURCES (computers, etc.)?" (Q3)

Approximately 31% of the faculty said that the question concerning graduate students was not applicable to them. For the remaining 69%, their opinions on the quality of space and resources for graduate students in FAS are cause for concern: 43% thought that the graduate students with whom they were directly involved had an adequate work environment, whereas 26% reported that their students had inadequate facilities (no office or cramped quarters and limited access to up-to-date computers). Descriptions of the inadequacies were remarkably consistent:

- "Grad students share office space in my building--sometimes five or six in one office--it is truly outrageous". (S##)
- "None of our grad students get much in the way of private workspace or computers--no room for that". (S##)
- "We have no offices for graduate students, which seriously impedes our ability to recruit top-notch students." (S##)
- "Our graduate students have it pretty bad in terms of both space and resources, but this is not the place to air these concerns. I hope that the Dean will provide a mechanism to systematically gather concerns of faculty and students regarding graduate student working conditions" (S##)

Summary

Inadequate office space remains a problem for many departments, but most faculty did not see it as a gender equity issue. It was clear, however, that faculty in lower ranks were less likely to request

better space and either lacked knowledge of how the system worked or felt powerless to alter the *status quo*. Although many buildings need renovation, most faculty found their laboratory space to be adequate and most believed that space allotments were not related to faculty gender. Graduate student working space requires serious attention. Students are integral parts of research and teaching at the university and their welfare has far-reaching effects. The questionnaire did not investigate gender differences in graduate student space allotments, but this is a worthwhile topic for future investigation.

VI. LEADERSHIP OPPORTUNITIES

Women constitute 17% of the full professors (PI and PII combined), those most likely to hold leadership roles. The pool for the most important leadership roles on campus is the PII category, in which only 9% of the FAS faculty are women (Table 4).

During the past decade, the proportion of women in administrative leadership at Rutgers has been greater than or equal to the proportion of women in the two most senior professional ranks (PI and PII), and greater than the proportion of women at the PII rank:

- Women served as directors of 17% (3 of 18) of the FAS research units in the fall of 1999 (Table 25);
- Women held 20% (7 of 35) of the FAS chairs in the fall of 1999 (Table 25);³⁴
- Women were 4 of 11 of those who served as FAS Deans, Vice Deans, or Area Deans from 1992 to 2000 (Table 26);
- Women constituted 29% (2 of 7) of the President's cabinet in the spring of 2001 and 24% (7 of 29) of the deans of academic units; during the same period, none of the FAS-NB deans were women, although a woman did serve as the Vice-Dean of the Graduate School;³⁵
- Women constituted 24% (104 of 432) of those who served on FAS Appointments & Promotion committees (Table 30);³⁶

³⁴ Tables 27, 28, and 29 provide additional data about men's and women's leadership roles: Table 27 presents the gender distribution of administrative positions (including chair and graduate director). Table 28 provides a history of department leadership from 1980 to the spring of 2000, and Table 29 lists the department that have never had a female chair during the same time period.

³⁵ In the spring of 2001, two members of the President's Cabinet were women: Nancy Winterbauer and JoAnn Jackson. Additionally, there were seven female deans: Mary Davidson (School of Social Work), Hurdis Margaret Ann Griffith (School of Nursing, Newark) Sandra Harris (Graduate School of Applied and Professional Psychology), Barbara Lee (School of Management and Labor Relations), Margaret Marsh (FAS-Camden), Barbara Shailor (Douglass College), Louise Wilkinson (Graduate School of Education).

³⁶ With the exception of committees for promotion to associate professor with tenure in the Social and Behavioral Sciences, where female faculty members have been under-represented for the past six years, women have been included on FAS Appointments and Promotions committees in approximate proportion to their representation on the faculty. The low number of women scientists at the PII rank (7 of 97 = 7%; Table 5) may account in part for the over-representation of women on recent PII promotion committees (6 of 36 = 17%; Table 30).

In addition to administrative leadership, many FAS women have achieved national and international recognition as intellectual leaders in their fields. Given this prominence, the number of women faculty members who hold positions at the very highest academic ranks is disproportionately small: as noted earlier, only 9% of the PII/special professors are women, and women hold only 4 of the 48 FAS-NB special professorships, none of the 4 endowed chairs, and none of the 6 State of New Jersey Professors (Tables 4 and 6). Women have distinguished themselves in teaching, as well as in scholarship: 30% of the 44 faculty recognized for their outstanding contributions to undergraduate education during the past decade were women (Table 31).

Although the percentage of chairs who were women in the fall of 1999 (20%; Table 25) slightly exceeds the percentage of women PIs and PIIs (17%, Table 4), it is notable that most departments (21 of 37) have never had a woman chair and only one woman has ever led any of the science departments (Tables 28 and 29).³⁷ The number of women in these administrative positions gives no indication of the relative sizes of the budgets or the number of personnel lines controlled by women versus men in University leadership roles. Although the committee did not have access to center budget data, anecdotally, the budgets and staff lines controlled by women center directors tend to be small.

The fraction of women who hold, or are relegated to, nurturing leadership roles with students, however, is somewhat greater than their representation on the faculty (28% of FAS-NB Undergraduate Directors in the fall of 1999 and 33% of FAS-NB Graduate Directors are women; see Table 25).³⁸ In addition, four of the seven women deans direct units of traditional women's scholarship (School of Social Work, School of Nursing-Newark, Douglass College, Graduate School of Education).

The employment histories of faculty members at the highest academic ranks suggest that the University has not had success in hiring or retaining women in positions of leadership. Specifically, as noted in Section II, most of the women in PII positions (67%) were initially hired at the assistant professor level, but only 37% of the men in these ranks started at that level (see Table 10). The situation is not consistent across divisions within FAS. For example, in the Mathematical and Physical Sciences for AY 1999-2000, only one out of 20 faculty members at the PII level was a woman hired at that level (Table 10). A total of 88 men and 22 women left faculty positions in the Faculty of Arts and Sciences between 1995 and 2000 (Table 14). As mentioned earlier, half of those women left Rutgers for positions at other universities, but only 15% of these men moved on to similar positions elsewhere. An overwhelming majority of the men left the University for reasons of retirement, disability, or death (84%), while fewer than half of the women (45%) left under those circumstances.

³⁷ Note that Tables 28 and 29 provide liberal estimates of the number of women chairs, since we counted both acting and permanent chairs. If we used a more restrictive definition (deleting acting chairs), three additional departments would be added to the list of departments with no female chairs (Table 29): Africana Studies, Anthropology, and Puerto Rican and Hispanic Caribbean Studies.

³⁸ These relatively high percentages are attributable primarily to women's greater representation in these positions in the Humanities: 46% and 58% of the Humanities undergraduate and graduate directors, respectively, are women.

The scarcity of women at the PII rank perhaps shapes the perception that women are under-represented in leadership more generally. We include a selection of comments from our survey and interview respondents to illustrate this and related issues:

*Proportion of women in leadership roles*³⁹

- “There is no question that there is a preponderance of men in high-level positions.” – P* woman (I)
- “Women have held high positions outside the department and university, in national and international societies, but not in the department and university.” – P* woman (I)
- “I don’t think that it dawned on anyone that I might be chair.” – P* woman (I)
- “The more important the committee, the less likely a woman will be on it.” – P* woman (I)
- “I feel there are areas where I have huge expertise and I have not been asked to help on those committees.” – P* woman (I)
- “I am very visible in the university when they want to tout accomplishments, but I am invisible when it comes to having an impact and being in the inner loop.” – P* woman (I)
- “I have experienced invisibility.” – P* woman (I)
- “I cannot remember a time in the past 6 years when a major committee in the dept was chaired by a woman. Nor is there even the slightest discussion of appointing a female dept chair. This seems unlikely given the way in which I have seen my senior women colleagues systematically excluded from decision making networks which are informal, excluded from access to information and in the past excluded from major committees. An inner circle made up of a selected group of male faculty determines decisions and these decisions are then rehearsed in formal committees.” – Assistant Professor Woman (S##)

Administrative roles for women

- “I could conceive of more female representation at the presidential level.” – P* woman (I)
- “People in the administration feel uncomfortable with women. For example, when individuals are all in a group they will talk to the men in the group and not talk to the women.” – P* woman (I)
- “. . . a very sports-minded mentality . . . excludes women.” – P* woman (I)
- “I was surprised that FAS did not appoint a woman as acting dean. That would have been a big step.” – P* woman (I)
- “The fact that we have never had a female Provost, female Dean of a major school, an academic Vice President is very telling.” – P* man (I)
- “You see men who started after I did and who haven’t achieved anywhere near as much and who are called upon for leadership. In name there are women in

³⁹ See footnote 20 for definitions of “S##” and “I”.

important positions in the university . . . [but] I don't see women rising from the ranks." – P* woman (I)

- “[Women] are not included in informal discussions, so they don't become part of the group that is moving ahead. Since they are excluded from important committees, they are out of the network.” – P* woman (I)
- “Whereas senior men get swept into political alliances, senior women get marginalized.” – P* woman (I)
- “Women are not seen as leaders and are not mentored during their career toward leadership.” – Associate Professor woman (S##)

Women in nurturing roles of leadership

- “The role assigned to women was doing low level student work plus busy work and nurturing TA's.” – P* woman (I)
- “The women that do have administrative positions are the hard work positions, such as undergraduate chair, and not the more influential positions.” – PI* woman (I)
- “Serious work (is) most often aligned with work that men do.” – Associate Professor woman (S#)
- “In my department it is explicitly acknowledged by the senior female faculty that a female chair would have greater difficulty within and without our department in doing her job due to the perception that a woman head is a mark of inferiority. A woman who assumes a leadership role must be far superior to male colleagues to assume similar roles. We have to jump higher to get to the same place.” – P* woman (S#)
- “My few female tenured colleagues and I have been over represented among our 'head undergraduate advisors' and our 'demand registration period advisors'.” – P* woman (S##)
- “... These nurturing functions are not given the same weight that they would be given when men occupy these slots. ... And this cycle contributes doubly to keeping women out of positions of power and decision-making.” – P* woman (S##)

Employment history of women

- “Part of the problem is as women approach that level [PII], they leave the department. However, equally distinguished men in the department who have gotten offers from the same and comparable universities as the women did, did not leave.” – P* man (I)
- “I've never been able to leverage any of my offers.” – P* woman (I)
- “The university needs to make a concerted effort to hire more senior women--well known women well respected in their fields.” – P* woman (S##)
- “... we are losing the best women all the time. Many of these women then go on and do get promoted in other institutions and have prominent careers.” – P* woman (S##)
- “In terms of retention, heaven and earth is moved to keep male senior professors. It takes forever for competing offer for women to be put together, and the process is

made so humiliating that they are completely alienated and leave.” – P* woman (S##)

- “All my male colleagues at the same level of seniority or lower who have been short listed at other universities have received an out of cycle raise before the hiring decision on the list they were part of, was taken. Although I have been short listed several times at prestigious universities, my department chairs (as there were several occasions, there were two) did not inform the administration of my being short listed nor request an out of cycle raise for me.” – Associate Professor woman (S##)
- “One [woman] has just been offered the sun and the moon by another major research institution and is likely to leave because she feels so undervalued here.” – P* woman (S##)

Summary

Women hold few leadership positions at Rutgers, despite impeccable academic credentials and national leadership roles in their disciplines. Given the under-representation of women in senior faculty ranks, gender parity in administrative leadership is extremely difficult to achieve. Nonetheless, the FAS has appointed a larger percentage of women chairs and deans than might be expected given their share in the senior ranks. The dearth of women in leadership cannot be corrected without a significant increase of senior faculty women. Intensive efforts are needed to recruit and retain women in intellectual and administrative leadership positions.

VII. PERCEPTIONS

Overview

As we might expect, responses to inquiries about gender equity at Rutgers vary considerably. Most respondents were conscious of what one woman called "the gender undercurrent" at Rutgers (S#).⁴⁰ A number of them, however, had positive things to say about it. Comparing Rutgers to other universities, three women remarked that Rutgers "treats women faculty very well indeed"; "never elsewhere have I seen such fairness toward women." "By and large I think Rutgers is a very good place for women faculty, probably one of the best" (S##, I, S##). "I may have my head in the sand," said another, "but I have never, in many years at Rutgers, felt disadvantaged or disregarded because of my sex. This was not the case at the institution where I taught prior to coming to Rutgers" (S##). Yet another's gratitude at Rutgers' fairness toward women compared to Ivy League practices led her to declare herself "quite certain that there is not a centilla [sic] of gender discrimination in [my] department" (I). One woman heard "via the grapevine" that Rutgers has been very good on gender issues, particularly FAS (I). Yet another imagined, in the context of the MIT gender study, that such inequity as exists here must be limited to the sciences (I). As to intentions, one woman wrote that "that the university and individual departments try fairly hard to prevent gender inequities" (S##). Both more gently and more pointedly, another thought that "Rutgers has good intentions on gender issues, they want to do good, but I don't think they are quite there yet" (I).

⁴⁰ See footnote 20 for definitions of "S##" and "I".

These are for the most part minority views: on average negative responses outnumbered positive voices about 2 to 1. At the other extreme is the judgment of a faculty member who had taught at several other universities: "There is no question that the climate here is more hostile than [at] any of these other campuses. ... Sexism is an acceptable norm on campus" (S##). Others wrote that "Rutgers is very poor on gender issues"; its "track record on gender issues is terrible" (2I). "There is definitely a glass ceiling at the university" (S##). "I love being at Rutgers, but this [the treatment of women faculty] has certainly been the most negative aspect of the experience" (S##). And those who sought to assign local responsibility for this state of affairs were likely to point to the attitude and policies of Rutgers' central administration (3I). "The university pays lip-service to supporting research in women and gender but it does not support those people. It has created a negative environment for women ..." (S##). One woman observed that ". . . [the central administration has] had a negative impact in general on faculty rights, both male and female" (S##). Another wrote that "[t]he constant use of sport's [sic] metaphors and statistics . . . is offputting to women and I presume to many men who are not involved in sports" (S##).

The problem of administrative bias was felt by some to extend to the decanal level. One faculty member, describing the "hostile work environment" in her department, reported that "[t]he only response from FAS (or any other part of the university administration) has been 'hands off' the department." Another concluded an account of how a female department chair was "totally ignored" at a chairs' meeting with the remark: "Most deans and higher have little consciousness of this phenomenon" (S##, S##). Several women remarked that they enjoyed better treatment and reputation outside the university than within (3I), and another believed that the reputation of Rutgers was adversely affected by the gender inequality with which it was associated (S##). "This is a university that no longer has a full-time affirmative action officer and which years ago reduced 'affirmative action' to fil[ling] out forms for the government. ... [Rutgers] lacks serious commitment to creating an equitable and harassment-free working environment for women" (S##). What's needed is a change in policy "at the university level" (I, S##). In this regard, a number of respondents called for a (more satisfactory, uniform, comprehensive) university maternity or family leave policy (S#, S##, S##, S##, I).

Several respondents addressed themselves to comparative assessments of gender inequity at Rutgers by chronology and rank. Women who had been here for a considerable number of years generally agreed that it was worse in the past (S##, S##, S##, 3I), although one, finding the reverse to be true, attributed the change to current Rutgers leadership (I). Some women experienced a decrease in gender bias (e.g., in teaching loads) as they rose through the ranks and gained authority (S#, S#, S##). But they also noted the presence of "a glass ceiling. ... You see men who started ... after I did and who haven't achieved anywhere near as much and who are called upon for leadership." There's "a sense of invisibility or marginalization as I grow older whereas the men seem to grow more powerful ..." "This feeling of isolation as you advance in the department and become more senior. It has happened to me. Whereas senior men get swept into political alliances, senior women get marginalized" (2I, S#). The sense of isolation, which respondents were explicitly asked to address, was a common experience at all ranks.⁴¹ The cause most often cited was the

⁴¹ Fully 66% of those who answered yes or no to this question (Q12; see Appendix III) believed that women faculty members at Rutgers were more likely than their male colleagues to feel personal or professional isolation. While the numbers are small, and hence must be viewed with caution, senior faculty were more likely than their younger

paucity of like-minded colleagues, especially women. "To me, it feels like an intellectual desert here" (S##). For one woman, the failure of promised hiring plans to materialize "has led to program[ma]tic isolation." She adds that "I felt completely isolated trying to juggle a tenure-track job, two young children, and a spouse who also had a very high pressure job outside of academia" (S##).

Salaries

Gender bias in salaries was reported across the range of faculty ranks (S##, S##, 2I). In documenting the absence of a supportive environment for her work, a P* cited "[l]ow salary because I was a woman." Another reported that "until quite recently, I was paid less than" men at Rutgers at the same rank and with equal years of employment. She concluded: "Pay inequity is the chief issue" (S##, S##). One associate professor referred to "the syst[e]matically lower salary that women in my department receive." Another felt that she had "no more hopes to be able to catch up salary wise ... [T]o be considered equal, I ... have to do more, not the same amount. ... In fact, although it has been quite clear ... that the two most unhappy persons in the department about [their salaries] were the most junior women, the question of gender bias was absolutely never raised or even hinted at" (S##, S##). One request for a raise met with the reminder that the requester was "a married woman, my husband makes good money and I don't need the money" (I). Other perquisites were likewise seen to be subject to gender bias: the allocation of research grants, "summer money," indirect costs, stipends for new projects; the selection of post-doctoral candidates; access to the ears of higher administrators (4I, S##, S##).

Teaching Loads

Some respondents reported gender inequity in teaching as well. According to one, "[m]y teaching load in my first three years on the tenure track was significantly higher than [that of a male] colleague in the same position." At the other end of the hierarchy, "[t]here is a lot of posturing about us being a 100% teaching faculty ..., but in fact this notion seems only to be used against the very s[enior] women in the dep[artmen]t. There are certainly a number of men who in fact have regular teaching release in our dep[artmen]t" (S##, S##). One woman discovered that two, gendered, teaching tracks existed in her department when she asked her chair to be assigned a "nonappropriate" course and later discovered a note in her file indicating she was for this reason "a difficult person" (I). But a more senior faculty member thought that the distribution of teaching loads was "fairer now than ever before. Women junior faculty in the past were seen as elementary-course teachers and coordinators and undergrad advisors "because they related better to students'(!)" (S##). And an associate professor testified that in her department "teaching loads are equitably divided, and we have great flexibility in deciding or negotiating which courses to teach" (S##).

