

**The Status of Women Faculty in the Humanities and Social Sciences at
Princeton University**

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Executive Summary

This report on The Status of Women Faculty in the Humanities and Social Sciences at Princeton parallels the report on The Status of Women Faculty in the Natural Sciences and Engineering that was issued in September 2003. The order of the topics and the time periods covered are identical in the two reports, in order to make it easier to think about the two reports in tandem.

The following are the major points of the data on tenure-track women faculty in the Humanities and Social Sciences. The detailed data are contained within the report.

- Representation of tenure-track women in the Humanities and Social Sciences Departments grew slowly, and not very steadily, over the decade between 1992 and 2002 (from 23.2% to 26.9%). In the Humanities, the percentage of tenured women increased from 17.3 % to 26.3%, while the percentage of women assistant professors actually declined from 50.0% to 41.0%. In the Social Sciences, there was a slight increase in the percentage of tenured women (from 15.7% to 17.6%) and a somewhat greater increase in the percentage of women assistant professors (from 25.9% to 34.0%). In 2002, the percentage of women faculty in the individual departments ranged from 10.0% to 57.1%; in half the departments, fewer than 30% of the faculty were women.
- Although every department in the Humanities and Social Sciences had multiple opportunities (from a low of 3 to a high of 47 new faculty members) to hire tenure-track faculty between 1992 and 2002, the 20 Humanities and Social Science departments were quite variable in the percentage of openings that resulted in the appointment of women faculty (from a low of 9.1% to a high of 100%).
- An analysis was conducted to see how well the departments in the Humanities and Social Sciences have utilized the available pools of women Ph.D.'s. Only a little more than one-quarter (5) of the 18 departments seem to have utilized well the available pools of potential women faculty, with the remaining departments about evenly divided between moderate and poor utilization.
- There is no difference in the rate at which tenure is granted to female and male assistant professors in the Humanities. Female faculty are granted tenure at a higher rate than male faculty in the Social Sciences; this can be partly explained by the fact that the departments with more female faculty are also the departments that grant tenure to a higher percentage of both male and female assistant professors, but other reasons apparently contribute as well.

- In the Humanities and Social Sciences, there is no difference between female and male faculty in the time to promotion from assistant to associate professor. There is also no difference between female and male faculty in the time to promotion from associate to full professor when only those faculty who were promoted from associate to full professor within eight years are considered. However, more women than men remain associate professors for more than eight years.
- Senior women faculty in the Humanities and Social Sciences leave Princeton at a higher rate than senior men (2.8% per year versus 1.4% per year). Unfortunately, we do not have data on why faculty leave Princeton or on whether the reasons are different for women and men.
- In the Humanities and Social Sciences, women faculty have been department chairs relatively infrequently, although this has improved in recent years, particularly in the Humanities.
- There are essentially no differences in salary between female and male faculty in the Humanities and Social Sciences after time since Ph.D., department, and rank are taken into account. In the Humanities, in recent years, there are no differences in salary even before department and rank are taken into account.
- The percentage of endowed chairs held by women faculty in the Humanities and Social Sciences is smaller than their percentage in the senior ranks.
- Since it is generally acknowledged that women bear more of the obligations associated with parenting than men do, it might be expected that female faculty would utilize the tenure extension and workload relief policies for childbirth or adoption more than men faculty do. Women do request workload relief more often than men do, but tenure extension is requested about equally often by women and men.

Going forward, the major issue for the departments in the Humanities and Social Sciences is the representation of women faculty. It is discouraging to see the slow progress in the decade between 1992 and 2002, especially considering that this lack of progress was not the result of scarcity. In their hiring over this 10 year period, 13 of 18 departments had either low or moderate utilization of available pools of women Ph.D.'s. Simulations indicate that greater efforts to identify and recruit new female faculty could result in substantial increases in the representation of women in the Humanities and Social Science departments over the next decade.

Report

This report describes the situation of tenure-track women faculty in the Humanities and Social Sciences at Princeton (see Table 1). The analyses reported here are patterned after the analyses that were done for the Natural Sciences and Engineering for The Report of the Task Force on the Status of Women Faculty in the Natural Sciences and Engineering at Princeton: May, 2003, using the same time periods. In order to make the two reports as parallel as possible, this summary uses the same order of topics as the Task Force report, allowing readers to go back and forth between the two documents.

Table 1. Humanities and Social Science Departments at Princeton University.

Humanities Departments	Social Science Departments
Architecture	Anthropology
Art and Archeology	Economics
Center for Human Values	History
Classics	Politics
Comparative Literature	Sociology
Council of the Humanities	Woodrow Wilson School
East Asian Studies	
English	
Germanic Languages and Literatures	
Music	
Near Eastern Studies	
Philosophy	
Religion	
Romance Languages and Literatures	
Slavic Languages and Literatures	

Parallel data were available for faculty in the Humanities and Social Sciences and faculty in the Natural Sciences and Engineering, with the following two exceptions. First, the Task Force conducted a survey both of all current faculty (male and female) in the Natural Sciences and Engineering, and of all faculty who had left Princeton within the previous 10 years, which provided data on male and female faculty members' perceptions of their experiences at Princeton. No comparable survey was conducted for the male and female faculty in the Humanities and Social Sciences (although it is expected that a survey of the faculty in all four divisions will be conducted in the Fall of 2006). Second, the Natural Sciences and Engineering Task Force worked very hard, but without much success, to gather data about the allocation of resources (e.g., startup space, current space, startup research funds) and workloads (e.g., teaching, committee assignments) in the Natural Sciences and Engineering. No attempt has been made to do this for the Humanities and Social Sciences, as it will be impossible to do this effectively until better records are kept, both in the departments and in the University.

There are 21 "units" in the Humanities and Social Sciences that have faculty appointed to them. Throughout the report, they will be referred to collectively as "departments." In fact, 17 of them are departments (Anthropology, Art and Archeology, Classics, Comparative Literature, East

Asian Studies, Economics, English, Germanic Languages and Literatures, History, Music, Near Eastern Studies, Philosophy, Politics, Religion, Romance Languages and Literatures, Slavic Languages and Literatures, Sociology), two are schools (Architecture and the Woodrow Wilson School), one is a center (Center for Human Values), and one is the Council of the Humanities.¹

Except for those faculty holding joint appointments with the Woodrow Wilson School, faculty with joint appointments in two departments are recorded in the department of primary appointment. Faculty holding joint appointments with the Woodrow Wilson School are recorded in their disciplinary departments, not because those faculty are more committed to their disciplinary departments than to the Woodrow Wilson School but because each discipline has its own labor market with different pay scales and different fractions of women in the pipeline.²

Representation of Women among Princeton Faculty in the Humanities and Social Sciences

Information from the University's personnel database was used to determine the total number of women in untenured, tenure-track positions and the total number of tenured women in three "snap shot" years: 1992, 1997, and 2002. Table 2 shows the summary data for each of the four divisions (Humanities, Social Sciences, Natural Sciences, and Engineering) at Princeton.³ (Appendix A provides the information for each of the departments in the Humanities and Social Sciences.)

There have been increases over the 10 years in both the percentage of women faculty and the percentage of tenured women faculty in the Humanities and Social Sciences, but these increases have been neither large nor particularly steady (see Table 2). Furthermore, both the number and the percentage of women assistant professors have been flat at best.

In 1992, 23.2% of the 358 faculty members in the Humanities and Social Sciences were women: 26.5% in the Humanities and 19.2% in the Social Sciences. The percentages for the tenured faculty were lower: 16.7% overall, 17.3% in the Humanities and 15.7% in the Social Sciences. Although only one department had no women faculty, three others had no tenured women faculty.

By 2002, the percentage of women faculty in the Humanities and Social Sciences had only increased to 26.9%: 30.3% in the Humanities and 22.6% in the Social Sciences. The percentage

¹ The Departments of French and Italian and of Spanish and Portuguese Languages and Culture were formed too recently to be included as separate departments in this report. During the 1992-2002 time period, the faculty in these two departments were combined in the Department of Romance Languages and Literatures.

² Throughout the report, whenever data are presented by department, two charts are provided for those departments (Economics, Politics, Sociology, Center for Human Values) that have joint appointments with the Woodrow Wilson School, as well as for the Woodrow Wilson School itself. In the charts labeled M3, faculty with joint appointments between a department and the WWS are located in their disciplinary homes. In the charts labeled M1, those faculty have been moved to the WWS (and the number of faculty reported in the relevant disciplinary departments is correspondingly smaller).

³ Throughout this study, Humanities and Social Science faculty who held major administrative positions at Princeton during the period of analysis, including President, Provost, Dean of the Faculty, Dean of the Graduate School, Dean of the College, Dean of the School of Architecture, and Dean of the Woodrow Wilson School are classed as administrators, not faculty. The rationale for this is that these individuals are not treated as faculty in terms of compensation or in terms of FTEs.

of women faculty in the tenured ranks had increased somewhat faster, although most of this increase was in the Humanities: 22.5% overall, 26.3% in the Humanities and 17.6% in the Social Sciences. By 2002, every department had at least one woman faculty member but two departments still had no tenured women. In 2002, there were wide variations in the percentage of women in individual departments, ranging from 10.0% to 57.1%. In half the departments (10 out of 19), fewer than 30% of the faculty were women.⁴

Table 2: Representation of Females in the Faculty at Princeton University, October 1992, 1997, and 2002

	Total # Faculty	Female # (%)	Total # Full and Associate Professors	Female # (%) Full and Associate Professors	Total # Assistant Professors	Female # (%) Assistant Professors
Humanities						
92	192	51 (26.5%)	138	24 (17.3%)	54	27 (50.0%)
97	190	50 (26.3%)	152	35 (23.0%)	38	15 (39.5%)
02	204	62 (30.3%)	148	39 (26.3%)	56	23 (41.0%)
Social Sciences						
92	166	32 (19.2%)	108	17 (15.7%)	58	15 (25.9%)
97	162	42 (25.9%)	113	22 (19.4%)	49	20 (40.8%)
02	172	39 (22.6%)	119	21 (17.6%)	53	18 (34.0%)
Natural Sciences						
92	196	22 (11.2%)	142	12 (8.4%)	54	10 (18.5%)
97	200	28 (14.0%)	146	15 (10.3%)	54	13 (24.1%)
02	206	33 (16.0%)	159	25 (15.7%)	47	8 (17.0%)
Engineering						
92	100	3 (3.0%)	77	1 (1.3%)	23	2 (8.7%)
97	102	8 (7.8%)	86	1 (1.1%)	16	7 (43.8%)
02	118	12 (10.1%)	92	7 (7.6%)	26	5 (19.2%)

Factors that Impact the Number of Women Faculty at Princeton

The number of women on the faculty at any time is the result of past practices surrounding hiring, promotion, and retention. This section of the report investigates Princeton's experience in each of these areas in the Humanities and Social Sciences.

A. Hiring

⁴ When reporting summary data about the Humanities and the Social Sciences, the two faculty members in the Center for Human Values are included. However, when reporting data by department, the Center for Human Values, and those two faculty members, are not included.

Because faculty with joint appointments in a department and the Woodrow Wilson School (WWS) are recorded in their disciplinary departments, and the WWS faculty consists overwhelmingly of faculty with joint appointments (35 of 42 total faculty in 2002), consideration of the sole WWS appointments as an independent group seemed inappropriate, and so the WWS is not included in the data reported by department (although the faculty with sole appointments in the WWS are included in the summary data reported for faculty in the Humanities and Social Sciences).

Experience over the past decade

Over the past decade, each Humanities and Social Science department had, in principle, multiple opportunities to hire women. Despite substantial differences in department size (ranging from 7 to 50 faculty members in 2002), the hiring rates for individual departments in the 1992-2002 period occupied a fairly narrow band, from 4%-9% per year (with 17 of the 19 departments in a band between 6% and 9% per year). Between 1992 and 2002, 287 faculty members were hired in the Humanities and Social Sciences. The percentage of new faculty who were women varied a great deal among the departments. In two departments, women were fewer than 15% of the new hires (Classics, 1/11; Economics, 6/47). In seven departments, between 20% and 30% of those hired were women (Architecture, 2/7; Comparative Literature, 2/7; Council of the Humanities, 2/10; Music, 2/9; Philosophy, 4/16; Politics, 10/37; Religion, 2/8). In seven departments, between 38% and 50% of those hired were women (Art and Archeology, 4/10; East Asian Studies, 3/8; English, 11/25; History, 12/30; Near Eastern Studies, 4/8; Romance Languages and Literatures, 8/19, Sociology, 5/11). Finally, in three departments, the percentage of new women faculty was greater than 50% (Anthropology, 5/8; Germanic Languages and Literatures, 4/7; Slavic Languages and Literatures, 3/3).

Approximately 68% of the faculty hired between 1992 and 2002 were appointed as assistant professors while 32% were appointed as associate or full professors with tenure. Of the 195 assistant professors, 38% were women; of the 92 associate and full professors, 20% were women. There were substantial differences among the departments in their hiring patterns. About 40% (8) of the 19 departments hired no senior women; in the other 11 departments, between 20% and 50% of the new tenured faculty were women. The percentage of new assistant professors who were women ranged even more widely: from 9% to 100%.

In any given job search, the probability of hiring a women is influenced by: (1) the fraction of women in the applicant pool; (2) the fraction of women among those invited for interviews; (3) the fraction of offers to women; (4) the fraction of offers to women that are accepted.

Underrepresentation of women at any one of these steps will affect a department's ability to increase the number of women on its faculty. There are two factors that make it difficult to assess departmental records at each of these levels. First, the University only maintains applicant records for successful searches; records are not maintained for searches in which no one was hired. Second, even for successful searches, in many cases, a substantial percentage of applicants are reported by academic departments as "gender unknown." As a result, it is currently only possible to assess departments' progress in hiring women by examining the fraction of new appointments that go to women.