Advising Assignments

The same professor (S##) reported gender equity in advising assignments as well. But the policies of this department are apparently not representative (although another respondent wrote that "undergraduate advising is ... shared absolutely equally among all members of the department--a

colleagues to report that Rutgers women felt isolated: 83% and 80% of PIIs and PIs who gave an answer, compared with 61% and 52% of the assistant and associate professors, respectively.

great and fairly unique system") (S#). Indeed, student advising seems to be a category of academic work in which gender inequity is unusually manifest. Another associate professor was "overwhelmed with both undergraduate and graduate students"--of the latter, "probably ten or more advises a year compared to no more than five for most of my male colleagues" (S##). A P* reported that the "women faculty in my department whose academic work focuses on gender have disproportionately large numbers of graduate students to supervise" (S##).

More broadly, several faculty report having learned that student advising was seen as a "feminine" activity, disproportionately staffed by women because of their "nurturing" and "mediating" capacities (S#, S#, S##, S##, S##, S##, I). An assistant professor who served as director of undergraduate studies in her department was required to advise all undergraduates as well as to supervise all graduate TAs. "My colleagues told me that the department needed a woman for undergraduate advising and high school recruitment because women interact better with younger students." But "since I was an untenured professor the burden of handling these duties without the advice of my colleagues was very great. I also felt isolated and depressed by the fact that my duties were defined in a way that was explicitly different from those of my male colleagues. ... [G]ender-based work overload," although sometimes intentional, often results from "an unconscious (but deeply harmful) bias that women 'do certain things better' and must therefore always do those things instead of men" (S##). But the differential in advising is not simply a function of gender bias in the exercise of workplace authority. Noting that as a P* she has "the option of refusing to take graduate students or advise them, as some men in our department do," one woman remarked: "I have not chosen that route" (S##). Another P* wrote that "[a]ltogether too many of my colleagues (and most of them are male) contrive to be 'too ignorant' of the educational structure and opportunities of the university to take on advising jobs" (S##). (The same faculty member observed that she was "both flattered and annoyed that people turn to me to mediate or negotiate in tense political situations within the department. I cannot tell whether they turn to me because 'females have good social skills' or because I have a valuable contribution to make.")

Mentoring

Another issue of special importance was the perceived absence of an informal network of professional information and opportunities available to women faculty members, a pipeline of practical knowledge about how to get along in the university and the profession comparable to that accessible through long-standing "old boys' networks" (although some felt the situation had improved in recent years) (S#, S##, S##, I). A number of respondents saw a formal mentoring system as a potential solution to this problem. "Some kind of mentoring of young women faculty members by older ones ... who are truly willing to help would in my opinion make a great difference. ... Having another woman guiding me in my early career steps would have help[ed] me avoid mistakes, clarify my professional goals[,] and identify ways to achieve them" (S##). Of the dearth of women faculty in the upper ranks (see below), one respondent said: "This is often a mentoring problem, because women are so rarely taken up by older (usually male) faculty as the latest young genius, taken to conferences, published in their collections, etc. ... Women are not seen as leaders and are not mentored during their career toward leadership positions." As for current mentoring arrangements: "The mentoring/advising from my department colleagues throughout my tenure evaluation was nonexistent, and in fact actively obstructionist" (S##, S##, S##).

Promotion

At the heart of perceived gender inequity at Rutgers are matters of authority and power, which were seen by respondents to correlate with issues of promotion and rank. The perception of inequality in promotion centered on several factors: women are required to have more publications than men; service counts more for men than for women; women are brought up for promotion later than men; a large percentage of women are turned down for tenure; "women still must prove themselves more than men"; "women have to do twice as much to be judged half as good" (S##, S##; S##, S##, S#, I, S##). Some respondents argued that the promotion system itself is biased against women. The quantitative standard of productivity implicitly and "constantly works against women," whose family responsibilities consume the time needed for the sheer accumulation of pages (S##). Again, "the cumbersome promotion and review processes are discriminatory [against] women" since the several review committees "have been a failure in exposing biases in the departments and in fact introduce many of their own. ... I would try to get rid of the A&P committee ... and diversify the PRC if we can't get rid of it" (S##).

But the real existence of a "double standard" was the common complaint: "In my department, weaker male candidates are promoted and strong female candidates are given an exceedingly hard time" (S##, S##). One respondent told of the factual misrepresentation--the "under-reporting"--of a female faculty member's grants and publications (S#). Another learned that a single negative letter in her dossier had been misrepresented as the general testimony of her "referees," and that a male colleague had withdrawn his support for her because she was seeking promotion at an age younger than that at which he'd been promoted (I). Complicating these complaints was the intuition that the double standard is so deeply embedded in social and psychological practice as to seem "natural." "Often men have more time, therefore get more done, therefore get more money, therefore get more done, etc." "Some of the gender inequity is internalized--women in my department are more careful to bring themselves up for promotion when the case is absolutely air-tight, while men I think are willing to push and take more risks." "Women are less likely to be aggressive in seeking promotions or outside offers. In my limited experience, once promotions are sought, however, their treatment is comparable" (S##, S##, S##).

The PII Rank

A striking number of complaints addressed the bias evident in the comparative paucity of female PIIs: "Because women are so seriously underrepresented among PII faculty, they are effectively excluded from decision-making" (S##; S#, S#, S##, S##, S##, S##, S##, S##, S##, I). "There is a glass ceiling after PI" for women (S##). "The miniscule numbers of women at the PII level is appalling. [The higher administration] should be ashamed" (S##). One faculty member who judged her department's promotion policies generally equitable found "[t]he big exception" in the PII rank. "Professor Two seems to be the creation of the Big Boys so they can have one last safe place to rule without having to share their power with women in any real way" (S##). Another argued against the proposal that a "pattern of discrimination at the higher ranks against women" be addressed by "target of opportunity" searches for senior women of quality rather than by promoting such women from within (S##). "The PII system is unfair to women because PIIs sit on the highest committees, yet women are woefully underrepresented at the PII level." The problem is so intractable that it can

"only be solved by leadership from the top or by abolishing the PII level. In the absence of the former (and probably in its presence) I strongly support the latter" (S##).

A number of respondents protested a related issue, the policy of granting significant salary increases in response to outside offers, because it discriminates against women. Women are less likely to enter into this kind of situation because they're more likely to regard bad-faith applications for other jobs as unethical. So, when women receive outside offers they're more likely than men to leave Rutgers--for this reason, but also because such offers aren't followed up on or taken seriously by those in charge (S##, S##, 2I, 6I). "A real problem at RU is that you have to threaten to leave (i.e., get an offer elsewhere) or be hired from the outside to get a research account. Rutgers doesn't reward those who are nationally and internationally recognized scholars and also loyal to the institution. ... [A woman in her department] has just been offered the sun and the moon by another major research institution and is likely to leave because she feels so undervalued here" (S##). "All my male colleagues at the same level of seniority or lower who have been shortlisted at other universities have received an out-of-cycle raise ... Although I have been shortlisted several times at prestigious universities, my department chairs ... did not inform the administration of my being short listed nor request an out-of-cycle raise for me" (S##). "In terms of retention, heaven and earth [are] moved to keep male senior professors. It takes forever for competing offers for women to be put together, and the process is made so humiliating that they are completely alienated and leave" (S##).

Administration

Respondents were struck by the absence of women in high places not only in the faculty ranks, but also in faculty administration. "In my department it is explicitly acknowledged by the senior female faculty that a female chair would have great difficulty within and without the department in doing her job due to the perception that a woman head is a mark of inferiority" (S#). A number of respondents commented on the lack of women department chairs (S#, S##, S##, S##, 2I). "Chairs are overwhelmingly male, as are the top committees of the university" (S##). One attributed a putative decline in women department chairs to reorganization in FAS (I). Some were reduced to hyperbole: "I think we might have a female Vice-President of the U.S. before we have a female as Chair of the Department!" "I expect I will see a Jewish pope long before I see the men in my department elect a woman as chair" (S##, S##). One of the exceptions was "surprised that new Chairs['] training did not address at all any ... gender issues" (S##). Testimony suggested that relatively few women chaired departmental committees, or at least those that are most prestigious and least dedicated to drudgery or nurturance (S#, S##, S##, S##, S##, S##, S##, S##, 3I). One woman told the following story of tokenism: "I remember I was picked to be on [an important] search committee in the early 1970s. I had come in as an alternate in terms of votes to be on this committee and they called me up and said that they wanted me to be on the committee because they needed a woman on the committee, but I would not get a vote" (I).⁴² In some departments, even the important committees appear beside the point: "The dep[artmen]t is run by an informal 'boys' club' that makes decisions together, lunches together, and so on." "Our department has an 'old boys group' that is self-selecting and self-electing. No one breaks into this circle." "The real power lies with the informal [decision-making structure.] which is an old boys club--no women allowed." "An inner circle made up of a selected group of male faculty determines decisions and these decisions

⁴² The Committee did not hear a more recent example of such blatant discrimination, and we hope it is indeed history.

are then rehearsed in formal committees" (S##, S##, S##, S##). "[I]t is the WASPMs that dominate and govern. Women and minor[ities] may serve in committees, but their voices are not heard and their suggestions never followed through. ... Often, it is a waste of time to serve on committees" (S##). The exceptions suggest how crucial differences in culture are for the quality of life at the local, departmental level: "The senior women in my department are vocal, powerful, and quite an inspiration. Their leadership, and the smooth operation of the department in general suggests that there are few problems with gender equity at this level" (S##).

Faculty members were also troubled by the absence of women at the decanal and central levels of university administration (S##, S##, S##, S##, 4I). "The fact that we have never had a female provost, female Dean of a major school, an academic Vice President is very telling" (I). "I've heard that very high up people in the administration feel uncomfortable with women" (I). In this context, the examples of Ziva Galili and Christine Haska were seen as exceptions that confirm the rule (S##, 2I).

Sexual Harassment

Although sexual harassment is an illegal form of sex discrimination prohibited by state and federal law, 33% of the women faculty responding to our survey reported that they had experienced sexual harassment at Rutgers. Complaints of sexual harassment ranged from the documentation of a hostile environment, to what one woman called "the typical comments that fly under the radar of actionable harassment," to physical advances (S##).⁴³ Some men in the department "make women feel uncomfortable by sexual innuendos, violations of personal space and the like" (S##). "I have been told that my superior performance at certain activities is [due] to my hormones, my female right-sided brain, my emotionality ... Male colleagues ask me to comment on 'other women's sexual habits, even their own students or clients, because I 'am a woman.' These conversations are clearly designed to titillate and/or irritate" (S#). One respondent learned that a male colleague was telling others that "I'd gotten tenure because some of the (nearly all-male) tenured faculty had crushes on me" (S##). "I have been asked to serve coffee for majors" (I). "I've seen faculty members engage in completely inappropriate behavior with female graduate students ... One junior faculty member in my department was literally stalked by a senior member of my field ... the year before she came up for tenure" (S##).

Race

Although the Committee did not explicitly address it, several respondents raised the complicating factors of minority status and race (S##, S##, S##, S##). An assistant professor remarked that "[w]hen I started at [R]utgers I knew an entire group of women of color across the university at various beginning stages. Of that group of about 10 women all have left. Some resigned[,] others were denied tenure. A survey that does not look into the conditions of women of color such as—

⁴³ 33% of those who responded yes or no to this question (Q9; see Appendix III)—"In your professional career at Rutgers, have you experienced unwanted sexual comments, attention, or advances from colleagues, superiors, or others?"--answered in the affirmative. When disaggregated by rank one finds that the largest percentages indicating harassment occurred for associate professors (54% of 22) and PIs (33% of 27), although the time frame is not known. The comparable figure for assistant professors, who have been at Rutgers no more than five or six years, was 18% (of 22).

what are the retention rates of these women? how many women of color are PII?—can only be incomplete in an understanding of the experience of female faculty here” (S##). Another respondent told the story of a “first-rate” minority colleague who’d been denied tenure, then added: “This is not mere anecdotal material. I have seen statistics on junior minority women which raise questions about how we treat them” (S##). A third agreed: “We have [an] especially bad record on promoting and retaining women of color. The outside reputation of Rutgers is increasingly often negative because of our inability to achieve gender and racial equity” (S##). And a fourth faculty member would “like to see more women and people of color in my dep[artmen]t. . . . [I]t would be very helpful to our female and non-anglo grad students to have more role models” (S##). These responses suggest that for many Rutgers women faculty, the experiences of gender inequity is closely linked to that of minority and race inequity.

Gender Studies: A Special Case

Some of the respondents who work in institutional subsets of the university that are directly concerned with gender studies attested to the seemingly self-fulfilling discrimination and hostility they experienced as a consequence of the work they do in bringing such behavior to light. One felt that “faculty in gender are not given the same respect for their professional evaluations or accorded the same degree of influence in the hiring process” (S##). Another believed that “women[,] and particularly women who work on gender[,] will have to perform more, and publish more to get the same treatment in terms of promotions etc.” (S##). A third reported that “[t]he women faculty in my department whose academic work focuses on gender have disproportionately large numbers of graduate students to supervise” (S##). And a fourth had witnessed “blatant discrimination, ... especially when an area within the Department is made up of primarily women” (S#). The following, more extended, comments document the results of trying to rectify this sort of bias: [T]he lack of support I've received has to do both with the fact that I'm female and with the fact that I do work in gender studies ... There is hostility toward the female sex and there is also hostility toward those who study the implications of being female! ... [M]y department refuses to hire additional faculty to carry the load in my subfield because my subfield is related to gender and it means they would have to hire another woman ... They feel as if they've been 'invaded' by women already, even though [the] ratio of men to women remains over 3 to 1. ... [I]t is a program so starved for resources that I've thought about leaving my dep[artmen]t and the university as a result. ... External reviewers ... recommended ... rebuilding the subfield of which I am a part. The first response of the men in my department was to accuse the women . . . of subverting the external review process ... because how else could these reviewers have come to such a conclusion?? The result has been that only token efforts have been made to address the inequities identified by the external reviewers and the Dean's office/University has not intervened” (S##).

Never far below the surface of these observations about gender inequity at Rutgers is the recognition that our problems are rooted in, and inseparable from, those of the society in which we work and live. As one professor put it, “I think this is a broad cultural and psychological issue, not an issue of inequity in this particular institution” (S##). Socialization and isolation are self-reinforcing: “I'd bet that if you were to study how much of their research budgets men and women use or how much additional funding men and women ask for from their deans or departments, you would find a large discrepancy; in general, men seem to have a far stronger sense of entitlement” (S##). “Gender equity becomes a non-issue in a [small] department like mine, because the few

women are each 'special cases'" (S##). At the same time, many respondents attested to the value of belonging to a community in which women's institutions--Women's Studies, the Institute for Research on Women, Douglass College--are so visible and accessible a resource.

Summary

Unlike the rest of the data reported in this study, the information we draw upon in this section recounts women's personal experiences. How do the quantitative data on the status of women faculty in the workplace compare with their qualitative impressions of their status? On some important issues, such as salaries, individuals' perceptions of gender inequity at Rutgers aren't borne out by statistical analysis. As noted in Section III, there is a 3.2% pay disadvantage for women that is just below a standard level of statistical significance. On other important issues, where numerical data are theoretically but not actually available (teaching loads, advising assignments, sexual harassment), the experience of perceived gender inequity is compelling. And on yet other issues that are insusceptible to quantitative measure—the widespread sense of condescension, disrespect, marginalization, isolation, tokenism, exploitation, and institutional sexism—the results are disturbing.⁴⁴ Such discrimination, which appears to be common, can profoundly affect women's capacity to achieve their scholarly potential.

Despite the inherent difficulties of rationalizing the relationship between objective and subjective evidence, we found a striking correlation on the crucial issue of promotion and appointment to the highest academic rank. Quantitative analysis reveals statistically significant gender inequity at the PII rank (see Section III), and dissatisfaction with the status of women at Rutgers stresses this particular complaint to a remarkable degree. The PII rank concentrates our attention on matters of authority and power that are vital to the issue of gender equity. The objective inequity evident in the gender distribution of the PII rank goes far toward explaining the source of much that disturbs us in our colleagues' subjective perceptions of the Rutgers work experience. It also underscores the policy changes needed to alter those perceptions for the better.

⁴⁴ The results from our survey of FAS women are instructive: if you delete those who failed to answer the individual questions (and hence were coded NA-no answer), nearly two-thirds of the respondents reported that female faculty at Rutgers are more likely than their male colleagues to feel personal or professional isolation (Q12); over half do not believe female faculty at Rutgers are promoted at rates equal to male colleagues at similar stages of professional development (Q11); 43% state that they are not as central a player as they wish to be in their department's informal decision-making (Q7); and 33% state that they have not found a supportive environment for their academic work (Q8). It would be helpful for a follow-up study to collect comparable data from male faculty.

As noted earlier, a chi-square test showed our survey sample to be representative of the full population of female faculty in terms of both rank and disciplinary group. With respect to other survey questions, it is impossible to assess how representative they are. But even if we make the improbable assumption of extreme sample bias, our conclusions stand. For the isolation question, for example, fully one-quarter of all FAS faculty women reported that Rutgers women feel isolated. That is, even if we assume that none of the non-respondents (either to the question or to the full survey) would have answered yes to Q12 (Appendix III), there would still be 23% (=43/190 women faculty) who reported that Rutgers women feel personal or professional isolation. Since it is unlikely that all non-respondents would have answered identically, it is reasonable to conclude that a substantial percentage of FAS faculty women would have indicated "yes."

VIII. SUMMARY OF FINDINGS

The status of women at Rutgers University is exemplary in many respects. Rutgers ranks among the top three public AAU institutions in the percentage of women faculty.⁴⁵ It also ranks well among public AAU institutions in faculty salaries: it is fifth from the top in salaries for full professors, first for associate professors, and ninth for assistant professors.⁴⁶

The FAS is home to about 46% of the Rutgers-New Brunswick faculty. Within the FAS, women constitute 17.3% of the faculty at the most senior ranks (PI and PII, calculated from Table 4), a percentage that exceeds the comparable national average of 15% for public AAU institutions.⁴⁷

The FAS deans have been committed to creating a supportive environment where all faculty members can carry out their teaching, research, and service responsibilities with equal access to opportunities and rewards. Significant recent progress has occurred in hiring women and in maintaining salary equity. During the past three decades, the FAS has increased the proportion of women among new faculty hires from an average of 26.3% in the 1970s to 35.8% in the 1990s.⁴⁸ Indeed, more recent FAS data indicate some notable gains for women at the tenured ranks from the AY 1999-2000 data used in this report. Among women at the associate professor rank, there has been a net gain of 18, attributable primarily to 21 successful promotions and four outside hires (seven were promoted out of the rank, or resigned). These gains increased women's representation among associate professors from 32% to approximately 38%. There has also been an increase of six in the PII rank, attributable to six successful promotions and one faculty hire (one female PII resigned to move to another university). This increased the total representation of women PII's from 9% to approximately 12% (see Table 32).⁴⁹

In addition, the Administration recruited a new female Executive Dean for the FAS, its first since its inception in 1981. The Committee commends the FAS deans and the University Administration for these FAS hiring successes.