Pipeline issues

Historically, women have been underrepresented in the Humanities and Social Sciences, both in graduate programs and beyond, although their proportion has steadily increased in recent decades and, in some disciplines, women are no longer underrepresented. In fact, by 2001, women received more than half of the Ph.D.'s awarded nationally in 9 of the 18 disciplines in the Humanities and Social Sciences at Princeton (Anthropology, Art and Archeology, Comparative Literature, English, Germanic Languages and Literatures, Near Eastern Studies, Romance Languages and Literatures, Slavic Languages and Literatures, and Sociology). At the same time,

there continue to be disciplines in which women are underrepresented in the Ph.D. pool; one-third or less of the Ph.D.'s awarded in 2001 in Economics, Philosophy, Politics, and Religion were awarded to women.⁵

It is difficult to assess to what extent hiring patterns in individual Princeton departments are influenced by pipeline issues. Although the national data are readily available by academic discipline, many faculty searches are targeted to specific subspecialties within a discipline, and it is generally not possible to estimate the available pool in particular subspecialties.

Compounding this problem, it is not possible to analyze the number of male versus female applicants in searches conducted at Princeton in the 1992-2002 period, since complete records on the gender of applicants for all searches are not available⁶.

Following the analyses in the report from the Task Force on the Status of Women Faculty in the Natural Sciences and Engineering, we used the following to estimate how well the fraction of female faculty in a given Princeton department reflects the potential pool of female candidates. In each department, we compared the fraction of faculty who are female to the fraction of Ph.D. recipients who are female. Specifically, we computed "Utilization Factors" for each department, equal to the fraction of faculty who were female in 2002 divided by the fraction of Ph.D.'s awarded to women in that discipline between 1991-96.⁷ We used Ph.D. attainment between 1991 and 1996 (rather than more current data) to allow for the lag between the receipt of the Ph.D. and a faculty position. We obtained information on the fraction of Ph.D.'s awarded to women from two sources. First, we looked at the fraction of Princeton Ph.D.'s that were awarded to women between 1991 and 1996 in each Humanities and Social Science department. This measure of the representation of women among new Ph.D. recipients is useful not because Princeton hires its own Ph.D.'s but rather because it reflects the gender composition in research areas in which Princeton is likely to hire.⁸ For comparison, we also computed Utilization Factors using data on Ph.D. attainment by discipline between 1991 and 1996 from the National Center for Education Statistics Integrated Postsecondary Data System (IPEDS). Results using both methods of computing the Utilization Factors are shown in Table 3 (M3)⁹. Both methods yield similar results.

The Utilization Factors provide a measure of how well each department is making use of the available pool of women. If the Utilization Factor is one or nearly one, the fraction of female faculty in that department in 2002 is similar to the fraction of females in the 1991-96 Ph.D. pool. Small Utilization Factors indicate that the department has a small number of female faculty relative to the size of the pool of potential female hires.

⁵ The national data come from the Department of Education/National Center for Education Statistics: Integrated Postsecondary Education Data System (IPEDS) Completion Survey.

⁶ The University does not maintain records on unsuccessful searches. In addition, the gender of applicants is not always apparent from application materials.

⁷ Patterned after analyses by D. J. Nelson, University of Oklahoma, "The Nelson Diversity Surveys," 2002.

⁸ Most Princeton departments emphasize a relatively small set of subareas of their disciplines, and thus search for faculty who are trained in these subareas, which may or may not have a gender composition similar to the field overall.

⁹ In Table 3 (M3), faculty with joint appointments between a department and the WWS are included in the data for their disciplinary departments. Table 3 (M1) in Appendix B shows the Utilization Factors when those faculty are reassigned to the WWS.

One can identify three groups of departments in Table 3 (M3). The first is a group of six departments with low (<.50) Utilization Factors: Art and Archeology, Classics, East Asian Studies, Economics, Philosophy, and Romance Languages and Literatures. The second is a group of seven departments with moderate (>.50 but <.75) Utilization Factors: Anthropology, English, Germanic Languages and Literatures, History, Music, Near Eastern Studies, and Sociology. The third is a group of only five departments with high (>.75) Utilization Factors, indicating that these departments are utilizing well the available pool of potential women faculty hires: Architecture, Comparative Literature, Religion, Slavic Languages and Literatures, and Politics. There doesn't seem to be any particular relationship between the percentage of women in the 1991-96 Ph.D. pool and the Utilization group into which a department falls; there are departments with very strong and less strong pools in all three Utilization groups. To put it another way, departments with both large and small existing pools of women Ph.D.'s in their disciplines have utilized the available talent pools well and not so well.

Table 3. (M3) 2002 Utilization Factors for Princeton Ph.D.'s and U.S. Ph.D.'s 1991-96 and 2002 percent Princeton Women Graduate Students.ⁱ

	% Women Faculty ⁱⁱ	% Women PU Ph.D.'s	% Women U.S. Ph.D.'s ⁱⁱⁱ	Utilization Factor		% Women Grad Stud 2002 ^{iv}
Department	2002	91-96	91-96	Princeton	U.S.	
Anthropology	40.0%	58.3%	55.9%	0.69	0.72	38.9%
Architecture	44.4%	42.3% ^v	32.2%	1.05	1.38	47.8%
Art & Archaeology	26.3%	71.4%	66.8%	0.37	0.39	68.2%
Classics	16.7%	34.6%	43.1%	0.48	0.39	51.8%
Comparative Literature	55.6%	51.5%	59.4%	1.08	0.94	50.0%
East Asian Studies	15.4%	36.1%	42.6%	0.43	0.36	50.0%
Economics	10.0%	20.4%	22.4%	0.49	0.45	23.2%
English	40.6%	56.0%	58.5%	0.72	0.69	53.1%
Germanic Lang. & Lit.	37.5%	46.6%	60.2%	0.80	0.62	50.0%
History	26.2%	37.0%	37.1%	0.71	0.71	52.4%
Music	25.0%	38.4%	40.4%	0.65	0.62	38.5%
Near Eastern Studies	25.0%	47.6%	28.7%	0.52	0.87	31.2%
Philosophy	10.0%	32.4%	25.2%	0.31	0.40	24.4%
Politics	24.4%	33.3%	28.1%	0.73	0.87	46.2%
Religion	38.5%	35.7%	29.6%	1.08	1.30	31.0%
Romance Lang. & Lit.	25.0%	53.2%	65.4%	0.47	0.38	70.3% ^{vi}
Slavic Lang. & Lit.^{vii}	57.1%	—	53.7%	—	1.06	69.2%
Sociology	35.0%	52.0%	50.7%	0.67	0.69	70.6%
Woodrow Wilson School^{viii}	28.6%	—	—	—	—	58.9%

ⁱ Faculty with joint appointments between a department and the Woodrow Wilson School (WWS) are included in the numbers for their disciplinary departments. This affects the Departments of Economics, Politics, and Sociology.

ⁱⁱ % Women Faculty data are for Oct.02.

ⁱⁱⁱ Sources

Data for % Women U.S. Ph.D.'s from Department of Education/National Center for Education Statistics: Integrated Postsecondary Education Data System Completions Survey

<http://nces.ed.gov/programs/digest/d99/d99t258.asp>

<http://nces.ed.gov/programs/digest/d98/d98t253.asp>

<http://nces.ed.gov/programs/digest/d97/d97t253.asp>

<http://nces.ed.gov/programs/digest/d97/d97t254.asp>

<http://nces.ed.gov/programs/digest/d96/D96T244.asp>

<http://nces.ed.gov/programs/digest/d96/D96T245.asp>

Data for Anthropology from the subheading Anthropology under Social Sciences and History.