Many of the Committee's findings reinforce the image of Rutgers as a leader in the higher education community on gender equity issues. For example, the Committee found that, in areas of academic base salary, promotion rates to the associate professor rank, and space allocation there exist no major gender inequalities. Nearly two-thirds of women faculty responding to the survey

⁴⁵ This ranking is based on 1999 data from the Rutgers University's office of Institutional Research and Planning. We included in the comparison only the assistant, associate, and full professor ranks (deleting the "other" category).

⁴⁶ Rutgers Fact Book, pp. 139-141; <http://oirap.rutgers.edu/instchar/factpdf/aau99.pdf>. See also R. B. Slater, "The Gender Pay Gap," *The Monthly Forum on Women in Higher Education*, December 1995, p 27. The schools noted for paying women higher average salaries than Rutgers are all private institutions: Princeton University, Stanford University, Harvard University, University of Pennsylvania, Yale University, and Southwestern University.

⁴⁷ The national average is taken from 1999 data on AAU institutions (see footnote 45).

⁴⁸ Table 3 documents these trends. Note that only faculty members who were hired from 1986 to the present, and those hired prior to 1986 and still in the FAS in 1986, are included in the FAS database. See note "a" in Table 3.

⁴⁹ Table 32 provides additional information on hires, retirements, resignations, and promotions since the spring of 2000, for both faculty men and women. It includes all faculty scheduled to arrive on campus through January 2002. We are indebted to Dean Michael Beals for these data.

found a supportive environment at Rutgers to carry out their academic work (Q8, see Appendix III). Furthermore, 81% of the respondents reported that they had adequate office space (Q1, Appendix III); 15 of 16 who responded to the lab question said they were satisfied with their laboratory space (Q2); 86% find their teaching load fair (Q5); and 75% find their advising load fair (Q6), when compared to that of other members of their department.

The Committee concluded, however, that despite these successes the FAS has not yet achieved its goal of providing equal opportunity and a supportive environment for its male and female faculty members. Subtle and not so subtle discrimination by sex persists on campus. The most glaring inequities are documented in the preceding chapters and are summarized here:

- Women are seriously underrepresented on the faculty of 9 of the 36 departments. In these departments, the percentage of women on the faculty is less than 60% of the percentage of cumulative doctorates awarded between 1981 and 1998 (calculated from Tables 2 and 7).
- Although the male to female ratio at the PI rank is 3.3/1, the male to female ratio at the PII level is 10.3/1 (calculated from Table 4).
- Approximately one-third of the 81 women surveyed indicated they had experienced unwanted sexual comments, attention or advances from colleagues, though the time frame of these occurrences is unknown. More specifically, four (18.2%) assistant professors reported unwanted approaches. This figure is significant because it represents sexual harassment activities as recently as the last five years (Q9, Appendix III).
- The perception of the women surveyed is that men are considered for tenure and promotion earlier in their career than women, that promotion standards are higher for women, and that women's scholarly accomplishments and their service and teaching contributions are undervalued in comparison with those of male colleagues.
- 66% of the survey respondents believed that faculty women were more likely than their male colleagues to feel personal or professional isolation, and these percentages were higher for senior than for junior faculty (Q12, Appendix III; see also footnote 41).
- Summer salary supplements, research accounts and start-up fund allocations favor male faculty (Tables 21-24).

These failings prevent women from achieving their potential and make it more likely that they will leave the University. Corrective actions are addressed in the following recommendations.

IX. RECOMMENDATIONS

The Committee believes that strong leadership by the Dean can, to a large extent, remedy current gender inequities. The Dean must regularly reaffirm the FAS commitment to gender equity in the promotion process, establish mechanisms within the FAS to promote continuous discussion with department chairpersons of issues of equity, monitor the application of fair promotion procedures,

and ensure that women have access to influential positions in FAS departments and the FAS administration.

The recommendations listed below identify strategies to enhance gender equality in the FAS.

A. Hiring

Hiring women at all levels and, in particular, at the higher ranks and in leadership positions is the single most pressing need.

1. Departments should be required to develop strategies, including timetables, to increase the number of women on their faculty to meet the percentages of women receiving doctorates in recent years.
2. Departments should also be required to develop specific plans, including timetables, to promote and recruit women at the PII rank.
3. The upcoming University capital campaign should be used to recruit and retain outstanding women scholars, as well as scholars in under-represented areas and disciplines. The declared initiative for dedicated academic endowments for faculty and academic chairs should be adapted to cluster hiring initiatives of outstanding women. One example of such a cluster hire approach developed by faculty in the Life Sciences is included in Appendix V.

B. Oversight of departmental policies

The Committee suggests the following decanal strategies for improving gender equity:

1. Highlight the importance of gender issues in the annual orientation of chairpersons.
2. Instruct department chairs that they will be held accountable for strictly enforcing the university's prohibition of sexual harassment.
3. Require department chairpersons to institute and publicize academic mentoring procedures for nontenured faculty. Faculty mentors should meet with nontenured faculty at least yearly to discuss research (current and planned), teaching, and service activities.
4. Foster discussion of equity issues at FAS chairs meetings, as well as between department chairpersons and their faculties.
5. Ensure fair promotion procedures, including gender equity, in preparing promotion packets. Charge Area Deans with the responsibility for monitoring departmental procedures for considering candidates for promotion.
6. Ensure that women candidates are considered for faculty and administrative appointments.

7. Charge department chairs with the responsibility of identifying and strategically supporting women to assume departmental leadership positions, and other administrative appointments.
8. Work with department chairs and other relevant personnel to devise fundraising strategies that promote gender equity in the FAS Capital Campaign.
9. Establish a special fund to encourage departments to invite outstanding female candidates for special lectures and seminars.

C. FAS-wide decanal strategies

Strong leadership in the Dean's office sets the tone for the FAS as a whole. The Committee proposes the following steps:

1. Appoint a standing Gender Equity Review Committee to monitor implementation of these recommendations and to assist the Dean in developing mechanisms to achieve gender equity in the FAS. The Committee's charge should cover issues of race and ethnic discrimination, which merit additional analysis.
2. Ensure that access to discretionary decanal funds (summer salaries, start-ups, and research accounts) be equitably distributed. Gender inequity, in addition to the usual historical market reasons, needs to be considered in the award of merit salary increases.
3. Appoint a permanent mentoring staff (ombudsperson) in the Dean's office charged with listening to faculty concerns, and identifying and resolving conflicts.
4. Update the electronic database prepared for this review to allow continuous monitoring of progress in gender equity. Add new data as needed by the Gender Equity Review Committee.
5. Publicize existing parental leave policies, ensure that all faculty are treated equally in applying for these leaves, and foster a college-wide environment that supports faculty who take such leaves.

D. Collaboration with the University higher administration

The Committee raised some issues that cannot be resolved within the FAS alone. For this reason, the Committee recommends that the Dean consider exploring the following issues with the central administration:

1. Request the central administration to include in the charge to External Review Committees an evaluation of department chairpersons and departmental faculty practices on issues of gender equity.
2. Increase administrative appointments of women in positions of visibility and authority in the University.

3. Create a high quality infant care facility on the New Brunswick-Piscataway campus.

E. Dissemination

The Committee recommends that the Dean make this report available to the FAS chairpersons and faculty for discussion. Chairpersons should be encouraged to discuss the report at faculty meetings, inviting the relevant Area Dean and one or two Committee members as resource people for discussion.

Rutgers has joined a select group of American universities in assessing the environment for faculty women and has already addressed many existing inequities. Continued vigilance and monitoring are necessary, however, to achieve and maintain a truly equal opportunity environment.

Meeting Dates:

December 21, 2000
February 1, 2001
March 29, 2001
April 26, 2001
June 12, 2001
July 24, 2001
September 7, 2001

Relevant Literature

Chronicle of Higher Education: Law, The Defining Moment for Gender Equity:
<http://www.chronicle.com/weekly/v47/i32/32b-15-1.html>

MIT Report: <http://web.mit.edu/fnl/women/women.html>
(Senior women at MIT collected data to document discrimination in laboratory space, research support and more. Their report was published in 1999. A supportive Dean and President acknowledged the existence of unintended discrimination against women at MIT.)

Rutgers University Office of Affirmative Action. “Availability Figures for Faculty Position,” March, 2001 [these data provide “figures for doctorates earned by field and subfield, 1998” and “cumulative figures for doctorates earned by field and subfield, 1981-98”; based on data from the National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File]

UCLA Gender Equity Committee Website and report: <http://www.apo.ucla.edu/GEC/index.html>
(includes a list of other universities’ Gender Equity Studies available on the web)

University of Arizona, The Millennium Report: www.u.arizona.edu/~millen/index.html

Zernike, Kate, 2001, “9 Universities Will Address Sex Inequities.” New York Times, January 31, 2001: <http://www.nytimes.com/2001/01/31/national/31WOME.html>

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We also thank the FAS faculty who took the time to participate in our interviews, or answer our web-based survey.

APPENDICES

- I. Spring 2000 Interviews With Senior Faculty
- II. Charge to the FAS Committee on Gender Equity
- III. February 28, 2001 Web-Based Survey
- IV. Data Tables
- V. Cluster Hiring: A Proposal from the Life Sciences

Appendix I. Spring 2000 Interviews With Senior Faculty

As part of the FAS effort to examine gender equity issues, Executive Dean Richard Foley provided funds to hire a Sociology graduate student, Mary Gatta, to work with Prof. Patricia A. Roos, Department of Sociology. Roos and Gatta devised a set of interview questions, and Gatta conducted 20 interviews (see following pages for the consent form and set of questions used for the interviews). Gatta compiled summaries of the interviews, sending them back to the interviewees for their comments and corrections. No names or departments were included on the summaries, which were available only to project staff. Roos revised the summaries to remove identifying information, and then grouped quotations from the summaries into five themes for use by committee members: impressions of gender equity at the department level, impressions of gender equity at Rutgers more generally, space issues, reaction to MIT report, work-family issues. Committee members used quotations from these interviews throughout the text of this report.

To generate our interview sample, we used a set of random numbers to sample separately within three stratified groups of FAS faculty: (1) all PII women, (2) all PI women with 10+ years in rank, and (3) all PII men. We excluded faculty currently in dean or higher administrative positions from the target population. Our original target samples were: 10 PII women, 5 PII men, and 5 PI women. We contacted 14 PII women, and 11 agreed to participate in the interview; similarly, we contacted 6 PI women, with 5 agreeing to participate (9 of the women interviewed were in the humanities, 2 in the social/behavioral sciences, and 5 in the sciences). Of the 4 women not interviewed, 2 were away from campus (but would otherwise have participated), and 2 declined to participate. PII men were less likely to agree to be interviewed: we contacted 20 to yield a sample of 4 PII men (2 from the humanities, 1 from the social/behavioral sciences, and 1 from the sciences). While we feel relatively confident about the generalizability of the female samples, we are not similarly confident about the male sample.

CONSENT FORM [this form was approved by the Rutgers IRB on 6/5/00]

I _____, consent to being interviewed as part of institutional research to examine differences in gender equity at Rutgers University conducted by Patricia Roos, Michael Beals, Mary Gatta and Barbara Shailor, Rutgers University.

I understand that the purpose of this interview is to gather information on patterns of gender equity and to supplement other data collection efforts in connection with this project. There will be no direct or indirect questions that will allow the researchers or any other individual to ascertain any information about my personal life. I also understand that I will not be paid for my interview, either by the researcher or my place of employment. The interview will last approximately one hour and there is no foreseeable risk or discomfort involved. I understand that my name was randomly drawn from all Professor II's or Professor I's in the Faculty of Arts & Sciences at Rutgers University. Up to 20 female faculty members will participate in the interviewing, with a supplemental sample of up to 10 male Professor II's.

I understand that the general trends regarding gender equity that may emerge out of the interviews, along with other data collected for this project, will be compiled into a report for the Executive Dean of the Faculty of Arts and Science. This report may also be distributed through the Dean's Office to other interested parties, such as FAS Chairs. In addition, the principal investigators may use the resulting data for publication in scholarly journals.

I understand that my name, academic department, or any other identifying information will not appear in any reports (preliminary or final), nor even in the summary of the interview. The summaries—with names and departments removed—will be kept in strict confidence by the researchers and never revealed to anyone outside the research team. I understand that my participation is voluntary and that if I refuse to participate there will be no penalty. I understand that I may refuse to complete the interview at any time. I understand that there may be follow-up phone interviews and I agree to participate in them, time permitting.

I understand that if I have any questions I may telephone Patricia Roos (Dean- Social & Behavioral Sciences (on leave), FAS, and Professor of Sociology, 732/906-8475) or Michael Beals (Dean-Educational Initiatives, FAS, and Professor of Mathematics, 732/932-8436). If I have questions regarding my rights as a research subject, I can call the Office of Research and Sponsored Programs at (732) 445-2799. I have received a copy of this consent form.

Signature of respondent

Date

Phone Number () _____

Home Address _____

Interview questions: 4/18/00

1. Do you have separate research space or laboratory space? If so, what is the size of laboratory or research space? Do you share that space with other faculty, staff, grad students and/or undergraduate students? If so, approximately how many individuals do you share space with in the laboratory/research areas?
2. How adequate is your laboratory/office space for your research and teaching needs? How adequate is the location of your office space? What changes would you suggest to facilitate your work? Have you requested upgrades to your lab/office space in the past? If so, what was the response to that request(s)?
3. Do you feel you need renovation money to be made available for labs and research space? Be specific.
4. What is your personal teaching load? What is your department's average teaching load? Do you mostly teach graduate or undergraduate courses? What level of courses do you typically teach? How are teaching assignments assigned in your department? Has this distribution changed over your tenure at Rutgers? If yes, how so?
5. Do you feel you have adequate access to available resources at the university? Why or why not?
6. Are you included on what you view as important committees, both in the department and throughout the university?
7. What is the procedure for linking graduate students up with faculty members? Do all professors share in a proportional number of graduate mentorships (in terms of advising students and chairing theses/dissertations)?
8. Do you have a graduate research assistant(s)? If so, how did you obtain this individual(s)? Do you feel you have adequate support in terms of research assistants?
9. Do (or did) you have specific family-work conflicts? What are they? How have you managed them? What could Rutgers do to help with family-work conflicts?
10. Have you had any outside job offers within the past 10 years? Why did you not take them? Are you now interested in looking elsewhere?
11. Do you have knowledge of MIT's report on gender equality? If so, what is your reaction to the report? How would you rate your department's track record on gender issues? Rutgers' track record? Do you feel that women hold what you view as important administrative positions in your department? at Rutgers? Have you experienced gender discrimination at Rutgers? Have you experienced more subtle forms of discrimination, such as exclusion, marginalization, and/or invisibility?

Appendix II. Charge to FAS Committee on Gender Equity

THE STATE UNIVERSITY OF NEW JERSEY

RUTGERS

Office of the Executive Dean • Faculty of Arts and Sciences
Rutgers, The State University of New Jersey
77 Hamilton Street • New Brunswick • New Jersey 08901-1248
732/9327923 • FAX: 732/932-5150

November 27, 2000

To:

From: Richard S. Falk
Acting Executive Dean

Re: Ad Hoc FAS Committee on the Status of Women

I write to ask you to serve on the Committee on the Status of Women in FAS, which I am now forming. Professor Noémie Koller of the Physics Department has agreed to serve as Chair of this Committee.

Serious discussion of the issues regarding the status of women faculty in FAS began in 1999 by Executive Dean Foley and Area Deans Roos and Beals following the report of an internal study conducted at MIT. During the current calendar year, Patricia Roos has supervised the collection of data related to gender questions in FAS: hiring and promotion/tenure patterns; salary and research support; administrative assignments; resignations. A research assistant also conducted faculty interviews. We wanted to assemble sufficient data that would allow a faculty committee to consider what FAS has accomplished in this area and to make recommendations about the future.

More specifically, the charge to the Ad Hoc FAS Committee on the Status of Women is to consider the following questions.

* What do the assembled data tell us about the representation of women in FAS units, across disciplinary units, and across ranks? What do they say about their conditions of work? Are there other data that we need to collect and analyze?

* What conclusions can we draw about gender equity in hiring in FAS units? About promotion/tenure patterns? About competitive salaries and research support? About monetary rewards for accomplishments? About leadership and other decision making roles? About retention? About climate issues within FAS units, or other issues relevant to women's academic success?

* What needs to be done? What steps can FAS implement to ensure continued/more equitable places for women in all its units?

I am asking the Committee to summarize its findings and specific recommendations in a report to me by May 15, 2001. My hope is that this report will help FAS to chart a future course for the recruitment and retention of women faculty at FAS. I also very much hope you will agree to participate in this effort. Please let me know by sending email to falk@fas-admin and nkoller@physics.

c: N. Koller

Appendix III. February 28, 2001 Web-based Survey

Interested in expanding on the interview data, the Committee developed and fielded a web-based survey of 14 questions (see below). Following IRB approval, on February 28, 2001 Committee Chairperson Koller emailed a letter (which also served as a consent form) and an appended survey to all 190 FAS tenured and tenure-track women in residence during AY 1999-2000.¹

Faculty members were provided with two response options: most respondents linked to a temporary website and answered the survey online, others “replied” to Koller’s email. The web response was entirely anonymous; the “reply” response was anonymous so long as electronic signatures were deleted (the letter provided detailed instructions outlining both options). On March 13, 2001 Koller sent a follow-up letter dated March 9, 2001 (she attached a copy of the original letter and survey). As of March 26, 2001 (the date we disabled the web site), we had received 81 responses (43 percent of those contacted).

All responses came back to Koller, who screened them and deleted any possible identifying information (e.g., name of department, specific names of people, specifics on type of research). Roos screened the responses again, deleting some additional identifying information, including disciplinary group. The double-screened responses were then provided to committee members, who used quotations from the survey in writing the final report.