Data for Architecture from the subheading Architecture under Architecture and Related Programs.

Data from Art & Archeology combines data from the subheadings Art, History, Criticism and Conservation under Visual and Performing Arts and Archeology under Social Sciences and History.

Data for Classics from the subheading Classical and Ancient Near East Languages and Literature Total under Foreign Languages and Literature.

Data for Comparative Literature from the subheading Comparative Literature under English Language and Literature/letters.

Data for East Asian Studies from the subheading East and Southeast Asian Languages and Literature, total under Foreign Languages and Literature.

Data for Economics from the subheading Economics under Social Sciences and History.

Data for English combines data from the subheadings English Language and Literature, General; English Composition; English , Creative Writing; American Literature; English Literature; Speech and Rhetorical Studies; English Technical and Business Writing; and English Language and Literature/Letters Other under English Language and Literature/Letters Total.

Data for Germanic Language and Literature from the subheading Germanic Language and Literature, Total under Foreign Languages and Literature.

Data for History from the subheading History under Social Sciences and History, Total.

Data for Music form the subheading Music, Total under Visual and Performing Arts, Total.

Data for Near Eastern Studies from the subheading Middle Eastern Language and Literature, Total under Foreign Languages and Literature.

Data for Philosophy from the subheading Philosophy under Religion and Philosophy, Total.

Data for Politics combines data from the subheadings International Relations and Affairs and Political Science and Government, General under Social Sciences and History.

Data for Religion from the subheading Religion/Religious Studies under Religion and Philosophy, Total.

Data for Romance Languages and Literature form the subheading Romance Languages and Literature under Foreign Languages and Literature.

Data for Slavic Languages and Literature from the subheading East European Languages and Literature, Total under Foreign Languages and Literature.

Data for Sociology from the subheading Sociology under Social Sciences and History, Total.

^{iv} % Women Grad Student data are for 2002-2003 academic year.

^v Ph.D. and M.Arch recipients are combined. For Architecture the terminal professional degree is the M.Arch. 43.0 % of M.Arch degrees recipients at Princeton 91-96 were women and 32.4% of M.Arch.degrees recipients 91-96 nationally were women, for utilization factors of 1.03 and 1.37 respectively.

28.6 % of Architecture Ph.D. recipients at Princeton 91-96 were women and 26.1 of Ph.D. recipients nationally were women for utilization factors of 1.55 and 1.70 respectively.

^{vi} This number combines the graduate students in the Department of French and Italian and the Department of Spanish and Portuguese in 2002. The separate numbers for the two departments are 78.3% for the Department of French and Italian and 61.1% for the Department of Spanish and Portuguese.

^{vii} Slavic Languages and Literatures awarded only one Ph.D. in the 1991-96 period and so no Princeton Utilization Factor was calculated.

^{viii} The Woodrow Wilson School largely appoints faculty in joint appointments with departments. The relevant pool for each appointment is the Ph.D. data in the departmental discipline. Thus, no separate Utilization Factors were computed for the WWS.

Promotion

Tenure

The representation of women among the senior faculty is affected by the rates at which female assistant professors are tenured. We examined whether cohorts of men and women who are hired as assistant professors at Princeton are equally likely to be tenured. Our analysis of the tenuring of assistant professors is based on a sample of assistant professors hired between July 1, 1980 and October 1, 1994. All members of this group had either been granted tenure or were no longer Princeton faculty members by October 1, 2002.¹⁰

Overall, in the Humanities and Social Sciences, men have lower rates of achieving tenure than women: 27% of men and 34% of women hired as assistant professors were eventually granted tenure. This gender difference exists only in the Social Sciences. In the Humanities, 33% of the men and 30% of the women who were hired as assistant professors were eventually granted tenure. In the Social Sciences, on the other hand, 23% of the men and 42% of the women were granted tenure, a significant difference. There are two reasons for the higher tenure rates for women compared to men in the Social Sciences. First, different departments have different tenure rates. In the Social Sciences, the departments in which women are a higher share of assistant professors happen to have higher tenure rates *for both men and women*. This is not true for the Humanities. The following graphs (Figure 1) illustrate this, by graphing the female tenure rate against the fraction of assistant professors hired who are female.¹¹ (The graphs would look similar if we graphed the male tenure rate against the fraction of assistant professors hired who are male.) Second, as shown in Table 4, even within the individual Social Science departments, tenure rates are higher for women than for men. Thus, the higher tenure rate among women in the Social Sciences is due in part to a compositional effect (women have less representation in low-tenure-rate departments) but is also in part because women have experienced higher tenure rates than the men in their departments.

¹⁰ The analysis excludes individuals who were recorded as having left the University in three months or less after the date of their appointments, since it is likely that they never took up their positions. Individuals who were promoted directly from assistant professor to full professor are included. Individuals who left the University after a promotion were included, provided they appeared as an associate or full professor in the personnel database in the October following their promotions.

¹¹ These graphs include only those departments that hired more than five assistant professors during the 1980-94 period. Comparative Literature, Religion, and Anthropology did not meet this criterion. Because the WWS faculty who have joint appointments in a department have been assigned to their disciplinary departments in this analysis, the WWS also does not appear in these graphs.

Figure 1: The rate at which female assistant professors received tenure in relation to the fraction of female assistant professors hired between 1980 and 1994

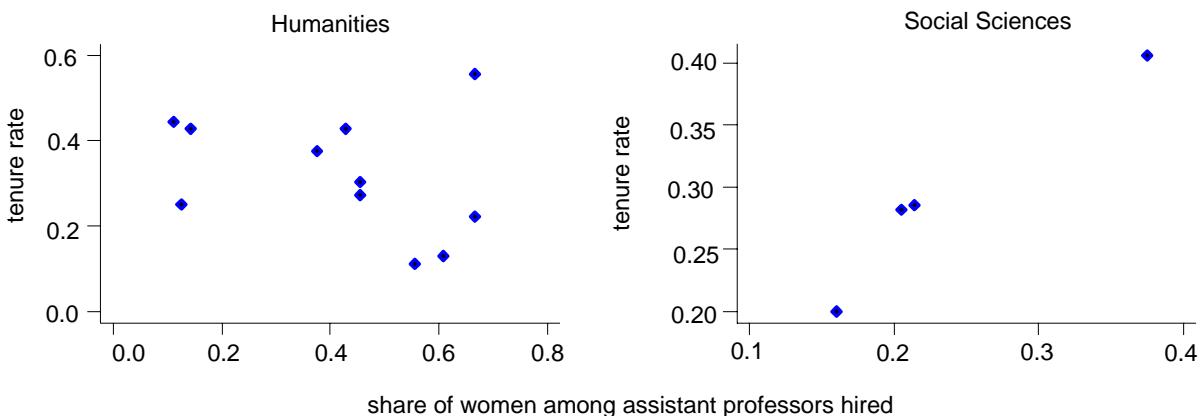


Table 4: Tenure rates in the social science departments for female and male assistant professors hired between 1980 and 1994

Department	# Men and women hired as assistant professors	Fraction women	Fraction men tenured	Fraction women tenured
Anthropology	4	0.750	0.000	0.667
Economics	50	0.160	0.167	0.375
History	32	0.375	0.350	0.500
Politics	39	0.205	0.258	0.375
Sociology	14	0.214	0.273	0.333

Time to Tenure and Promotion

We examined both the time to tenure for assistant professors, and the time to promotion to full professor for associate professors.¹² In both the Humanities and the Social Sciences, women have slightly longer times to tenure than do men: 0.42 years longer in the Humanities, and 0.30 years longer in the Social Sciences. Interestingly, these differences seem to result from men being slightly more likely to be promoted to tenure early (Humanities: 5.5 years; Social Sciences: 5.8 years) compared to women (Humanities: 5.9 years; Social Sciences: 6.1 years).¹³ The differences between men and women in the time to tenure are not statistically significant for either the Humanities or the Social Sciences.