Unfortunately, several programming errors in tabulating responses limited our ability to use several survey questions. We received no closed-ended answers to question 13 (“Are women faculty members at Rutgers treated fairly?”) for those who answered the survey on the web. Similar programming errors reduced the number of responses we received for the “comments” section for questions 7 and 12.

Of the 81 women who responded to the survey, 27 percent were assistant professors/lecturers, 28 percent associate professors, 33 percent PI’s, and 11 percent PII’s. [These percentages correspond to the actual percentage distribution of 190 FAS faculty women in these ranks during AY 1999-2000 of 30, 32, 30, and 8 percent, respectively (see Table 4).] With respect to discipline group, 54 percent of the respondents were in the humanities, 31 percent in the social & behavioral sciences, and 15 percent in the sciences. [The comparable percentages for FAS faculty women in AY 1999-2000 were 52, 28, and 19 percent, respectively (see Table 1).] Chi-square calculations for faculty rank and disciplinary group showed no significant differences between the survey sample and the FAS population of women.

In preparing the report, we ran simple frequencies for the survey questions, as well as separate crosstabulations of each question by rank and discipline group, respectively. A copy of these analyses is available to interested readers from Patricia Roos (roos@rci.rutgers.edu).

¹ We limited our survey sample to women FAS faculty primarily because of our charge and time and resource constraints.

FAS-NEW BRUNSWICK GENDER EQUITY COMMITTEE

February 28, 2001

Dear Colleague,

I am writing to you as Chairperson of the FAS Gender Equity Committee. Executive Dean Richard Falk created this committee last semester to examine the climate for women faculty in the FAS-NB on issues such as hiring and tenure patterns, salary and research support, and administrative assignments. The Committee members are listed below.

The Faculty of Arts and Sciences in New Brunswick has facilitated this project by providing us with substantial data on issues such as salaries, promotion rates, merit awards and institutional support. In addition, in Spring 2000 we interviewed a number of Prof. II women, a few Prof. II men, as well as a small number of Prof. I women. We would like to expand upon those data by soliciting additional responses from a wider range of FAS women faculty. We do so in this letter to all FAS-NB women at the tenured or tenure-track level. If we interviewed you previously feel free either to ignore this email or to supplement your earlier interview.

As you well know, many factors affect gender equity in the workplace. Work conditions represented by salaries, promotion rates, merit awards, and institutional support for research and travel are relatively easy to quantify, and we have these data available to us through the Dean's office. However, many of the more subtle interactions, such as those we list in the brief questionnaire below, also affect the development of women's careers. We are therefore sending this brief, anonymous questionnaire to all women who hold tenured or tenure track lines in FAS to evaluate these less visible elements. Please feel free to address any other issues that our questionnaire may have omitted.

There is minimal risk involved in participating in this survey, and your participation is strictly voluntary. All responses will be ANONYMOUS (see instructions below). The web site and backup email channel we have set up for this project do not enable anyone to track identities of respondents to our letter. I alone will carefully screen all responses, and will delete or mask any potentially identifying remarks from responses or other correspondence before distributing them to the Committee. The full text of these anonymous responses will be available only to committee members, who will hold them in strictest confidence. Quotations may be drawn from your response for inclusion in the committee's final report. The Rutgers University's Institutional Review Board (IRB) has reviewed and approved this survey protocol.

We thank you for your thoughts and help in carrying out this study, which is important both for women faculty and for the university's standing. We would appreciate hearing from you at your earliest convenience since we aim to complete a preliminary draft of the report for the FAS Executive Dean by May 2001. We ask that you respond by March 8th, although we'd appreciate a response even if you must respond subsequent to that date.

The final report from the committee will be sent to the FAS Executive Dean, and perhaps to other interested parties, such as FAS Chairs, or other members of the university community. In addition, faculty working on the project may quote from the responses for publication in scholarly journals.

We would appreciate your prompt and frank response to the questions as well as your comments on related subjects. If you have any questions concerning this survey or about issues not covered in this memo, do not hesitate to call me at 732-445-2525 (or email me directly at nkoller@physics.rutgers.edu). Note, however, that any "direct reply" to this email message will be anonymous, see below. You may also contact the Office of Research and Sponsored Programs of the University at 732-445-2799.

Noemie Koller
Professor of Physics

COMMITTEE MEMBERS

Prof. Gail Ashley, Dept. of Geological Sciences
Prof. Mary Hartman, Institute for Women's Leadership
Prof. Angelique Haugerud, Dept. of Anthropology

Prof. Mary Hawkesworth, Eagleton Institute of Politics
Prof. Michael McKeon, Dept. of English
Prof. Mark Killingsworth, Dept. of Economics
Prof. Wilma Olson, Dept. of Chemistry
Dean Barbara Shailor, Douglass College
Prof. Wise Young, Dept. of Cell Biology and Neuroscience
Prof. Noemie Koller, Dept. of Physics, Chairperson. Tel: 545-2525

FAS SUPPORT COLLEAGUES

Prof. Patricia Roos, Dept. of Sociology
Prof. Michael Beals, FAS and Dept. of Mathematics

Approved by the Rutgers IRB 2/27/01; Expiration date 2/7/02

INSTRUCTIONS

PLEASE RESPOND BY MARCH 8TH IF POSSIBLE.

Following these instructions will ensure that your responses will be entirely anonymous.

1) Web response (preferred response):

Link to the following website on your web browser:

<http://fas.rutgers.edu/irb>

You will be asked for a User Name (use “irb” without the quotes) and a password (use “irbpwd” without the quotes). Click “okay”. The following questionnaire will be replicated on the reply form.

Once you have entered your responses, click “Send Form”, which will send your response to Prof. Noemie Koller. A copy of your response will print on the screen, if you would like to keep a copy. Once you click out of the web site, the form will be reset for the subsequent respondent.

2) Email response:

We prefer that you respond through a web browser, but if you do not have web access, you can simply “reply” directly to this email, sent through an anonymous email list.

If you choose this option, **YOU MUST DELETE ANY SIGNATURE ASSOCIATED WITH YOUR EMAIL ACCOUNT**, or that information will be sent to Prof. Koller.

Contact Prof. Noemie Koller if you have any additional questions: 732-445-2525.

QUESTIONNAIRE:

Date: _____

Rank: Instructor/Assistant Professor _____
Associate Professor _____
Prof I _____
Prof II _____

Discipline: Humanities _____
Social & Behavioral Sciences _____
Mathematical, Physical, & Life Sciences _____

QUESTIONS 1-9 FOCUS ON YOUR OWN PERSONAL EXPERIENCES WITH GENDER EQUITY AT RUTGERS.

PLEASE ADD MORE SPACE AS NEEDED.

1. Relative to others in your department, have you been allocated OFFICE SPACE adequate in size and location to carry out your research and/or teaching duties in the department and university?

Yes_____ No_____ Not applicable_____

Have you requested upgrades to your office SPACE in the past?

Yes_____ No_____ Not applicable_____

If yes, was the response to that request,

Adequate _____
Somewhat adequate _____
Inadequate _____
Not applicable _____

Comments:

2. Relative to others in your department have you been allocated adequate LABORATORY SPACE to conduct your research, keeping in mind the total resources available to your department and your own external funding?

Yes_____ No_____ Not applicable_____

Do you share this SPACE with other faculty or staff?

Yes_____ No_____ Not applicable_____

Comments:

3. Are your graduate students allocated adequate office SPACE AND RESOURCES (computers, etc.)?
Yes_____ No_____ Not applicable_____

Comments:

4. Have you received any other university-provided RESOURCES (e.g., research funds, summer money, internal grants)?
Yes_____ No_____

If yes, please specify what kind of resources you have received.

Comments:

5. Do you believe your TEACHING LOAD is fair compared with other members of your department?
Yes_____ No_____

Comments:

6. Do you believe your graduate and undergraduate student ADVISING LOAD is fair compared with other members of your department?
Yes_____ No_____

Comments:

7. Do you believe that you are as central a player as you wish to be in the more informal decision-making processes in your department?
Yes_____ No_____

Comments:

8. In general, have you found a supportive environment for your academic work at Rutgers?
Yes_____ No_____

If not, can you identify gender-related factors that have made your work life less than satisfactory?

9. In your professional career at Rutgers, have you experienced unwanted sexual comments, attention, or advances from colleagues, superiors, or others?

Yes_____ No_____

Comments:

QUESTIONS 10-14 ASK YOUR PERCEPTIONS RE ISSUES OF GENDER EQUITY AT RUTGERS MORE GENERALLY.

10. Are the assignments to department and university COMMITTEE MEMBERSHIP AND CHAIRS made on an equitable basis by gender?

Yes_____ No_____

Comments:

11. Are women faculty at Rutgers PROMOTED at rates equal to those of male colleagues at similar stages of professional development?

Yes_____ No_____

Comments:

12. Are women faculty members at Rutgers more likely than their male colleagues to feel personal or professional isolation?

Yes_____ No_____

Comments:

13. Are women faculty members at Rutgers treated fairly?

Strongly Agree_____

Agree_____

Disagree_____

Strongly Disagree_____

Comments:

14. Please add any other comments you think will be useful for our deliberations. Feel free to discuss your general impressions of gender equity issues in your department and at Rutgers apart from your own personal experience of them.

THANK YOU FOR YOUR ASSISTANCE.

Appendix IV. Data Tables

Table 1. PERCENTAGE IN DISCIPLINARY GROUPS, BY SEX, FOR TENURED AND TENURE-TRACK FACULTY, FACULTY OF ARTS & SCIENCES, AY 1999-2000

<u>Disciplinary Group</u>	<u>Men</u>	<u>Women</u>	<u>% Female</u>	<u>N</u>
<u>Total FAS Faculty</u> ^a			<u>25.6</u>	<u>743</u>
Humanities	27.7	52.1	39.3	252
Social & Behavioral Sciences	24.8	28.4	28.3	191
Life Sciences	8.9	6.8	21.0	62
Mathematical & Physical Sciences	38.7	12.6	10.1	238
Total	100.1	99.9		
N	(553)	(190)		

^aIncludes all FAS faculty with a current (9/1/99) salary.

Source: FAS Dean's Office

12/21/00

Table 2. Doctorates Earned in the U.S. 1998, and in 1981 to 1998, by Field, and Percent Female in FAS Departments

<u>FAS Dept. [NRC field, if different]</u>	<u>Doctorates, 1998^a</u>		<u>Cumulative Doctorates^b</u> <u>1981-1998</u>		<u>FAS Departments^c</u>	
	<u>Total</u>	<u>% Female</u>	<u>Total</u>	<u>% Female</u>	<u>Total</u>	<u>% Female</u>
<u>Humanities^d</u>	<u>4419</u>	<u>49.6</u>	<u>62049</u>	<u>47.3</u>	<u>252</u>	<u>39.3</u>
American Studies	93	51.6	1376	55.4	3	na
Art History	179	77.7	2441	71.3	17	70.6
East Asian Languages ^e	186	60.2	2850	57.3	13	38.5
Classics	67	46.3	931	40.6	6	33.3
English [Amer. Lit., English, & Engl. Lit.]	945	58.1	13510	57.6	64	43.8
French	110	64.5	1834	70.8	15	53.3
German	81	55.6	1178	58.8	4	na
Hebraic Studies [Hebrew]	6	50.0	146	26.0	2	na
History [6 subfields added]	835	40.7	10916	36.0	57	35.1
Italian	18	61.1	297	62.0	6	16.7
Linguistics	135	64.4	2133	59.6	11	36.4
Philosophy	311	29.9	4053	25.7	25	16.0
Religion	281	27.8	3491	23.7	8	12.5
Spanish & Portuguese [Spanish]	151	59.6	2445	62.7	21	52.4
<u>Social & Behavioral Sciences^d</u>	<u>5421</u>	<u>58.1</u>	<u>89694</u>	<u>50.1</u>	<u>191</u>	<u>28.3</u>
Africana Studies	na	na	na	na	7	28.6
Anthropology	327	56.9	5366	54.2	19	31.6
Economics	470	30.2	8599	24.2	31	19.4
Geography	114	31.6	1634	28.6	11	18.2
Political Science [Pol Sc. & Gov't]	530	40.2	6509	30.5	36	25.0
Psychology	3137	67.6	52962	57.4	51	25.5
Puerto Rican & Hisp Carib Studies	na	na	na	na	5	na
Sociology	415	59.3	7041	51.7	31	45.2

<u>Life Sciences^d</u>	<u>5869</u>	<u>49.0</u>	<u>90425</u>	<u>41.0</u>	<u>60</u>	<u>21.0</u>
Cell Biology & Neuroscience [added 2]	555	46.8	5719	42.5	29	27.6
Genetics ^f	416	46.6	6729	43.5	14	14.3
Molecular Biology and Biochemistry [added 2]	1039	44.7	15844	38.6	17	17.6
<u>Mathematical & Physical Sciences^d</u>	<u>4062</u>	<u>26.2</u>	<u>65898</u>	<u>20.4</u>	<u>238</u>	<u>10.1</u>
Chemistry	1413	31.8	25495	24.8	40	25.0
Computer Science	528	21.6	6585	19.0	36	8.3
Exercise Science ^g	102	44.1	441	41.3	3	na
Geological Sciences [Geology]	113	28.3	1916	22.5	14	14.3
Mathematics	639	30.0	9084	22.5	70	5.7
Physics & Astronomy	925	14.4	15173	11.3	59	6.8
Statistics [Mathematical Statistics]	119	29.4	1749	25.7	16	6.2
<u>Total (all NRC fields)</u>	<u>29948</u>	<u>47.1</u>	<u>483291</u>	<u>41.9</u>	na	na
<u>Total (all NRC humanities, social and behavioral sciences, life sciences, and math and physical sciences)^h</u>	<u>19771</u>	<u>46.9</u>	<u>308066</u>	<u>40.5</u>	<u>743</u>	<u>25.6</u>

^aTotal number of doctorates conferred in the U.S. in 1998, by field of study (NRC data).

^bTotal number of doctorates conferred in the U.S. from 1981 to 1998, by field of study (NRC data).

^cNumbers in departments for tenured and tenure-track faculty, Faculty of Arts & Sciences, AY 1999-2000. Percent female is calculated only for departments with greater than 5 faculty.

^dIncludes NRC fields without FAS department equivalents.

^eAs of AY 1999-2000, East Asian Languages included Chinese, Japanese, Comparative Literature, Russian, and Slavic. NRC data includes sum of all degrees (and average percent female) for all five fields.

^fListing for 1998 NRC data is "Microbiology" and "Human & Animal Genetics"; listing for 1981-1998 is "Microbiology", "Human & Animal Genetics", and "Genetics".

^gListing for 1998 NRC data is "Exercise Physiology"; listing for 1981-1998 is "Exercise Science/Kinesiology".

^hTotals for FAS Departments refers to AY 1999-2000. Total for NRC columns includes NRC fields without FAS department equivalents.

Source: FAS data: FAS Dean's office; NRC data: data made available from the Rutgers Office of Affirmative Action (March, 2001).

These data are from the National Research Council, Office of Scientific Engineering Personnel and the Doctorate Records File. The Affirmative Action office deleted "aliens on temporary visas" and "degree recipients of unspecified race or citizenship status."

5/30/01

Table 3. FACULTY OF ARTS & SCIENCES (FAS) HIRING, BY SEX AND YEAR^a

<u>Hire Year</u>	<u>Total</u>	<u>Men</u>	<u>Women</u>	<u>% Female</u>
<u>1940s</u>	<u>4</u>	<u>4</u>	<u>0</u>	<u>0.0</u>
1946	1	1	0	0.0
1947	1	1	0	0.0
1948	2	2	0	0.0
1949	0	0	0	0.0
<u>1950s</u>	<u>48</u>	<u>39</u>	<u>9</u>	<u>18.8</u>
1950	2	2	0	0.0
1951	2	1	1	50.0
1952	2	2	0	0.0
1953	1	1	0	0.0
1954	6	6	0	0.0
1955	3	3	0	0.0
1956	6	5	1	16.7
1957	13	11	2	15.4
1958	4	3	1	25.0
1959	9	5	4	44.4
<u>1960s</u>	<u>229</u>	<u>196</u>	<u>33</u>	<u>14.4</u>
1960	16	14	2	12.5
1961	10	10	0	0.0
1962	15	14	1	6.7
1963	10	7	3	30.0
1964	27	22	5	18.5
1965	15	11	4	26.7
1966	20	18	2	10.0
1967	32	26	6	18.8
1968	40	34	6	15.0
1969	44	40	4	9.1
<u>1970s</u>	<u>320</u>	<u>236</u>	<u>84</u>	<u>26.3</u>
1970	42	38	4	9.5
1971	46	38	8	17.4
1972	31	17	14	45.2
1973	18	14	4	22.2
1974	28	17	11	39.3
1975	33	26	7	21.2
1976	19	13	6	31.6
1977	40	29	11	27.5
1978	34	24	10	29.4
1979	29	20	9	31.0

<u>Hire Year</u>	<u>Total</u>	<u>Men</u>	<u>Women</u>	<u>% Female</u>
<u>1980s</u>	<u>406</u>	<u>292</u>	<u>114</u>	<u>28.1</u>
1980	53	38	15	28.3
1981	45	27	18	40.0
1982	23	18	5	21.7
1983	31	27	4	12.9
1984	25	17	8	32.0
1985	37	27	10	27.0
1986	42	27	15	35.7
1987	44	32	12	27.3
1988	59	43	16	27.1
1989	47	36	11	23.4
<u>1990's</u>	<u>302</u>	<u>194</u>	<u>108</u>	<u>35.8</u>
1990	42	29	13	31.0
1991	30	17	13	43.3
1992	22	11	11	50.0
1993	34	23	11	32.4
1994	19	13	6	31.6
1995	33	22	11	33.3
1996	22	13	9	40.9
1997	31	22	9	29.0
1998	34	23	11	32.4
1999	33	21	12	36.4
2000 ^b	2	0	2	100.0
Total (1946-2000)	1309	961	348	26.6

^aIncludes only those FAS faculty in the Dean's office database: (1) everyone hired from 1986 to the present; and (2) those hired prior to 1986 and still in FAS in 1986. FAS was organized as a faculty in 1981. Faculty hired prior to that date were hired into colleges, after that date directly into FAS.

^bAY 1999-2000 start only.

Source: FAS Dean's Office

4/30/01

**Table 4. PERCENTAGE FEMALE IN TENURED OR TENURE-TRACK ACADEMIC RANKS,
FACULTY OF ARTS & SCIENCES, AY 1999-2000**

<u>Rank</u>	<u>Men</u>	<u>Women</u>	<u>% Female</u>	<u>N</u>
<u>Total FAS Faculty^a</u>			<u>25.6</u>	<u>743</u>
Instructors/Lecturers	0.4	0.5	33.3	3
Assistant Professors	13.6	29.0	42.3	130
Associate Professors	23.2	32.1	32.3	189
Professor I	34.9	30.5	23.1	251
Professor II/Special Professor Ranks	28.0	7.9	8.8	170
Total	100.1	100.0		
N	(553)	(190)		

^aIncludes all FAS faculty with a current (9/1/99) salary.

Source: FAS Dean's Office

12/21/00

Table 5. ACADEMIC YEAR EARNINGS AND EARNINGS RATIOS BY DISCIPLINE GROUP, RANK, AND SEX, AY 1999-2000^a

<u>Discipline Group/Rank</u>	<u>Earnings</u>			<u>Base N</u>	
	<u>Women</u>	<u>Men</u>	<u>Earnings Ratio (W/M)</u>	<u>Women</u>	<u>Men</u>
<u>Humanities</u>	\$ 75,641	\$ 88,763	85.2%	99	153
Assistant Professors	\$ 52,325	\$ 52,408	99.8%	26	20
Associate Professors	\$ 68,785	\$ 69,603	98.8%	34	41
Professor I	\$ 93,284	\$ 92,697	101%	32	54
Professor II/Special Profs.	\$ 126,077	\$ 125,012	101%	6	37
<u>Social & Behavioral Sciences</u>	\$ 71,517	\$ 88,476	80.8%	54	137
Assistant Professors	\$ 57,778	\$ 56,644	102%	22	19
Associate Professors	\$ 70,720	\$ 76,080	93.0%	19	37
Professor I	\$ 94,440	\$ 92,391	102%	11	52
Professor II/Special Profs.	\$ 104,142	\$ 120,517	86.4%	2	28
<u>Life Sciences</u>	\$ 79,454	\$ 86,466	91.9%	13	49
Assistant Professors	\$ 50,596	\$ 54,402	93.0%	3	9
Associate Professors	\$ 70,232	\$ 78,330	90.0%	4	16
Professor I	\$ 97,050	\$ 95,532	102%	5	17
Professor II/Special Profs.	^b	\$ 124,270	^b	1	7
<u>Mathematical & Physical Sciences</u>	\$ 93,095	\$ 97,247	95.7%	24	214
Assistant Professors	\$ 63,248	\$ 61,690	103%	4	27
Associate Professors	\$ 77,347	\$ 75,622	102%	4	34
Professor I	\$ 92,288	\$ 92,038	100%	10	70
Professor II/Special Profs.	\$ 124,837	\$ 122,065	102%	6	83

^aIncludes all FAS faculty with a current (9/1/99) salary. The few (n=3) "Instructors" are included in discipline averages, but not separately within disciplinary groups.

^bData withheld due to small n. Brackets ([]'s) used for values based on fewer than 5 faculty.

Table 6. PERCENTAGE FEMALE IN SPECIAL PROFESSORSHIPS, FACULTY OF ARTS & SCIENCES, AY 1999-2000

<u>Title</u>	<u>Total # Titles</u>	<u># Women</u>	<u>% Female</u>
Special Professor Ranks (FAS faculty only)^a	48	4	8.3
Board of Governors Professorships	13	2	
Endowed Chairs	4	0	
Named Chairs	18	1	
University Professors	7	1	
State of New Jersey Professors	6	0	

^aSeveral faculty have more than one title, and are included separately in each.

Source: FAS Dean's Office

Table 7. NUMBERS IN DEPARTMENTS, BY SEX, FOR TENURED AND TENURE-TRACK FACULTY, FACULTY OF ARTS & SCIENCES, AY1999-2000

<u>Department</u>	<u>Men</u>	<u>Women</u>	<u>Total</u>	<u>% Female</u>
<u>Humanities</u>	<u>153</u>	<u>99</u>	<u>252</u>	<u>39.3</u>
American Studies	2	1	3	
Art History	5	12	17	
East Asian Languages	8	5	13	
Classics	4	2	6	
English	36	28	64	
French	7	8	15	
German	2	2	4	
Hebraic Studies	2	0	2	
History	37	20	57	
Italian	5	1	6	
Linguistics	7	4	11	
Philosophy	21	4	25	
Religion	7	1	8	
Spanish & Portuguese	10	11	21	
<u>Social & Behavioral Sciences</u>	<u>137</u>	<u>54</u>	<u>191</u>	<u>28.3</u>
Africana Studies	5	2	7	
Anthropology	13	6	19	
Economics	25	6	31	
Geography	9	2	11	
Political Science	27	9	36	
Psychology	38	13	51	
Puerto Rican & Hisp Carib Studies	3	2	5	
Sociology	17	14	31	
<u>Life Sciences</u>	<u>49</u>	<u>13</u>	<u>62</u>	<u>21.0</u>
Cell Biology & Neuroscience	21	8	29	
Genetics	12	2	14	
Life-IMCS	2	0	2	
Molecular Biology and Biochemistry	14	3	17	
<u>Mathematical & Physical Sciences</u>	<u>214</u>	<u>24</u>	<u>238</u>	<u>10.1</u>
Chemistry	30	10	40	
Computer Science	33	3	36	
Exercise Science	3	0	3	
Geological Sciences	12	2	14	
Mathematics	66	4	70	
Physics & Astronomy	55	4	59	
Statistics	15	1	16	
<u>Total</u>	<u>553</u>	<u>190</u>	<u>743</u>	<u>25.6</u>

Table 8. PERCENTAGE IN RACE GROUPS, BY SEX, FOR TENURED AND TENURE-TRACK FACULTY, FACULTY OF ARTS & SCIENCES, AY 1999-2000

<u>Race</u>	<u>Men</u>	<u>Women</u>	<u>% Female</u>	<u>N</u>
<u>Total FAS Faculty^a</u>			<u>25.6</u>	<u>743</u>
White	86.4	82.1	24.6	634
Black (not Hispanic)	3.4	6.3	38.7	31
Hispanic	3.6	3.7	25.9	27
Asian & Pacific Islander	6.5	7.9	29.4	51
Other	0.0	0.0		
Total	99.9	100.0		
N	(553)	(190)		

^aIncludes all FAS faculty with a current (9/1/99) salary

Source: FAS Dean's Office

Table 9. MEANS FOR SELECTED VARIABLES, BY DISCIPLINARY GROUP, AND SEX, AY 1999-2000^a

<u>Discipline Group/Rank</u>	<u>Years at Rutgers^b</u>		<u>Years Since Ph.D.^b</u>		<u>Associate Professor Years in Rank^c</u>		<u>Professor I Years in Rank^d</u>	
	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>
<u>Humanities</u>	15.1	19.2	18.5	23.6	10.7	9.9	8.9	10.5
Assistant Professors	3.7	2.8	5.8	6.1	na	na	na	na
Associate Professors	15.7	19.7	18.3	20.5	10.7	13.2	na	na
Professor I	23.4	23.0	26.9	26.6	11.1	8.6	9.0	11.3
Professor II/Special Profs.	19.2	22.6	29.5	32.0	6.3	5.8	8.0	8.8
<u>Social & Behavioral Sciences</u>	12.8	19.9	15.7	24.0	10.1	9.8	7.8	11.1
Assistant Professors	4.4	4.4	6.3	6.8	na	na	na	na
Associate Professors	16.8	18.6	20.3	21.5	11.0	13.4	na	na
Professor I	20.1	23.7	23.4	26.4	9.0	8.4	7.2	11.8
Professor II/Special Profs.	[27.5]	25.9	[33.0]	34.4	[7.0]	4.5	[11.0]	9.6
<u>Life Sciences</u>	14.8	17.3	19.7	23.4	8.2	11.2	9.7	9.3
Assistant Professors	[3.3]	4.7	[8.7]	9.8	na	na	na	na
Associate Professors	[16.5]	18.9	[19.0]	23.4	[10.0]	13.4	na	na
Professor I	17.8	23.9	25.2	28.5	7.0	9.5	9.4	10.4
Professor II/Special Profs.	[27.0]	13.9	[28.0]	28.7	[6.0]	8.0	[11.0]	4.8
<u>Mathematical & Physical Sciences</u>	16.8	18.7	22.3	24.5	6.1	7.1	6.9	9.2
Assistant Professors	[4.8]	4.1	[7.5]	6.8	na	na	na	na
Associate Professors	[11.0]	14.3	[13.0]	19.1	[5.0]	9.9	na	na
Professor I	17.2	21.4	25.2	25.0	7.9	7.3	8.2	11.1
Professor II/Special Profs.	28.9	23.1	33.3	31.9	4.6	4.9	4.2	6.7

^aIncludes all faculty with 9/1/99 salary. The few (n=3) "instructors" are included in disciplinary group averages, but not separately.

^bYears at Rutgers (2000-hire year); years since Ph.D. (2000-Ph.D. year).

^cAssociate Professor Year in Rank (for those currently in that rank: number of years as associate professor; for those in higher ranks: year awarded full professor rank minus year awarded associate professor). Available only for faculty awarded both promotions at Rutgers.

^dProfessor Year in Rank (similar to Associate except that higher rank is Prof. II, and lower rank is full professor).

Brackets ([]'s) used for values based on fewer than 5 faculty.

Source: FAS Dean's Office

2/8/01

Table 10. Rank When Hired at Rutgers, Professor II Faculty, AY 1999-2000

<u>Disciplinary Group/Sex</u> <u>Numbers</u>	Rank when hired at Rutgers					<u>Special Profs.</u>	<u>Total</u>
	<u>Asst. Prof.^a</u>	<u>Assoc. Prof.</u>	<u>Prof. I</u>	<u>Prof. II</u>			
<u>Totals</u>	68	26	32	36	8	170	
Humanities	16	5	10	8	4	43	
Men	13	5	10	6	3	37	
Women	3	0	0	2	1	6	
Social & Behavioral Sciences	9	6	10	5	0	30	
Men	8	5	10	5	0	28	
Women	1	1	0	0	0	2	
Life Sciences	2	1	2	3	0	8	
Men	1	1	2	3	0	7	
Women	1	0	0	0	0	1	
Mathematical & Physical Sciences	41	14	10	20	4	89	
Men	36	14	10	19	4	83	
Women	5	0	0	1	0	6	
<u>Percentages</u>						<u>Total %</u>	<u>Base N</u>
<u>Totals</u>	<u>40.0</u>	<u>15.3</u>	<u>18.8</u>	<u>21.2</u>	<u>4.7</u>	<u>100.0</u>	<u>170</u>
Humanities (25.3%)	37.2	11.6	23.3	18.6	9.3	100.0	43
Social & Behavioral Sciences (17.6%)	30.0	20.0	33.3	16.7	0.0	100.0	30
Life Sciences (4.7%)	25.0	12.5	25.0	37.5	0.0	100.0	8
Mathematical & Physical Sciences (52.4%)	46.1	15.7	11.2	22.5	4.5	100.0	89
Men (91.2%)	37.4	16.1	20.6	21.3	4.5	99.9	155
Women (8.8%)	66.7	6.7	0.0	20.0	6.7	100.1	15

^aIncludes Assistant Professors and Lecturers.

Table 11. Rank When Hired at Rutgers, Professor I Faculty, AY 1999-2000

<u>Disciplinary Group/Sex</u> <u>Numbers</u>	Rank when hired at Rutgers				<u>Total</u>
	<u>Asst. Prof.^a</u>	<u>Assoc. Prof.</u>	<u>Prof. I</u>	<u>Total</u>	
<u>Totals</u>	190	36	25	251	
Humanities	66	11	9	86	
Men	41	8	5	54	
Women	25	3	4	32	
Social & Behavioral Sciences	49	9	5	63	
Men	41	7	4	52	
Women	8	2	1	11	
Life Sciences	17	3	2	22	
Men	14	2	1	17	
Women	3	1	1	5	
Mathematical & Physical Sciences	58	13	9	80	
Men	52	12	6	70	
Women	6	1	3	10	
<u>Percentages</u>				<u>Total %</u>	<u>Base N</u>
<u>Totals</u>	<u>75.7</u>	<u>14.3</u>	<u>10.0</u>	<u>100.0</u>	<u>251</u>
Humanities (34.3%)	76.7	12.8	10.5	100.0	86
Social & Behavioral Sciences (25.1%)	77.8	14.3	7.9	100.0	63
Life Sciences (8.8%)	77.3	13.6	9.1	100.0	22
Mathematical & Physical Sciences (31.9%)	72.5	16.2	11.2	99.9	80
Men (76.9%)	76.7	15.0	8.3	100.0	193
Women (23.1%)	72.4	12.1	15.5	100.0	58

^aIncludes Assistant Professors and Lecturers.

<u>Discipline Group</u>	<u>% Promotion Success Rate^b</u>							
	<u>1997-98^a</u>		<u>1998-99</u>		<u>1999-2000</u>		<u>1997-2000</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
<u>Total FAS Faculty</u>	<u>70.0</u>	<u>87.5</u>	<u>82.1</u>	<u>66.7</u>	<u>95.2</u>	<u>78.9</u>	<u>81.0</u>	<u>78.8</u>
Humanities	77.8	75.0	70.0	60.0	100.0	88.9	80.0	77.8
Social & Behavioral Sciences	71.4	100.0	100.0	100.0	100.0	71.4	85.7	81.8
Math & Physical Sciences	50.0	100.0	90.0	0.0	100.0	100.0	80.0	100.0
Life Sciences	100.0	0.0	66.7	0.0	66.7	0.0	80.0	0.0

^aAcademic year indicates promotion cycle. Thus, Board decisions made in the Fall for the previous year's promotion cycle are included in the previous year's totals.

^bSee above for base N.

4/9/01

Source: FAS Dean's Office

Table 13. BOARD OF GOVERNORS TENURED HIRING DECISIONS, FACULTY OF ARTS & SCIENCES, BY SEX, RANK, AND DISCIPLINE GROUP, AY1997-98 TO 1999-2000

<u>Discipline Group/Rank</u>	<u># Successfully Hired With Tenure</u>							
	<u>1997-98^a</u>		<u>1998-99</u>		<u>1999-2000</u>		<u>1997-2000</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
<u>Total FAS Faculty</u>	<u>7</u>	<u>2</u>	<u>12</u>	<u>5</u>	<u>4</u>	<u>2</u>	<u>23</u>	<u>9</u>
<u>Humanities</u>	3	1	2	1	1	1	6	3
Associate Professor	1	0	1	1	1	1	3	2
Professor I	2	1	1	0	0	0	3	1
Professor II	0	0	0	0	0	0	0	0
<u>Social & Behavioral Sciences</u>	0	1	3	2	1	1	4	4
Associate Professor	0	0	1	1	1	1	2	2
Professor I	0	1	1	0	0	0	1	1
Professor II	0	0	1	1	0	0	1	1
<u>Math & Physical Sciences</u>	3	0	6	2	2	0	11	2
Associate Professor	0	0	5	0	2	0	7	0
Professor I	1	0	0	2	0	0	1	2
Professor II	2	0	1	0	0	0	3	0
<u>Life Sciences</u>	1	0	1	0	0	0	2	0
Associate Professor	0	0	0	0	0	0	0	0
Professor I	0	0	1	0	0	0	1	0
Professor II	1	0	0	0	0	0	1	0

^aAcademic year indicates promotion cycle. Thus, Board decisions made in the Fall for the previous year's promotion cycle are included in the previous year's totals.

4/9/01

Source: FAS Dean's Office

Table 14. REASONS FOR LEAVING, BY SEX, TENURED FACULTY SCIENCES, 1995-2000

<u>Women</u>	<u>Year Left</u>	<u>Department</u>	<u>Reason for Leaving^a</u>
1	1995	English	Left for foreign university
2	1996	English	Retired
3	1996	Anthropology	Left for U.S. university
4	1996	German	Retired
5	1996	Philosophy	Retired
6	1996	English	Left for foreign university
7	1996	History	Retired
8	1996	Psychology	Retired
9	1997	English	Left for foreign university
10	1997	English	Left for U.S. university
11	1997	English	Left for univ. administrative job
12	1998	Political Science	Left for U.S. university
13	1998	Computer Science	Retired
14	1998	Anthropology	Retired
15	1998	Physics	Left for U.S. university
16	1998	Anthropology	Internal transfer
17	1999	History	Left for U.S. university
18	1999	Psychology	Left for U.S. gov't agency
19	1999	Physics	Left for univ. administrative job
20	2000	English	Retired
21	2000	Computer Science	Left for U.S. university
22	2000	English	Retired
<u>Men</u>			
1	1995	Political Science	Internal transfer
2	1995	German	Retired
3	1995	Sociology	Retired
4	1995	English	Retired
5	1995	Chemistry	Retired
6	1995	Mathematics	Permanent disability
7	1995	Philosophy	Retired
8	1995	Comparative Literature	Retired
9	1995	Statistics	Retired
10	1995	Geography	Left for U.S. university
11	1995	CBN	Retired
12	1995	Chemistry	Retired
13	1996	Psychology	Left for U.S. university
14	1996	Philosophy	Deceased
15	1996	Africana Studies	Retired
16	1996	English	Retired
17	1996	French	Retired
18	1996	CBN	Retired
19	1996	Africana Studies	Retired
20	1996	Mathematics	Retired
21	1996	History	Retired
22	1996	Molecular Biology	Retired
23	1996	English	Retired

24	1996	Economics	Permanent disability
25	1996	History	Retired
26	1997	Chemistry	Retired
27	1997	Statistics	Retired
28	1997	Psychology	Permanent disability
29	1997	German	Left for U.S. university
30	1997	English	Retired
31	1997	Physics	Left for U.S. university
32	1997	Geological Sciences	Retired
33	1997	Physics	Retired
34	1997	Philosophy	Left for U.S. university
35	1997	Statistics	Retired
36	1997	Psychology	Deceased
37	1997	English	Retired
38	1997	Mathematics	Retired
39	1997	History	Retired
40	1997	Mathematics	Retired
41	1998	Mathematics	Left for foreign university
42	1998	English	Retired
43	1998	Philosophy	Retired
44	1998	Statistics	Retired
45	1998	History	Retired
46	1998	Political Science	Retired
47	1998	Sociology	Retired
48	1998	Italian	Retired
49	1998	French	Retired
50	1998	Physics	Retired
51	1998	CBN	Retired
52	1998	Chemistry	Retired
53	1998	Computer Science	Retired
54	1998	Physics	Left for U.S. university
55	1998	CBN	Retired
56	1998	Economics	Retired
57	1998	Physics	Retired
58	1998	Anthropology	Termination
59	1998	Physics	Retired
60	1998	English	Retired
61	1998	CBN	Retired
62	1999	Psychology	Retired
63	1999	Political Science	Retired
64	1999	Mathematics	Retired
65	1999	English	Retired
66	1999	Chemistry	Retired
67	1999	Philosophy	Retired
68	1999	Physics	Retired
69	1999	Molecular Biology	Left for U.S. university
70	1999	Mathematics	Retired
71	1999	Psychology	Retired
72	1999	Chemistry	Retired
73	1999	English	Left for foreign university
74	1999	Mathematics	Left for U.S. university
75	1999	CBN	Retired

76	2000	English	Retired
77	2000	Life Sciences	Retired
78	2000	History	Retired
79	2000	Philosophy	Left for U.S. university
80	2000	Physics	Retired
81	2000	Philosophy	Retired
82	2000	Chinese	Retired
83	2000	Psychology	Retired
84	2000	Mathematics	Retired
85	2000	Psychology	Deceased
86	2000	History	Retired
87	2000	History	Left for U.S. university
88	2000	Philosophy	Left for univ. administrative job

Summary: Percentage Leaving for Indicated Reasons, by Sex

<u>Reason for Leaving</u>	<u>Women</u>	<u>Men</u>
Left for U.S. university ^b	36.4	12.5
Left for foreign university	13.6	2.3
Retired	40.9	76.1
Internal transfer	4.5	1.1
<u>Other^c</u>	<u>4.5</u>	<u>8.0</u>
Total %	99.9	100.0
N	(22)	(88)

^aFaculty transferring to another school within Rutgers as part of the transfer of academic programs are not included in this list (e.g., Ecology & Evolution).