In analyzing the time to promotion to full professor for associate professors, we considered only those faculty who were promoted to full professor within eight years of becoming an associate

¹² The analysis of the time to tenure for assistant professors is based on a sample of assistant professors hired between January 1, 1980 and December 31, 1994. All members of this group had either been granted tenure or departed from the University by October 1, 2002.

¹³ Extensions to the tenure clock due to childbirth or adoption do not appear to have a large impact on gender differences in time to promotion. We only have information on extensions since 1997: on average, 3.0% of male assistant professors and 3.6% of female assistant professors in the Humanities and Social Sciences requested tenure extensions each year between 1997-2002.

professor.¹⁴ Women on average spent .34 years longer than men in the associate professor rank before being promoted to full professor.¹⁵ This difference is not significant. At the end of the eight year period in this analysis, 9 (of 59) men and 9 (of 26) women who were associate professors have neither been promoted nor departed; thus a larger fraction of women have the possibility of being promoted after eight years than the fraction of men who may yet be promoted. It is thus possible that the average time to promotion in the long run will prove significantly longer for women than for men.

Retention

Another parameter that might impact the representation of women faculty is retention of tenured women. We used the University's personnel database to determine the numbers of departures for male and female full professors from the Humanities and the Social Sciences between 1981 and 2002.¹⁶ We found that the rate of departure for reasons other than retirement or death is 1.4% per year for men and 2.8% per year for women. These percentages are quite similar to the rates of departure for men and women in the Natural Sciences and Engineering (men: 1.4%; women: 2.2%). The difference in the rates of departure for men and women is statistically significant in the Humanities and the Social Sciences: female full professors leave Princeton at a higher rate than male full professors leave Princeton. The gender difference in departure rates could reflect a number of things, including gender differences in job satisfaction, the receipt of outside offers, dual-career opportunities, or the age structure of the faculty. Unfortunately, we do not have any data on why full professors leave Princeton or on whether the reasons are different for men and women.

Representation of Women in Positions of Authority in the University

Department Chairs

It seems likely that department chairs¹⁷ are the single most powerful influence in determining the departmental climate for women. (In the Report of the Task Force on the Status of Women Faculty in the Natural Sciences and Engineering at Princeton, this view was strongly supported by the faculty survey responses.) Between 1976 and 2002, there were 10 women and 79 men

¹⁴ The analysis of promotion of associate professors is based on a sample of 95 individuals who were associate professors in at least one year between 1980 and 1994, and who had been promoted to full professor within eight years (96 months) of becoming an associate professor. This includes any individuals who were promoted directly from assistant to full professor during the 1980 to 1994 time period. The reason for looking only at promotions that occur within 96 months is that those promoted to the rank of associate professor in 1994 can only be observed for 96 months (eight years).

¹⁵ Because of the small number of women involved, the data for the Humanities and Social Sciences were combined for this analysis.

¹⁶ Because of the small number of women involved, the data for the Humanities and the Social Sciences were combined for this analysis.

¹⁷ In the period covered by this report, there were 21 "units" in the Humanities and Social Sciences that had faculty appointed to them. They will be referred to collectively as "departments" in this section of the report. In fact, 17 of them are departments (Anthropology, Art and Archeology, Classics, Comparative Literature, East Asian Studies, Economics, English, Germanic Languages and Literatures, History, Music, Near Eastern Studies, Philosophy, Politics, Religion, Romance Languages and Literatures, Slavic Languages and Literatures, Sociology), two are schools (Architecture and the Woodrow Wilson School), one is a center (Center for Human Values), and one is the Council of the Humanities.

who served at least one regular term as chair (or dean) in the Humanities and Social Sciences.¹⁸ The 10 women served in 9 different departments (Anthropology, Art and Archeology, Classics, Comparative Literature, East Asian Studies, English, Music, Religion, and Sociology). Put another way, there were 169 terms as chair (or dean) in the Humanities and Social Sciences between 1976 and 2002:¹⁹ only 11 (6.5%) of them were held by women. Of the four departments with more than 30 faculty members (Economics, English, History, and Politics), only English had a woman chair (Elaine Showalter, 1990-93) during this period. At the same time, it should be noted that, in 2004, there were 8 women chairs (or deans) in the 22 departments in the Humanities and Social Sciences²⁰ (36.4%), which is by far the largest percentage that there has been at any one time.

Major University administrative positions that impact the Humanities and Social Sciences

The Princeton administration has had some representation of women for many years, with more in recent years. In June 2001, Shirley Tilghman was named University President. Amy Gutmann served as Provost from 2001-04; she also served as Dean of the Faculty from 1995-97. The Dean of the College has been a woman since 1977, with Joan Girgus (1977-87) and Nancy Malkiel (1987-present) serving in this position. Nina Garsoian was Dean of the Graduate School from 1977-79. Ann-Marie Slaughter, who is included in the previous section on department chairs, was appointed Dean of the Woodrow Wilson School in 2003.

Distribution of Resources

Salary

The Task Force on the Status of Women Faculty in the Natural Sciences and Engineering at Princeton commissioned a salary analysis from Dr. Mark Killingsworth, using the University's salary records for all faculty from 1991-2002.²¹ Figure 2 presents information about gender differences in the salaries of all University faculty. The mean difference between the salaries of all female and all male faculty employed by Princeton University, including all ranks and departments between 1991 and 2002, is 22% (Figure 2, Model 1). Although the gap narrowed over time, in 2002, women still earned on average 18% less than men.

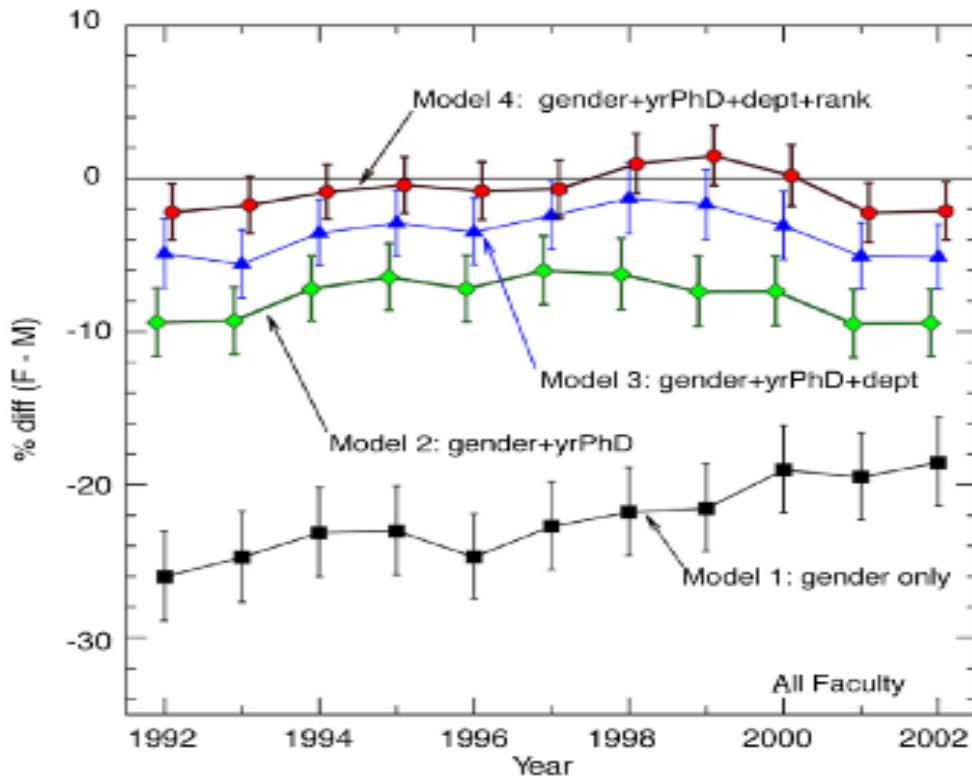
¹⁸ No woman faculty member served as a department chair before 1976. Faculty who served for a semester or a year while the chair was on sabbatical (or for some other reason) are not counted as having served a term as chair.

¹⁹ In calculating the number of terms, chairs (and deans) who served for 2, 3, or 4 years were counted as having served 1 term, those who served for 5, 6, or 7 years were counted as having served two terms, and so forth.

²⁰ The Department of Romance Language and Literature was split into the Department of French and Italian and the Department of Spanish and Portuguese Languages and Cultures in 2001, so there are now 22 departments in the Humanities and Social Sciences.

²¹ Dr. Mark Killingsworth is from the Department of Economics, Rutgers University, and the National Bureau of Economic Research; his report can be found under Publications and Reports on the Princeton Dean of the Faculty home page as an appendix of the Report of the Task Force on the Status of Women Faculty in the Natural Sciences and Engineering at Princeton. Major administrative officers of the University, such as President, Provost, and Dean of the Faculty are not classified as faculty for purposes of compensation and hence are not included in the compensation analysis.

Figure 2: Gender differences in salaries (%) for all Princeton faculty as a function of time. (Differences in the negative direction indicate lower salaries for women.)



Gender differences are shown for four models. As discussed in the text, model 3 (allowing for dependence of salary on time since Ph.D. and on academic department) provides a bound on possible gender bias. More details can be found in the text and in Appendix C of the Report of the Task Force on the Status of Women Faculty in the Natural Sciences and Engineering at Princeton.

Several factors in addition to gender could contribute to this observed difference. For example, salaries are expected to vary with experience and accomplishment. Since the fraction of women in the Princeton faculty has been growing with time (and recent hires are on average younger), female faculty members at Princeton have on average fewer years of experience than male faculty. We used years since receipt of the Ph.D. as a measure of the effects of experience and accomplishment on salary. When years since Ph.D. are included in the salary analysis, the gender difference University-wide is reduced to about 8%, and appears to be relatively stable over the 11 year period (Figure 2, Model 2).

Salaries are also not equal in the different disciplines nationally, and these “market” differences are reflected in differences in salaries between departments at Princeton. Since women are not uniformly represented across departments (for example, women constitute 30% of the Humanities faculty, but only 8.8% of the Engineering faculty), departmental affiliation might influence gender differences in salary. When departmental differences are also considered, the gender difference in salaries at Princeton is reduced even further with a mean difference between men and women over the ten year period of 3.5% (Figure 2, Model 3). Of course, departmental differences in salaries may be due in part to gender bias. There is evidence that society tends to

undervalue women's work such that fields with a high proportion of women have lower salaries than fields where there are few women²².

Salaries also vary across ranks, and part of the gender difference in salary may be due to differences in the representation of men and women across ranks. Gender differences in salaries are reduced even further once salaries are rank-adjusted. Although these differences vary from year-to-year, they have an average value of 0.7% (Figure 2, Model 4). The results of this model indicate that there are essentially no differences in average salaries for women and men with equal years of experience, with the same departmental affiliation, and with the same rank.