^bIncludes faculty and administrators.

^cIncludes government agency, permanent disability, deceased, and termination.

2/16/01

Table 15. ACADEMIC YEAR EARNINGS AND STANDARD DEVIATIONS BY DISCIPLINE GROUP, RANK, AND SEX, AY 1999-2000^a

<u>Discipline Group/Rank</u>	<u>Mean Earnings</u>		<u>Standard Deviations</u>	
	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>
<u>Humanities</u>	\$ 75,641	\$ 88,763	\$22,897	\$28,023
Assistant Professors	\$ 52,325	\$ 52,408	\$3,056	\$4,566
Associate Professors	\$ 68,785	\$ 69,603	\$6,916	\$8,305
Professors	\$ 93,284	\$ 92,697	\$13,664	\$12,065
Professor II/Special Profs.	\$ 126,077	\$ 125,012	\$20,227	\$20,998
<u>Social & Behavioral Sciences</u>	\$ 71,517	\$ 88,476	\$16,709	\$22,385
Assistant Professors	\$ 57,778	\$ 56,644	\$7,865	\$8,045
Associate Professors	\$ 70,720	\$ 76,080	\$5,940	\$7,980
Professors	\$ 94,440	\$ 92,391	\$8,636	\$10,227
Professor II/Special Profs.	[\$104,142]	\$ 120,517	[\$6,535]	\$11,369
<u>Life Sciences</u>	\$ 79,454	\$ 86,466	\$23,520	\$24,831
Assistant Professors	\$ 50,596	\$ 54,402	\$4,528	\$2,246
Associate Professors	[\$70,232]	\$ 78,330	[\$8,256]	\$16,711
Professors	\$ 97,050	\$ 95,532	\$13,674	\$9,407
Professor II/Special Profs.	^b	\$ 124,270	^b	\$19,316
<u>Mathematical & Physical Sciences</u>	\$ 93,095	\$ 97,247	\$22,979	\$25,824
Assistant Professors	[\$63,248]	\$ 61,690	[\$5,238]	\$8,063
Associate Professors	[\$77,347]	\$ 75,622	[\$9,544]	\$11,897
Professors	\$ 92,288	\$ 92,038	\$8,234	\$12,116
Professor II/Special Profs.	\$ 124,837	\$ 122,065	\$10,695	\$16,562

^aIncludes all FAS faculty with a current (9/1/99) salary. The few (n=3) "Instructors" are included in discipline averages, but not separately within disciplinary groups.

^bData withheld due to small n. Brackets ([]'s) used for values based on fewer than 5 faculty.

Table 16. CALENDAR YEAR EARNINGS, BY DISCIPLINE GROUP, RANK, AND SEX, CY 1999-2000^a

<u>Discipline Group/Rank</u>	<u>Base Salary^b</u>			<u>Base & Discretionary Salary^b</u>			<u>Total CY Salary^b</u>		
	<u>Women</u>	<u>Men</u>	<u>Ratio W/M</u>	<u>Women</u>	<u>Men</u>	<u>Ratio W/M</u>	<u>Women</u>	<u>Men</u>	<u>Ratio W/M</u>
<u>Total FAS Faculty</u>	<u>\$ 76,934</u>	<u>\$ 91,771</u>	<u>83.8%</u>	<u>\$77,831</u>	<u>\$93,196</u>	<u>83.5%</u>	<u>\$80,085</u>	<u>\$99,084</u>	<u>80.8%</u>
<u>Humanities</u>	<u>\$ 75,641</u>	<u>\$ 88,763</u>	<u>85.2%</u>	<u>\$76,845</u>	<u>\$90,636</u>	<u>84.8%</u>	<u>\$77,030</u>	<u>\$90,729</u>	<u>84.9%</u>
Assistant Professors	\$ 52,325	\$ 52,408	99.8%	\$52,325	\$53,625	97.6%	\$52,325	\$53,625	97.6%
Associate Professors	\$ 68,785	\$ 69,603	98.8%	\$69,150	\$70,163	98.6%	\$69,687	\$70,163	99.3%
Professors	\$ 93,284	\$ 92,697	101.0%	\$96,373	\$93,694	102.9%	\$96,373	\$93,694	102.9%
Professor II/Special Profs.	\$ 126,077	\$ 125,012	101.0%	\$127,410	\$130,024	98.0%	\$127,410	\$130,410	97.7%
<u>Social & Beh. Sciences</u>	<u>\$ 71,517</u>	<u>\$ 88,476</u>	<u>80.8%</u>	<u>\$72,072</u>	<u>\$89,572</u>	<u>80.5%</u>	<u>\$74,597</u>	<u>\$91,574</u>	<u>81.5%</u>
Assistant Professors	\$ 57,778	\$ 56,644	102.0%	\$58,573	\$57,221	102.4%	\$60,203	\$59,371	101.4%
Associate Professors	\$ 70,720	\$ 76,080	93.0%	\$70,720	\$76,457	92.5%	\$72,882	\$78,330	93.0%
Professors	\$ 94,440	\$ 92,391	102.0%	\$95,575	\$93,341	102.4%	\$100,020	\$95,370	104.9%
Professor II/Special Profs.	[\$104,142]	\$ 120,517	86.4%	[\$104,142]	\$123,225	84.5%	[\$109,388]	\$125,320	87.3%
<u>Life Sciences</u>	<u>\$ 79,454</u>	<u>\$ 86,466</u>	<u>91.9%</u>	<u>\$79,454</u>	<u>\$86,466</u>	<u>91.9%</u>	<u>\$90,218</u>	<u>\$97,390</u>	<u>92.6%</u>
Assistant Professors	\$ 50,596	\$ 54,402	93.0%	\$50,596	\$54,402	93.0%	\$59,886	\$72,070	83.1%
Associate Professors	[\$70,232]	\$ 78,330	90.0%	[\$70,232]	\$78,330	89.7%	[\$81,677]	\$87,955	92.9%
Professors	\$ 97,050	\$ 95,532	102.0%	\$97,050	\$95,532	101.6%	\$102,701	\$101,999	100.7%
Professor II/Special Profs.	^c	\$ 124,270	^c	^c	\$124,270	^c	^c	\$140,315	^c
<u>Math. & Physical Sciences</u>	<u>\$ 93,095</u>	<u>\$ 97,247</u>	<u>95.7%</u>	<u>\$93,974</u>	<u>\$98,888</u>	<u>95.0%</u>	<u>\$99,546</u>	<u>\$110,254</u>	<u>90.3%</u>
Assistant Professors	[\$63,248]	\$ 61,690	103.0%	[\$68,524]	\$65,848	104.1%	[\$78,575]	\$71,500	109.9%
Associate Professors	[\$77,347]	\$ 75,622	102.0%	[\$77,347]	\$76,750	100.8%	[\$84,098]	\$85,598	98.2%
Professors	\$ 92,288	\$ 92,038	100.0%	\$92,288	\$92,240	100.1%	\$95,372	\$100,098	95.3%
Professor II/Special Profs.	\$ 124,837	\$ 122,065	102.0%	\$124,837	\$124,312	100.4%	\$130,781	\$141,526	92.4%

^aIncludes all FAS faculty with a current (9/1/99) salary. Three "Instructors" are included in discipline averages, but not separately within discipline groups.

^bSalary definitions: Base salary includes those with academic year salary, and those whose titles carry calendar year salaries (e.g., chair, dean).

Base & discretionary salary adds dean-provided summer salary. Total CY salary adds dean-provided and grant summer salary.

^cData withheld due to small n. Brackets ([]'s) used for values based on fewer than 5 faculty.

4/12/01

Source: FAS Dean's Office

Table 17. PERCENTAGE RECEIVING DISCRETIONARY OR GRANT SUMMER SALARIES, BY YEAR, DISCIPLINE GROUP, AND SEX^a

	Summer 1998 Salary		Summer 1999 Salary		Summer 2000 Salary	
	<u>Discretionary^b</u>	<u>Grant^c</u>	<u>Discretionary^b</u>	<u>Grant^c</u>	<u>Discretionary^b</u>	<u>Grant^c</u>
Total FAS Faculty	8.9	25.3	10.8	25.6	11.4	23.4
Male	9.9	28.8	11.8	29.7	12.1	26.4
Female	5.8	15.3	7.9	13.7	9.5	14.7
Humanities	12.3	2.4	13.1	0.8	9.1	0.4
Male	14.4	2.6	15.0	0.6	10.5	0.0
Female	9.1	2.0	10.1	1.0	7.1	1.0
Social & Behavioral Sciences	8.4	15.7	9.4	15.2	10.5	12.6
Male	11.0	14.6	11.0	13.9	9.5	11.0
Female	1.8	18.5	5.6	18.5	13.0	16.7
Life, Math. & Physical Sciences	6.3	50.7	9.7	53.0	14.0	49.7
Male	6.8	51.3	10.3	54.8	14.4	49.8
Female	2.7	46.0	5.4	40.5	10.8	48.6

^aIncludes all FAS faculty with a current (9/1/99) salary.

^b"Discretionary summer salary" refers to salary received in June, July, or August of indicated year (state funding, Busch grants, department, and central administration).

^c"Grant summer salary" refers to external grant money earned in June, July, or August of indicated year.

4/30/01

Table 18. MERIT INCREASES, BY DISCIPLINARY GROUP, RANK, AND SEX, AY 1999-2000^a

<u>Discipline Group</u>	% Receiving Merit		Merit (FASIP) ^b		Highest dollar amount		% Receiving Out of Cycle Merit ^c	
	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>
<u>Humanities</u>	86.9	88.9	2.8	2.9	\$2,962	\$3,335	7.1	15.7
Assistant Professor	69.2	55.0	1.2	0.6	\$2,335	\$2,500	0.0	5.0
Associate Professor	97.1	90.2	3.7	2.6	\$2,820	\$2,792	11.8	4.9
Full professor ^d	92.1	96.7	3.3	3.5	\$3,418	\$3,667	7.9	23.1
<u>Social & Behavioral Sciences</u>	75.9	82.5	2.4	2.6	\$2,835	\$3,006	5.6	9.5
Assistant Professor	63.6	52.6	1.5	0.7	\$2,745	\$2,643	4.5	0.0
Associate Professor	78.9	91.9	2.9	2.3	\$2,677	\$2,739	5.3	16.2
Full professor ^d	92.3	85.0	3.4	3.2	\$3,138	\$3,190	7.7	8.8
<u>Life Sciences</u>	76.9	73.5	2.5	2.0	\$3,234	\$2,946	7.7	2.0
Assistant Professor	[33.3]	88.9	[0.7]	1.6	[\$3,460]	\$2,428	[0.0]	0.0
Associate Professor	[75.0]	68.8	[2.5]	1.5	[\$3,961]	\$2,397	[0.0]	6.2
Full professor ^d	100.0	70.8	3.5	2.5	\$2,832	\$3,544	16.7	0.0
<u>Mathematical & Physical Sciences</u>	91.7	84.1	3.8	2.9	\$2,864	\$2,903	8.3	6.1
Assistant Professor	[100.0]	48.1	[1.8]	0.8	[\$2,294]	\$1,913	[0.0]	0.0
Associate Professor	[100.0]	85.3	[3.8]	2.5	[\$1,617]	\$2,307	[25.0]	2.9
Full professor ^d	87.5	90.2	4.2	3.3	\$3,383	\$3,119	6.2	7.8

^aIncludes all faculty with 9/1/99 salary. The few (n=3) instructors are included in disciplinary averages, but not separately within disciplinary groups.

^b"% Receiving Merit" = percentage receiving merit (FASIP) increase; "# Increases" = number of merit (FASIP) increases while faculty member;

"Highest dollar amount" = largest dollar amount received for single merit increase;

^c% Receiving Out of Cycle Merit = percentage receiving out of cycle merit increase while faculty member. Note that disciplines may vary in how they respond to circumstances resulting in OOC awards (e.g., in response to an outside offer, some disciplines may award OOC awards, while others may promote faculty to a higher rank).

^dIncludes PI's, PII's, and Special Professors. Note: Brackets ([]'s) used for values based on fewer than 5 faculty.

Table 19. Female-Male Pay Differentials, AY 1999-2000

Model	(A)	(B)	(C)	(D)	(E)	(F)
	<u>base salary</u> in \$	<u>in %</u>	<u>base salary +</u> <u>discretionary</u> in \$	<u>in %</u>	<u>base salary +</u> <u>discretionary +</u> <u>grant money</u> in \$	<u>in %</u>
1. Basic variables only	-2971.	-3.2	-3346.	-3.5*	-4311.*	-4.3*
2. Both basic variables and rank variables	-153.	0.0	-401.	-0.2	-822.	-0.7

Results for model with “basic variables only” refer to sex difference in pay for faculty who are the same in terms of all of the basic variables (years since Ph.D., years at Rutgers, age, academic department, race). Results for model with “basic variables and rank variables” refer to sex difference in pay for faculty who are the same in terms of all of the basic variables and hold the same academic rank.

Negative (positive) entries indicate a pay difference that is adverse to female relative to male faculty (male relative to female faculty) who are the same in terms of all other variables considered in the analysis. An asterisk (*) identifies a pay difference that is statistically significant at conventional test levels; a pay difference not identified by an asterisk is not statistically significant.

Table 20. Female-Male Differences in Academic Ranking, AY 1999-2000

coefficient for female-male difference in academic rank:

<u>definition of academic rank:</u>	
<u>three-category</u>	<u>four-category</u>
-0.225	-0.304*

“Three-category” definition of academic rank consists of assistant professor, associate professor, and full professor. “Four-category” definition consists of assistant professor, associate professor, professor I, and professor II.

Each set of results refers to sex difference in the relevant definition of academic rank for faculty who are the same in terms of all of the basic variables (years since Ph.D., years at Rutgers, age, academic department, race).

Negative (positive) entries indicate a difference in academic rank that is adverse to female relative to male faculty (male relative to female faculty) who are the same in terms of the "basic" variables. An asterisk (*) identifies a academic rank difference that is statistically significant at conventional test levels; a rank difference not identified by an asterisk is not statistically significant.

Table 21. AVERAGE INTERNAL RESEARCH FUNDS RECEIVED FY 1998-2000, BY SEX, RANK, AND DISCIPLINE GROUP^a

	<u>Fiscal Year 1998-2000</u>					
	Means		Medians		Base N	
	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>
<u>FAS Faculty With Research Account</u>	<u>\$9,325</u>	<u>\$11,366</u>	<u>\$7,500</u>	<u>\$9,000</u>	<u>67</u>	<u>143</u>
<u>Rank^b</u>						
Assistant Professors	\$7,916	\$6,276	\$6,000	\$6,000	23	10
Associate Professors	\$9,056	\$9,197	\$7,000	\$8,000	18	29
Professors	\$10,486	\$10,491	\$9,000	\$9,000	21	49
Professor II/Special Profs.	\$11,900	\$14,338	\$7,500	\$13,000	5	54
<u>Discipline Group</u>						
Humanities	\$9,731	\$9,342	\$7,250	\$8,000	48	77
Social & Behavioral Sciences	\$8,011	\$11,819	\$8,715	\$9,000	15	43
Life Sciences	\$9,750	\$24,833	\$9,750	\$30,000	2	3
Mathematical & Physical Sciences	\$9,000	\$16,162	\$9,000	\$13,000	2	20

^aIncludes all FAS faculty with a current (9/1/99) salary who received FAS-provided research funds in each or all years from FY 1998 to 2000. These figures represent three-year averages (FY 1998-2000).

^bInstructors are not included separately in the rank groupings, due to their small number (n=1).