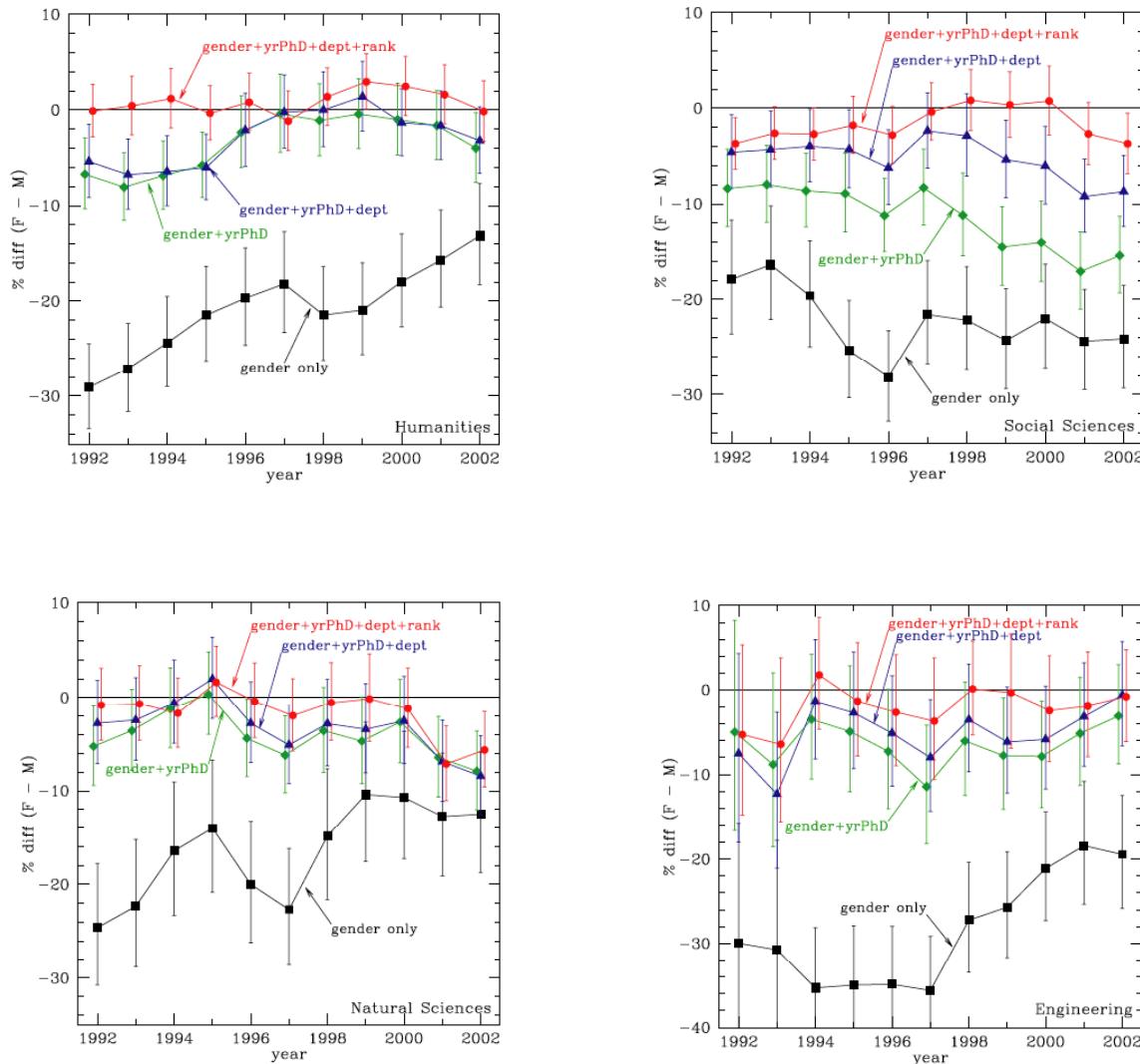
It is not clear that it is appropriate to control for rank in the salary analysis. On the one hand, rank is a measure of accomplishment, and is therefore a valid determinant of salary. On the other hand, there could be gender biases in promotion, in which case controlling for rank will mask gender differences that are not based on accomplishment. Analyses of time to promotion for faculty in the Natural Sciences and Engineering (as reported in the Task Force report) found that the average number of years to promotion to associate and especially to full professor is longer for women than for men. The difference is not significant for the time to tenure and promotion to associate professor, but is marginally significant for the time to promotion from associate to full professor. The data for the Humanities and Social Science faculty also show longer times to promotion for women than for men. Like the Natural Sciences and Engineering, the difference between women and men in the time to tenure is not significant. The length of time in the associate professor rank is also not significantly longer for women than for men eight years after promotion to associate professor, but a larger percentage of women have yet to be promoted after eight years, suggesting that the time to promotion from associate professor to full professor may yet prove to be significantly longer for female faculty in the Humanities and Social Sciences than for male faculty. Given this, it is probably reasonable to assume that the University-wide gender difference in salary falls somewhere between the 11-year average of 3.5% indicated by Model 3 (without adjustment for rank) and 0.7% indicated by Model 4 (with adjustment for rank). While there may be some gender bias in salaries, it does not exceed 3.5% when averaged over the entire faculty. This of course does not exclude the possibility that there may be substantial individual inequities, and that some of these may be gender related.

Figure 3 shows graphs for gender differences in salary for each of the four divisions. In recent years in the Humanities, there has been essentially no difference between the salaries of men and women faculty: even before department and rank are taken into account, the line hovers around zero. The picture in the Social Sciences is a little more complicated but, here too, in recent years, there is essentially no difference between the salaries of men and women faculty, once department and rank are taken into account. Table 5 shows the average gender difference in salary over the 10 year period for each of the four divisions and for each of the four models. In each of the four divisions, there is a substantial reduction in the gender difference when years since Ph.D. are taken into account (Model 1 to Model 2). In three of the four divisions, there is a small reduction in the gender difference when departmental affiliation is taken into account; in the fourth division (Social Sciences), there is a larger reduction in the gender difference when departmental affiliation is taken into account, suggesting that in that division departments with

²² Long, J. S. (Ed.) From Scarcity to Visibility: Gender Differences in the Careers of Doctoral Scientists and Engineers, National Research Council, National Academy Press, 2001. Chapter 7: Gender differences in salary.

higher salaries have fewer women (Model 2 to Model 3). Finally, in all four divisions, there is a reduction in the gender difference in salary when rank is taken into account, reflecting the fact that women are proportionately better represented in the lower ranks that have lower salaries (Model 3 to Model 4).

Figure 3: Gender differences in salaries (%) for Princeton faculty in each of the four divisions (Humanities, Social Sciences, Natural Sciences, Engineering) separately



(Differences in the negative direction indicate lower salaries for women)

For each division, gender differences are shown for four models: gender only; gender + yrPhD; gender + yr PhD + dept; and gender + yrPhD + dept + rank. As discussed in the text, model 3 (allowing for the dependence of salary on time since Ph.D. and on academic department) provides a bound on possible gender bias. More details can be found in the text and in Appendix C of the Report of the Task Force on the Status of Women Faculty in the Natural Sciences and Engineering at Princeton.

Table 5: Average percentage differences between women's and men's salaries during the period 1991–2002 in each of the four divisions at Princeton (negative entries indicate lower salaries for women)

Division	Model 1	Model 2	Model 3	Model 4
Humanities	-20.8%	-3.5%	-2.9%	+0.8%
Social Sciences	-22.4%	-11.4%	-5.3%	-1.7%
Natural Sciences	-16.5%	-4.1%	-3.3%	-1.7%
Engineering	-28.5%	-6.4%	-5.1%	-2.1%

Endowed chairs

Although Princeton faculty with endowed chairs do not generally receive additional funds for salary or research support, these honorifics add to an individual's professional stature both within Princeton and in the larger academic community. In 1992, when women comprised 16.7% of the tenured faculty in the Humanities and Social Sciences, they held 9 of the 80 (11.2%) endowed chairs in the Humanities and Social Sciences. In 2002, when women were 22.5% of the tenured faculty in the Humanities and Social Sciences, there were 104 endowed chairs, with 16 (15.4%) held by women.²³ These are similar to the disparities between the percentage of tenured women and the percentage of women holding endowed chairs reported earlier for the Natural Sciences and Engineering.

Climate

There are many aspects of an institutional climate that are important to the lives of faculty and their ability to function to their fullest potential. These include: mentoring; the professional environment; and family issues, including childcare, opportunities for spousal employment, and tenure extension and workload relief for childbirth or adoption. At this time, we only have information for Humanities and Social Science faculty about their use of Princeton's tenure extension and workload relief policies. Future surveys of the faculty will provide information about the other topics, as well as additional information about the tenure extension and workload relief policies.

Tenure Extension and Workload Relief

A recent study²⁴ supports the notion that combining parenthood and academics is particularly difficult for women. The authors found that women faculty who have a child early in their careers (within five years of earning their Ph.D.) are much less likely to receive tenure than women who do not have "early" babies. This pattern exists nationally for female faculty in the Humanities and Social Sciences (although it is more pronounced for faculty in the Natural Sciences). In contrast men who have children early in their careers have a modestly improved chance of gaining tenure. Perhaps not so surprisingly, the study found that the majority of women who receive tenure do not have children.