Table 22. PERCENT RECEIVING INTERNAL RESEARCH FUNDS BY DISCIPLINE GROUP, RANK, AND SEX, FY 1998-2000^a

<u>Discipline Group/Rank</u>	<u>% Receiving research funds^b</u>		<u>Base N</u>	
	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>
<u>Total FAS Faculty</u>	<u>35.3</u>	<u>25.9</u>	<u>190</u>	<u>553</u>
<u>Humanities</u>	<u>48.5</u>	<u>50.3</u>	<u>99</u>	<u>153</u>
Assistant Professors	53.8	25.0	26	20
Associate Professors	41.2	41.5	34	41
Professors	53.1	53.7	32	54
Professor II/Special Profs.	50.0	70.3	6	37
<u>Social & Behavioral Sciences</u>	<u>27.8</u>	<u>31.4</u>	<u>54</u>	<u>137</u>
Assistant Professors	40.9	26.3	22	19
Associate Professors	15.8	21.6	19	37
Professors	18.2	32.7	11	52
Professor II/Special Profs.	50.0	42.9	2	28
<u>Life Sciences</u>	<u>15.4</u>	<u>6.1</u>	<u>13</u>	<u>49</u>
Assistant Professors	0.0	0.0	3	9
Associate Professors	25.0	6.2	4	16
Professors	20.0	5.9	5	17
Professor II/Special Profs.	0.0	14.3	1	7
<u>Mathematical & Physical Sciences</u>	<u>8.3</u>	<u>9.3</u>	<u>24</u>	<u>214</u>
Assistant Professors	0.0	0.0	4	27
Associate Professors	0.0	8.8	4	34
Professors	10.0	2.9	10	70
Professor II/Special Profs.	16.7	18.1	6	83

^aIncludes all FAS faculty with a current (9/1/99) salary. The few (n=3) "Instructors" are included in discipline averages, but not separately within disciplinary groups.

^b"% Receiving research funds" = percent who received FAS-provided research funds in FY 1998, FY 1999, or FY 2000.

Source: FAS Dean's Office

2/21/01

Table 23. Average Startup Funds Received FY 1998-2000, By Sex, Rank, and Discipline Group^a

	<u>Fiscal Year 1998-2000</u>								
	<u>Total</u>	<u>Means Women</u>	<u>Men</u>	<u>Total</u>	<u>Medians Women</u>	<u>Men</u>	<u>Total</u>	<u>Base N Women</u>	<u>Men</u>
<u>FAS Faculty With Startup Funds</u>	<u>\$66,069</u>	<u>\$47,748</u>	<u>\$76,354</u>	<u>\$21,000</u>	<u>\$17,974</u>	<u>\$28,000</u>	<u>89</u>	<u>32</u>	<u>57</u>
<u>Rank^b</u>									
Assistant Professors	\$50,509	\$45,152	\$53,776	\$20,250	\$17,948	\$21,576	66	25	41
Associate Professors	\$62,453	\$64,211	\$61,699	\$29,471	\$30,000	\$28,942	10	3	7
Professors	\$91,169	\$51,625	\$117,532	\$54,733	\$35,750	\$107,255	10	4	6
Professor II/Special Profs.	\$336,770	n.a.	\$336,770	\$194,222	n.a.	\$194,222	3	0	3
<u>Discipline Group^c</u>									
Humanities	\$18,593	\$14,076	\$22,397	\$16,860	\$14,500	\$18,000	35	16	19
Social & Behavioral Sciences	\$31,358	\$29,530	\$33,352	\$21,000	\$20,500	\$25,000	23	12	11
Life, Mathematical & Physical Sciences	\$145,424	\$237,088	\$131,844	\$81,000	\$206,862	\$66,000	31	4	27

^aIncludes all FAS faculty with a current (9/1/99) salary who received FAS-provided startup funds in FY 1998-2000.

^bThe few instructors are included with assistant professors.

^cDue to small sample sizes, the sciences are combined into one group.

Note: These data include only those funds awarded and paid out in FY 1998 to 2000. Thus, those awarded startup in FY 1998 received up to three years of startup paid out, those in FY 1999 two years, and those in FY 2000 only one year.

Table 24. Numbers Awarded Yearly Startup Funds, by Sex, Rank, and Disciplinary Group^a

	Fiscal Year First Awarded Startup Funds			
	<u>FY 1998</u>	<u>FY1999</u>	<u>FY 2000</u>	<u>Total N</u>
<u>Sex</u>	<u>23</u>	<u>38</u>	<u>28</u>	<u>89</u>
Male	15	25	17	57
Female	8	13	11	32
<u>Rank^b</u>	<u>23</u>	<u>38</u>	<u>28</u>	<u>89</u>
Assistant Professor	20	26	20	66
Associate Professor	1	4	5	10
Professors	1	6	3	10
Professor II/Special Profs.	1	2	0	3
<u>Discipline Group^c</u>	<u>23</u>	<u>38</u>	<u>28</u>	<u>89</u>
Humanities	12	11	12	35
Social & Behavioral Sciences	4	12	7	23
Life, Mathematical & Physical Sciences	7	15	9	31

^aIncludes all FAS faculty with a current (9/1/99) salary who received FAS-provided startup funds in FY 1998-2000.

^bThe few instructors are included with assistant professors.

^cDue to small sample sizes, the sciences are combined into one group.

Table 25. FACULTY OF ARTS & SCIENCES ACADEMIC LEADERSHIP, Fall 1999

	% Female	N
FAS Deans^a	28.6	7
Department Chairs^b	20.0	35
Humanities	35.3	17
Social & Behavioral Sciences	12.5	8
Physical & Mathematical Sciences	0.0	7
Life Sciences	0.0	3
Graduate Directors	33.3	27
Humanities	58.3	12
Social & Behavioral Sciences	0.0	6
Physical & Mathematical Sciences	33.3	6
Life Sciences	0.0	3
Undergraduate Directors	28.0	25
Humanities	45.5	11
Social & Behavioral Sciences	16.7	6
Physical & Mathematical Sciences	20.0	5
Life Sciences	0.0	3
Centers, Bureaus and Institutes (CBI) Directors^c	16.7	18

^a Includes Executive Dean, Vice Dean and Area Deans, FAS (Acting Deans Excluded).

^b Includes Acting Chairs. This table summarizes Table 28, which includes three extra "Programs" with "Directors" (Comparative Literature, Slavic & East European Languages, and Women's Studies). In Summer 2001, Women's Studies moved from program to departmental status.

^c Includes all CBI directors who report to the Executive Dean, FAS

Source: FAS Dean's Office, Graduate School

8/9/01

Table 26. HISTORY OF FAS ACADEMIC DEANS, FALL 1992 - SPRING, 2000

<u>Title</u> ^a	<u># of Deans</u>	<u># of Female Deans</u>
Dean/Executive Dean	1	0
Vice Dean (1995-Spring, 2000)	1	1
Area Deans	9	3

^a Acting deans are excluded.

Source: FAS Dean's Office

12/21/00

Table 27. DEPARTMENT LEADERSHIP ROLES, BY DISCIPLINARY GROUP, RANK, AND SEX, AY 1999-2000^a

<u>Discipline Group</u>	% Ever Administrator		Type of Administrator ^b		% Ever Graduate Director	
	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>
<u>Humanities</u>						
Associate Professor	41.2	46.3	11.8	24.4	17.6	2.4
Full professor ^c	71.1	48.4	34.2	38.5	18.4	8.8
<u>Social & Behavioral Sciences</u>						
Associate Professor	31.6	37.8	5.3	16.2	5.3	8.1
Full professor ^c	30.8	55.0	15.4	41.2	0.0	11.2
<u>Life Sciences</u>						
Associate Professor	[25.0]	31.2	[0.0]	12.5	[0.0]	0.0
Full professor ^c	66.7	70.8	0.0	20.8	0.0	20.8
<u>Mathematical & Physical Sciences</u>						
Associate Professor	[0.0]	17.6	[0.0]	5.9	[0.0]	2.9
Full professor ^c	37.5	25.5	12.5	14.4	18.8	3.3

^aIncludes all associate and full professor faculty with 9/1/99 salary.

^b"% Ever Administrator" = percentage ever been any kind of administrator"; "%Ever Chair" = percentage ever been a chair/acting chair;

"% Ever Graduate Director" = percentage ever been a graduate director/vice chair of graduate studies.

^cIncludes PI's, PII's, and Special Professors.

Note: Brackets ([]'s) used for values based on fewer than 5 faculty.

Table 28. HISTORY OF FAS DEPARTMENTAL LEADERSHIP^a AND PERCENT FEMALE BY DISCIPLINARY GROUP, FALL 1980/1981-SPRING 2000 (unless otherwise specified).											
	TOTAL^b				1980's				1990's		
Department (years)	# of Chairs	# Female Chairs	Percent Female		# of Chairs	# Female Chairs	Percent Female		# of Chairs	# Female Chairs	Percent Female
Total	163	32	19.6		91	13	14.3		110	21	19.1
Humanities:	79	25	31.6		41	11	26.8		56	16	28.6
American Studies	2	0			1	0			2	0	
Art History	4	2			3	1			4	2	
Classics and Archaeology	6	1			4	1			3	0	
Comparative Literature	6	3			N/A	N/A			6	3	
East Asian Languages and Cultures	1	0			1	0			1	0	
English	4	1			3	0			2	1	
French	5	0			2	0			4	0	
Germanic Languages & Literatures	4	2			1	0			4	2	
Hebraic Studies	2	0			2	0			1	0	
History	8	1			5	0			4	1	
Italian	2	1			1	0			2	1	
Linguistics (Fall,1989-Spring, 2000)	6	2			1	0			6	2	
Philosophy	9	0			4	0			7	0	
Religion (Fall,1979-Spring, 2000)	4	0			3	0			2	0	
Slavic & East. Eur. Lang./Lit. (Fall,1990-Spring,2000)	2	0			N/A	N/A			2	0	
Spanish & Portuguese	4	2			2	1			3	1	
Women's Studies ^c	10	10			8	8			3	3	
Social & Behavioral Sciences:	44	6	13.6		28	2	7.1		26	4	15.4
Africana Studies	6	1			4	0			3	1	
Anthropology	6	1			3	0			4	1	
Economics	6	0			4	0			3	0	
Geography (Fall,1987-Spring, 2000)	5	2			2	1			4	1	
Political Science	6	0			4	0			3	0	
Psychology	6	0			5	0			4	0	
Puerto Rican & Hisp./Caribbean Studies	6	1			4	1			3	0	
Sociology	3	1			2	0			2	1	

		TOTAL				1980's				1990's		
	# of	# Female	Percent		# of	# Female	Percent		# of	# Female	Percent	
Department (years)	Chairs	Chairs	Female		Chairs	Chairs	Female		Chairs	Chairs	Female	
Physical & Mathematical Sciences:	28	1	3.6		15	0	0		21	1	4.8	
Chemistry	4	1			2	0			3	1		
Computer Science	4	0			2	0			3	0		
Exercise Science/Sports Studies (Fall,1988-Spring,2000)	3	0			2	0			2	0		
Geological Sciences	3	0			1	0			3	0		
Mathematics	7	0			4	0			4	0		
Physics and Astronomy	2	0			1	0			2	0		
Statistics	5	0			3	0			4	0		
Life Sciences:	12	0	0		7	0	0		7	0	0	
Biological Sciences (Fall,1980-Spring, 1995)	4	0			4	0			1	0		
Cell, Bio. & Neuroscience (Fall,1995-Spring,2000)	1	0			N/A	N/A			1	0		
Genetics (Fall, 1998-Spring, 2000)	1	0			N/A	N/A			1	0		
Microbiology & Genetics (Fall,1996-Spring, 1998)	1	0			N/A	N/A			1	0		
Molecular Biology & Biochemistry	5	0			3	0			3	0		
^a Includes both acting and official chairs. Each individual chair was counted once, regardless of the number of distinct terms he/she served. The Humanities list includes three "Programs" with "Directors" (Comparative Literature, Slavic & East European Languages, and Women's Studies). In Summer 2001, Women's Studies moved from program to departmental status.												
^b The sum total number of chairs does not always equal the sum of the number of chairs for 1980's and the 1990's. This is because some chairs served terms in both decades.												
^c Includes two years with co-directors.												
Source: FAS Dean's Office											8/9/01	

Table 29. FAS ACADEMIC DEPARTMENTS IN WHICH THERE WERE NO FEMALE CHAIRS^a, FALL 1980/1981 - SPRING 2000 (unless otherwise specified). N=36 Departments

Humanities (N=17):

American Studies
East Asian Languages and Cultures
French
Hebraic Studies
Philosophy
Religion (Fall,1979-Spring, 2000)
Slavic & Eastern European Languages & Literatures (Fall,1990-Spring, 2000)

Social & Behavioral Sciences (N=8):

Economics
Political Science
Psychology

Physical & Mathematical Sciences (N= 7):

Computer Science
Exercise Science and Sports Studies (Fall,1988-Spring, 2000)
Geological Sciences
Mathematics
Physics and Astronomy
Statistics

Life Sciences (N=5):

Biological Sciences (Fall,1980-Spring,1995)
Cell, Biology & Neuroscience (Fall,1995-Spring, 2000)
Genetics (Fall, 1998-Spring, 2000)
Microbiology & Genetics (Fall,1996-Spring, 2000)
Molecular Biology & Biochemistry

^a Includes both acting and official chairs.

Table 30. FAS APPOINTMENTS TO A&P (APPOINTMENT AND PROMOTION) COMMITTEES, BY YEAR AND DISCIPLINARY GROUP

<u>A&P by Discipline Group</u>	<u># Women (out of 6), by Academic Year</u>						Total
	<u>1994-95</u>	<u>1995-96</u>	<u>1996-97</u>	<u>1997-98</u>	<u>1998-99</u>	<u>1999-2000</u>	<u># of Women (out of 36) 1994-2000</u>
<u>A&P for Nontenured Reappointments</u>							
Humanities	2	3	4	2	4	3	18
Social & Beh. Sciences	2	2	1	1	3	4	13
Math/Physical & Life Sciences	2	1	1	0	0	0	4
<u>A&P for Promotion to Associate Professor</u>							
Humanities	3	1	1	2	3	4	14
Social & Beh. Sciences	1	1	1	0	0	1	4
Math/Physical & Sciences	2	1	1	1	1	1	7
<u>A&P for Promotion to Professor I</u>							
Humanities	3	2	3	2	3	3	16
Social & Beh. Sciences	1	0	1	2	1	1	6
Math/Physical & Life Sciences	2	1	1	1	1	1	7
<u>A&P for Promotion to Professor II</u>							
Humanities	1	1	1	1	1	1	6
Social & Beh. Sciences	1	1	0	0	0	1	3
Math/Physical & Life Sciences	1	0	2	1	1	1	6

^aThe number of A&P members for each discipline group is six. All regular and alternate members included.

Source: FAS Dean's Office

8/9/01

Table 31. PERCENTAGE FEMALE AMONG FACULTY RECIPIENTS OF THE FAS AWARD FOR DISTINGUISHED CONTRIBUTORS TO UNDERGRADUATE EDUCATION, 1989-2000

<u>Disciplinary Group/Rank</u>	<u>Faculty Award Recipients</u>		<u>Total FAS Faculty (AY 1999-2000)</u>	
	<u>% Female</u>	<u>N</u>	<u>% Female</u>	<u>N</u>
Total	29.5	44	25.6	743^a
Humanities	36.8	19	39.3	252
Social & Behavioral Sciences	30.0	10	28.3	191
Life Sciences	33.3	6	21.0	62
Mathematical & Physical Sciences	11.1	9	10.1	238
Assistant Professors	18.2	11	42.3	130
Associate Professors	40.0	15	32.3	189
Professors (I, II, Special Ranks)	22.2	18	17.3	421

^aTotal N for rank omits 3 tenure-track faculty in "instructors/lecturers" positions.

Source: FAS Dean's Office

12/21/00

Table 32. FAS Faculty Changes Since Spring 2000^a

	<u>Men</u>	<u>Women</u>
<u>New Hires</u>		
Assistant Professor	31	24
Associate Professor	4	4
PI	4	2
PII	2	1
<u>Retirements/Resignations</u>		
Assistant Professor	11	4
Associate Professor	6	4
PI	11	2
PII	14	1
<u>Promotions</u>		
to Associate Professor	14	21
to PI	13	3
to PII	11	6
<u>Net Change^b</u>		
Assistant Professor	6	-1
Associate Professor	-1	18
PI	-5	-3
PII	-1	6

^aThese figures include all faculty scheduled to arrive on campus by January 2002.

^bCalculated as new hires - retirement/resignations - promoted out of this rank + promoted into this rank.

Appendix V:

CLUSTER HIRING: A PROPOSAL FROM THE LIFE SCIENCES

Women constituted 25.6% of Rutgers FAS faculty members in 2000, compared to 36% of full-time U.S. university faculty in 1997 [1]. The gender imbalance is most marked in the mathematical and physical sciences and in the life sciences. Women account for only 10% and 21% of FAS faculty in these two areas. By comparison, women comprised 21.9% and 36.2% of U.S. scientists in these two areas in 1997.

The low rate of academic appointments of women scientists is a serious problem amongst major research universities. For example, Massachusetts Institute of Technology [2,3], Harvard University [4], and Princeton University [5,6] all have found serious gender imbalances, especially in the sciences. At Harvard, for example, there are only two women among 36 assistant professors in the Natural Sciences. Similar gender imbalances are present in public universities, including the University of Oregon [7], University of Arizona [8], University of Kansas [9], and University of Illinois at Champaign-Urbana [10].

The Rutgers FAS has been hiring more women faculty in recent years, especially in the sciences. However, even conscientious hiring of women faculty at a 50% rate will not close the gender gap for a long time. For example, if we assume that 6% of the faculty retired and were replaced yearly by 50% women, FAS will not achieve gender parity for over two decades. Reversing the gender imbalance will require extraordinary measures. As Jeremy Knowles, the Dean of the Faculty of Arts of Sciences at Harvard said, “My sense is that mere decanal exhortation is not enough” [4]. Unusual approaches to recruit more women to the FAS faculty need to be considered, particularly in departments that have serious gender imbalances. One approach is a “cluster hiring” of senior women faculty in departments that have the most gender imbalance. Many universities, including Rutgers, have successfully used a similar approach to increase hiring of minority faculty. A cluster hiring program would not only rapidly address critical gender imbalances at the senior faculty levels but will establish a more favorable environment for recruiting and retaining women faculty in the future.

In this Appendix, the Division of Life Sciences will consider the advantages, rationale, resources, and pitfalls of a program to hire clusters of senior women faculty to correct gender imbalance in the FAS, using the Division of Life Sciences as a model. The discussion will focus on both the positive and negative aspects of implementing such a cluster hiring program within the FAS at Rutgers University.

Advantages of a Cluster Hiring Approach

A cluster hiring program is advantageous for many reasons:

A favorable environment for recruiting women faculty. Simultaneous hiring of a “cluster” of senior women faculty will have synergistic effects on individual recruitment and will provide a

favorable environment for recruiting other women into the faculty. For example, successful recruitment of a cluster of senior and respected women faculty will provide a clear signal that Rutgers has a supportive environment for women.

Pooling of internal resources and efforts. A cluster hire allows pooling of internal resources for the recruitment. The efforts of multiple departments will be required for successful recruitment of senior women faculty. Pooling resources and effort will allow greater efficiency and coordination of recruitment.

Development of external funding sources. Federal agencies such as the National Science Foundation have a strong interest in funding activities that promote women in science. Private donors and foundations likewise have substantial interest in funding programs directed at women. To develop funding from public and private funding sources, a well-organized and visionary program is required.

A direct solution for the most serious inequity. A cluster hire of senior women faculty would directly address the most serious gender inequity at the FAS: the relative lack of senior women faculty, particularly in the mathematical, physical, and life sciences. For example, a cluster hire of five senior women faculty would bring gender parity to the senior faculty ranks in the Division of Life Sciences.

Providing a template for further recruitment. Cluster hires of senior women faculty have not been done before at Rutgers. Solutions to regulatory and legal obstacles will pave the way for cluster hires in other departments. A cluster hire in one department would provide a template for similar efforts in other departments.

More women in faculty leadership positions. Due to the paucity of women in faculty leadership positions, viewpoints of women faculty are under-represented in departmental decisions and activities. A cluster hire of senior women faculty will rapidly and directly correct this deficit.

Public relations. The concept of increasing the role of women faculty at public universities will find substantial resonance with the public. Many of our alumni, as well as the citizenry of New Jersey, will find the concept attractive. It will also attract the best women students to Rutgers.

In summary, a cluster hiring program will directly address the most serious gender inequities while maximizing internal resources and opportunities for external funding. It will appeal to potential donors and foundations, and place senior women into faculty leadership positions that will aid in the recruitment of more and better women faculty to Rutgers University.

Potential Negative Consequences of a Cluster Hiring Approach

The positive consequences of a successful cluster hiring of senior women faculty are self-evident. A cluster hiring program will allow the FAS to rapidly correct gender imbalances in specific departments and to compete successfully for the best women faculty in the nation. Successful recruitment of senior women faculty will have many positive effects on the university, including a

better environment for women faculty and students and easier recruitment of women faculty. Rutgers will take a national leadership role in solving this difficult problem.

A cluster hiring program will require the commitment of significant effort and resources by the University. To ensure that consumption of these resources does not have negative impact on the growth of other high-priority programs at Rutgers, the program must be largely funded through external fundraising and grants. There will be significant competition for such funding and for the best women in the field, particularly since many universities have recently recognized that they have a serious problem with gender inequity. The program may be more difficult to implement than we think.

Failure may have significant negative consequences. For example, if the FAS undertakes a highly visible program to recruit senior women faculty and fails at the attempt, it will set back the effort to recruit women for years to come. Likewise, if the program does not recruit productive women faculty, it will introduce a long-lasting burden that the FAS will have to shoulder for years. The recruited faculty must have access to sufficient support and resources to maximize their productivity and success. Thus, once the program starts, the university must commit sufficient resources to ensure its success.

Care must be taken that increasing the number of women at the senior level does not impede the advancement of the junior faculty. One possible solution to this problem is to recruit some senior women who may be in a position to retire within a decade. The number of women and the positions to which they are recruited must be carefully and individually considered for each department. It is likely that some departments will require more junior faculty while others will require middle-rank faculty.

Finally, positive perception and strong support of the cluster hiring program by existing faculty at Rutgers is crucial to its success. One potential negative consequence of a highly visible cluster hiring program is a feeling of discrimination by both current male and female faculty who may perceive the program with envy. The FAS must be sensitive to this issue and consistently work to ensure that the existing faculty see the advantages of such a program for them.

Rationale for Cluster Hiring of Women Faculty at the Division of Life Sciences

Women faculty currently account for about 21% of the 60 faculty members in the Division of Life Sciences at Rutgers. According to the National Science Foundation (NSF) Report on “Women, Minorities, and Persons with Disability in Science and Engineering: 2000” [1], 36.2% of scientists and engineers in the biological and agricultural sciences were women in 1997 (Table V.1). Women comprise 34%, 38%, 39%, and 43% of academically employed life scientists in 4-year colleges or universities, medical schools, university research institutes, and combined 4-year, medical school, and research institutes, respectively (Table V.2).

The low proportion of women faculty in the Division of Life Sciences is partly explained by lower numbers of women who earned doctorates in the field. Between 1968 and 1997, women received only 21.8% of doctorates awarded in biological and agricultural sciences (Table V.3). The proportion of women receiving doctorates in this field increased to 24.4% in 1978-1997 and 26.8%

in 1988-97. These statistics are skewed by a lower number of women in agricultural sciences. If we consider only biological sciences, women received 37.3% and 42.9% of doctorates in 1990 and 1999 respectively [11].

The track record for the Division of Life Sciences in recruiting women has improved recently. For example, in the last three years, the new faculty recruits were nearly 50% women. However, even if the Division maintained this laudatory recruitment rate, it would still take decades to achieve gender parity. To illustrate this, we created a model assuming 6% annual retirement of existing faculty and replacement of the retired positions by 50% women (shown in Table V.4). The Division would achieve 36% and 42% women faculty by 2011 and 2020 respectively.

A cluster hire of six senior women faculty to the Division of Life Sciences would rapidly bring the percentage of women faculty to 29% in 2002, 36% by 2005, 42% by 2011. The last is close to the percentage of women receiving doctorates in biological sciences in 1999. These projected numbers assume that the existing faculty in the Division retire at the rate of 6% per year and are replaced with 50% women faculty. Both assumptions depend on external factors, including the degree of competition for qualified women in the Life Sciences.

This approach is attractive for several other reasons. First, it would rapidly correct the current gender imbalance, particularly at the senior faculty ranks within 3 years. Second, the Division has already demonstrated its ability to recruit 50% women, exceeding available pools of women doctorate holders. Third, the recruitment of six well-known and established women scientists should facilitate recruitment of additional women to the Division. Finally, it would signal that Rutgers University is serious about correcting its gender equity problem in the Division of Life Sciences.

Resources Required for a Life Science Cluster Hiring Program

The timing of a cluster hire in the next two years is opportune because the new Genetics and Biomaterials building will free up significant laboratory space in the Nelson Biological Laboratories. This space is sufficient to accommodate six senior women faculty and still leave room for further expansion. One potential senior leadership position has opened up in the Division, the Chair of the Department of Molecular Biology and Biochemistry. Finally, the timing of the cluster hiring with the current Capital Campaign will allow for synergy in fundraising for the program.

A cluster hire of six senior woman life scientists at the ranks of Professor will probably cost about \$12 million. This will cover salaries, staff, setup, and laboratory renovation for a period of seven years. One possibility is that the Division of Life Sciences and the W. M. Keck Center will raise \$6 million from grants and donations while the FAS matches this amount from projected indirect costs and other resources at the University. At the end of the seven years, the recruited women faculty can be shifted over to available faculty lines or additional faculty lines from the state.

A \$2 million recruitment package per faculty member should be competitive and attractive to many top women scientists around the country. An informal survey of a dozen senior women neuroscientists in the field indicate that they would be interested in moving to Rutgers. Over the

past three years, the W. M. Keck Center invited many senior women neuroscientists to speak at the Rutgers Women in Neuroscience (WINS) program. Many of them were sufficiently impressed by the working environment of the Center that they suggested that they would be available.

The National Science Foundation has long had an active program aimed at increasing the number of women in the sciences [12]. Rutgers should be in a good position to compete successfully for funding through this program. In addition, several private foundations may be interested in funding such a program, including the W. M. Keck Foundation. In addition, we believe that several private donors and corporations can be approached to help sponsor such a program. A majority of the major private donors in the nation are women to whom this program might be especially attractive. Finally, this is a program that would be eligible for state funding. State legislators are concerned that our university is not providing sufficient “high-tech” workers to supply industry needs. Senior women life scientists are likely to attract and train a higher proportion of highly-qualified women who may otherwise not enter life sciences or the industry. There is intense competition for well-qualified scientists and particularly women. Thus, a cluster hiring program for women in the life sciences would address this need in a timely fashion and provide significant economic benefits to the state of New Jersey.

Potential Pitfalls

Three pitfalls must be avoided if the cluster hiring program is to succeed. First, all the departments in the Division must enthusiastically support the program. The departments and faculty will oppose the program if they believe that they are losing faculty lines or internal resources. However, they would strongly support the program if it added faculty lines and resources to their departments. Second, the program must recruit the best women scientists. It must not give the impression of hiring women who may not be as qualified as men. Third, the recruited faculty must continue to garner respect by achieving a high level of productivity and successful competition for federal grants. The program will be criticized if the recruited faculty could not obtain external funding. Thus, they must get the resources and support to ensure their productivity and success. The leadership of the Division of Life Sciences supports the above plan: Dr. Ken Breslauer, Dean of Life Sciences, understands the need for correction of the gender inequity in the Division and supports a cluster hiring program. Likewise, Dr. Jay Tischfield and Dr. Richard Triemer, respectively the chairs of the Department of Genetics and the Department of Cell Biology and Neuroscience support this program. Dr. Wise Young, Director of the W. M. Keck Center for Collaborative Neuroscience, is committed to helping the Division raise the initial funds for the program.

The above support is contingent on two conditions. The first is that the cluster hires must provide additional faculty lines for the Division rather than taking up existing lines. This is not only important for Departmental support of the program but also because the plan for achieving gender equity within seven years will require that retiring faculty be replaced by 50% women in the coming years. The second is that the lines should be divided equally between the three Departments of Cell Biology and Neuroscience, Genetics, and Molecular Biology and Biochemistry. The search committees should be appropriately appointed with representatives from the three departments.

Other minor pitfalls should be considered. For example, it is important that the newly recruited women faculty be integrated into the Division as quickly as possible. If they were physically separated from the rest of the Division, this integration would be more difficult. Thus, we recommend that the new recruited faculty be clustered by department but be situated close enough to interact with each other. The way the program is advertised is important. Some women may feel uncomfortable with the fact that they are being recruited because they are women while others may be attracted by this fact. However, funding sources may be needed to provide some publicity for the program. Thus, the program announcements must be crafted with great care with sensitivity to this issue. Finally, the program must be flexible to take advantage of unforeseen opportunities that may arise, including spousal hires.

Summary and Conclusions

We have proposed a cluster hiring program for senior women faculty for the Division of Life Sciences. There is a demonstrable need for such a program to correct a longstanding gender imbalance in the faculty of the Division. At the present, only 21% of the Division faculty are women, compared to national averages of 36% women faculty in the Life Sciences and 49% women receiving doctorates in the Life Sciences in 1998. Although the Division has been hiring approximately 50% women in the last three years, the Division will not achieve gender parity for 15 years.

A cluster hire of six senior women faculty to the Division of Life Sciences and a policy of hiring 50% women faculty to replace retiring faculty members would result in 35% women faculty in the Division by 2005 and 42% by 2011. The former is close to the national average of academically employed women life scientists in the U.S. while the latter is close to the current available pool of women holding doctorates in the biological sciences. The program offers several advantages. A cluster hire will have synergistic effects on individual recruitment and provide a favorable environment for recruiting other women to the faculty. It would allow pooling of internal resources and efforts, as well as coordinated development of external funding sources.

The program would directly and rapidly address the most serious gender imbalance, i.e. the paucity of women in the faculty leadership of the Division. At the present, there are only 13 women faculty in the Division and none in leadership positions (e.g., department chair, center director). In addition, the presence of these senior women faculty should help significantly in the future recruitment of women into junior faculty positions in the Division. This will help ensure that the Division reaches gender equity within seven years.

Several external funding opportunities are available. In addition to federal programs that are interested in funding programs that encourage women in sciences, it is likely that such a cluster hiring program will be attractive to private donors and foundations. There may also be opportunities for corporate and state funding for such a program. The major advantage of having a program is that development of external funding can be directed and coordinated towards the program.

The timing of such a cluster hire is opportune because space will become available in the Division in the coming two years. With the completion of the new Genetics and Biomaterials building,

significant space will become available within Nelson Biological Laboratories to house six new senior women faculty in the Division. Many details, however, need to be worked out in detail in collaboration with the leadership of the Division, including whether the women should be housed together, how the program should be publicized, and the level and discipline of the individuals to be recruited

Table V.1. Percent of scientists and engineers who are women 1993-97¹

Occupation	1993	1995	1997
Computer (mathematical scientists)	30.7%	28.9%	27.3%
Life and related scientists	34.3%	34.9%	36.2%
Physical and related scientists	21.5%	21.6%	21.9%
Social and related scientists	50.5%	49.9%	52.1%
Engineers	8.6%	8.6%	9.1%
Total scientists and engineers	22.8%	22.4%	22.8%

Explanation: This table gives the percentage of scientists and engineers who are women in various major areas: mathematical, life, physical, social, and engineering sciences.

¹ Source: Chapter 5, text table 5-1, in Women, Minorities, and Persons With Disabilities in Science and Engineering: 2000.

Table V.2. Academic Employment of Life Scientists in 1997²

Institutions	Total	Women	Men	Women	Men
Life and related scientists, total	321,800	115,900	205,900	36%	64%
Elementary, middle, secondary	700	500	100	71%	14%
2-year college	12,500	6,500	6,000	52%	48%
4-year college or university	52,400	17,600	34,800	34%	66%
Medical school	32,700	12,500	20,200	38%	62%
University research institute	9,700	3,800	6,000	39%	62%
Other educational institution	2,200	500	1,700	23%	77%
Combined 4-year, med, research	44,300	18,900	25,500	43%	58%
Private-for-profit	76,400	27,100	49,300	35%	65%
Private-not-for-profit	13,300	6,300	6,900	47%	52%
Self-employed, not incorporated	8,000	2,100	5,900	26%	74%
Self-employed, incorporated	3,700	700	2,900	19%	78%
Local government	6,700	2,400	4,300	36%	64%
State government	20,000	6,400	13,600	32%	68%
U.S. Military	2,000	700	1,300	35%	65%
U.S. Government	35,900	9,600	26,400	27%	74%
Other non-educational institution	1,300	400	900	31%	69%

² Source: Appendix Table 5-12, in “Women, Minorities, and Persons With Disabilities in Science and Engineering: 2000. National Science Foundation/Division of Science Resources Studies, 1997 SESTAT (Scientists and Engineers Statistical Data System).

Table V.3. Doctorates in Biological/Agricultural Sciences³

Year	Total	Men	Women	% Women
1966	3,036	2,711	325	10.7%
1967	3,367	2,966	401	11.9%
1968	3,994	3,511	483	12.1%
1969	4,353	3,815	538	12.4%
1970	4,703	4,165	538	11.4%
1971	5,217	4,557	660	12.7%
1972	5,127	4,454	673	13.1%
1973	5,292	4,503	789	14.9%
1974	5,084	4,304	780	15.3%
1975	5,251	4,402	849	16.2%
1976	5,214	4,361	853	16.4%
1977	5,109	4,266	843	16.5%
1978	5,327	4,369	958	18.0%
1979	5,532	4,501	1,031	18.6%
1980	5,865	4,715	1,150	19.6%
1981	6,006	4,785	1,221	20.3%
1982	6,136	4,844	1,292	21.1%
1983	6,122	4,756	1,366	22.3%
1984	6,225	4,877	1,348	21.7%
1985	6,312	4,903	1,409	22.3%
1986	6,256	4,804	1,452	23.2%
1987	6,346	4,815	1,531	24.1%
1988	6,817	5,126	1,691	24.8%
1989	6,971	5,202	1,769	25.4%
1990	7,363	5,502	1,861	25.3%
1991	7,705	5,723	1,982	25.7%
1992	7,926	5,862	2,064	26.0%
1993	8,338	6,060	2,278	27.3%
1994	8,638	6,281	2,357	27.3%
1995	8,858	6,412	2,446	27.6%
1996	9,457	6,760	2,697	28.5%
1997	9,401	6,683	2,718	28.9%
1968-97	190,945	149,318	41,627	21.8%
1978-97	141,601	106,980	34,621	24.4%
1988-97	81,474	59,611	21,863	26.8%

³ Source: Appendix Table 4-9 and 4-10, NSF Report on “Women, Minorities, and Persons with Disability in Science and Engineering: 2000.”

Table V.4. Projected Percentages of Women Faculty in the Division of Life Sciences

Year	Program without Cluster Hire					Program with Cluster Hire				
	#Tot	%fem	#fem	#new	#nfem	#Tot	%fem	#fem	#new	#nfem
2000	60	22%	13	0	0	60	22%	13	0	0
2001	60	23%	14	4	2	60	23%	15	4	2
2002	60	25%	15	7	3	66	32%	22	13	9
2003	60	26%	16	10	5	66	33%	24	16	11
2004	60	28%	17	13	7	66	34%	26	19	13
2005	60	29%	18	16	8	66	36%	27	22	14
2006	60	30%	18	19	9	66	37%	28	25	15
2007	60	32%	19	21	11	66	38%	30	27	17
2008	60	33%	20	23	12	66	39%	31	29	18
2009	60	34%	20	26	13	66	40%	32	32	19
2010	60	35%	21	28	14	66	41%	33	34	20
2011	60	36%	21	30	15	66	42%	34	36	21
2012	60	37%	22	31	16	66	42%	35	37	22
2013	60	37%	22	33	17	66	43%	36	39	23
2014	60	38%	23	35	17	66	44%	36	41	23
2015	60	39%	23	36	18	66	44%	37	42	24
2016	60	39%	24	38	19	66	45%	38	44	25
2017	60	40%	24	39	20	66	46%	39	45	26
2018	60	41%	24	40	20	66	46%	39	46	26
2019	60	41%	25	41	21	66	47%	40	47	27
2020	60	42%	25	43	21	66	47%	40	49	27

Explanation: This table projects the number of total faculty (#Tot), percent female (%fem), number of female (#fem), number of new (#new), and number of new female (#nfem) faculty members in the Division of Life Sciences. The left group of columns list the projected numbers if current trends of hiring 50% women were maintained. The right group of columns list the projected numbers if a cluster hire of 6 women faculty were implemented in 2002. The calculations assume that 6% of the existing faculty will be retiring each year and they will be replaced by 50% female faculty and that all the newly recruited faculty stay for 20 years. The model predicts that women will make up 36% of Life Science faculty by 2011 and 42% by 2020 with the current trend of hiring. If a cluster hire of 6 women were made in 2002, women will constitute 36% of the Life Science faculty by 2005 and 42% by 2011.

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