²³ Information on endowed chairs is from the 2003-04 Princeton Register. Although in other sections of this summary (e.g., compensation analysis), major administrative officers, such as the President, the Provost, and the Dean of the Faculty, are not included as faculty, those officers who hold endowed chairs are included in the endowed chair analysis.

²⁴ Mason, MA and Goulden, M 2002. "Do Babies Matter?" Academe pp. 21-27

In 1970, Princeton established a tenure extension policy that allowed women the right to request a one-year extension in the rank of assistant professor for each pregnancy (up to two pregnancies). In 1991, this policy was extended to adoptions and to men.²⁵ The workload relief policy, adopted in 1998, allows the primary caregiver of a newborn child or a newly adopted child to request a semester of workload relief from classroom teaching and administrative duties (or two semesters of half relief from such duties) for up to two children. In addition, the University provides paid maternity disability leave from 3 weeks before to 6-10 weeks after a birth, and parents of either sex can take up to one year of unpaid parenting leave.

Between 1997 and 2002, in the Humanities and Social Sciences, 10 males and 9 females requested a tenure extension due to birth or adoption. During this time period, women were 42% of the assistant professors in the Humanities and Social Sciences and received 47% of the tenure extensions. Between the inception of the workload relief policy in 1998 and 2002, 27 Humanities and Social Science faculty, 9 men and 18 women, have used this policy.

Approximately, two-thirds of those using the policy were assistant professors (19 of 27), while the others (8 of 27) were evenly divided between associate and full professors. During this period, women were 28% of the faculty in the Humanities and Social Sciences and received 67% of the workload reliefs.²⁶ Since it is generally acknowledged that women bear more of the obligations associated with parenting than men do, one might expect to find the tenure extension and workload relief policies utilized more by women than by men. This does occur in the case of the workload relief policy but does not in the case of the tenure extension policy, both in the Humanities and the Social Sciences and in the Natural Sciences and Engineering (as described in the earlier Task Force report). The results of the survey of faculty in the Natural Sciences and Engineering suggested that there is considerable anxiety among female junior faculty about how a request for a tenure extension will be viewed by their departmental colleagues. It is certainly possible that a similar anxiety exists among the female junior faculty in the Humanities and the Social Sciences.²⁷

Summary

When considering the status of women faculty, the issue of primary concern for Princeton is representation. This was demonstrated for the Natural Sciences and Engineering in the Task Force report of May 2003, and is clearly visible in the data for the Humanities and Social Sciences presented here. It is disturbing to see that the percentage of women faculty in the Humanities and Social Sciences only increased from 23.2% to 26.9% in the 10 year period between 1992 and 2002, and particularly unsettling to observe (see Table 2) that the percentage of women assistant professors did not increase at all in that 10 year period (37.5% in 1992 and 37.6% in 2002). By and large, this was not the result of scarcity. In the utilization analysis, 13 of 18 departments in the Humanities and Social Sciences had either low or moderate utilization of the available pools of women Ph.D.'s.

²⁵ This policy was changed again in 2005. All assistant professors who are new mothers or fathers are now automatically granted a one year extension for each child. This change was, however, not in effect in the 1991-2002 period covered by this report.

²⁶ Tenure extension and workload relief data are based on Dean of the Faculty files of the requests for these benefits.

²⁷ It is hoped that the policy change described in Footnote 25 will alleviate this anxiety.

Once women faculty in the Humanities and Social Sciences come to Princeton, they receive salaries comparable to those of their male colleagues, and are granted tenure and promotion to associate professor at similar rates. At the same time, it is likely that women spend more time in the associate professor rank before being promoted to full professor than men do.

Women faculty in the Humanities and Social Sciences are less likely to be appointed to positions of authority and visibility than their male colleagues. Fewer than 10% of the department chair appointments since 1980 have been women, and half the departments in the Humanities and Social Sciences have never had a woman chair. Women have also consistently held a smaller percentage of endowed chairs than their representation in the tenured faculty would predict.

Women full professors are more likely to leave Princeton than their male colleagues. Based on the data available to us, it is not possible to tell whether this gender difference occurs for personal or professional reasons (or both).

Finally, since we did not conduct a climate survey, we know relatively little about the climate for women faculty in the Humanities and Social Sciences. It would appear that faculty in general, and women faculty in particular, may be somewhat reluctant to request a tenure extension for birth or adoption of a child, although this reluctance apparently does not extend to requests for workload relief.

In general, then, the primary task for the immediate future is to increase the representation of women faculty in the Humanities and Social Sciences at Princeton. Since our analyses indicate that women are tenured at similar rates to men, increases in the numbers of women can be accomplished through greater recruitment and hiring at both the junior and senior levels and with additional attention to the retention of tenured women.

We conducted simulation analyses in order to assess how the representation of women faculty would change over the next 10 years if hiring rates were to change. Table 6 summarizes the results that could be achieved in the Humanities and Social Sciences with a range of hiring rates. For each division, the simulation begins with the hiring rate of women faculty for the last 10 years and increases the rate gradually to a difficult but feasible rate. (More details about the simulation analyses can be found in Appendix C).

Table 6: Projected representation of women faculty in the Humanities and Social Sciences in 2013 given different hiring rates

f%	Untenured faculty			Tenured faculty			Total faculty		
	Total number	Total women	Percent women	Total number	Total women	Percent women	Total number	Total women	Percent women
Humanities									
35%	60.6	21.2	35%	160.2	54.1	34%	220.8	75.3	34%
38%	60.6	23.0	38%	160.2	56.4	35%	220.8	79.4	36%
41%	60.6	24.8	41%	160.2	58.7	37%	220.8	83.5	38%
44%	60.6	26.7	44%	160.2	61.0	38%	220.8	87.7	40%
47%	60.6	28.5	47%	160.2	63.3	40%	220.8	91.8	42%
Social Sciences									
27%	57.4	15.5	27%	128.8	31.7	25%	186.1	47.2	25%
30%	57.4	17.2	30%	128.8	33.3	26%	186.1	50.5	27%
33%	57.4	18.9	33%	128.8	34.8	27%	186.1	53.7	29%
36%	57.4	20.6	36%	128.8	36.4	28%	186.1	57.0	31%
39%	57.4	22.4	39%	128.8	37.9	29%	186.1	60.3	32%

The simulation analyses indicate clearly that greater efforts to identify and recruit new female faculty could result in substantial increases in the representation of women on the faculty over the next decade. For example, over the period between 1992 and 2002, 35% of the faculty hired in the Humanities were women. If this hiring rate increases to 47% --which is not unrealistic given the pools of women in the Humanities – the total fraction of women represented in the faculty of these departments is projected to increase to 42% by 2013. This is in contrast to the 34% rate of representation that is projected if the hiring rate remains at 35%. Similarly, 27% of the faculty hired in the Social Sciences between 1992 and 2002 were women. If the fraction of hires that are women increases to 39% over the coming decade, by 2013, the fraction of faculty in the Social Sciences who are women will increase to 32%, in contrast to the 25% representation of women that will be found in these departments if the hiring rate of women over the next 10 years continues at the 27% level. Thus, it will be possible to increase substantially the representation of women faculty in the Humanities and Social Sciences over the next 10 years, but to do this will require extensive efforts by everyone concerned.