

Executive Summary 2012 FAS Gender Equity Committee Report

April 8, 2013

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This is the fifth study that has examined data on FAS Tenure Track (TT) and Non-Tenure Track Full Time Faculty (NTTFTF, sometimes called Contract faculty) performed over the course of the last twelve years. These studies build on data collected to examine trends and to recommend action items for the FAS Dean. We have noted issues of concern that have been addressed by prior FAS Deans and are hopeful that this remediation will continue under Tom Carew.

We start with a review of the progress of **TT faculty**. For the last 12 years, a concerted effort has been made to hire female faculty, and this has been successful, especially in the Humanities and Social Sciences. But, science departments are lagging in the recruitment of women and we are still below national average proportions of faculty women in all institutions of higher education. The recruitment and retention of underrepresented minority (URM) faculty has been less successful than the recruitment of women, and today only 8.3% of the TT faculty members are URM. An additional area of concern is that women are under-represented at the Full Professor and Named Chair levels. This under-representation has been a consistent feature of all the past gender equity surveys as well.

There is no association between the gender of the TT faculty member and salary, once year of hire and department are accounted for. But there are some differences, especially at the most senior levels, and on average for junior TT positions, just below the level of significance.

The rates of promotion and tenure were the same for men and women hired during the 2001-2006 period. Women TT faculty members were more likely to be funded by internal research grants. While women taught 0.29 more courses than men, the average class size was larger by 12 students for the men. Women were well represented in CAS teaching awards, winning a disproportionately large number of Golden Dozen awards during 09/10 and 11/12.

A major concern is that NYU nominated far fewer women than men for external competitive awards such as the James S. McDonnell Foundation and the Sloan Research Fellowship, largely for science disciplines: 84% of these nominations went to men. Only nominees can receive these professional accolades.

For NTTFTF, there has been tremendous growth over the last 12 years, for many reasons. This group includes a diverse set of job titles and responsibilities,

and is half-women, but they are not represented in proportion in the more advanced categories (CAP, CP, for instance). Most NTTFTF are members of Humanities departments as Language Lecturers and in LSP. URM represent only 10.7% of hires and 10% of the current faculty.

Starting salaries for Women contract faculty remain lower than their male colleagues, but less inequitable than in the 2010 analysis. Female NTTFTF members at the CAP and CP levels are underpaid. In general, the salary scale is low compared to our peer institutions (examples: Penn and Columbia) and much lower than universities outside the metropolitan area (example: Dartmouth). The serious salary inequities seen in the 2010 survey have become less dramatic due to decanal intervention, but still need to be addressed.

As was seen for TT faculty, the class size is 22.3 students larger for NTTFTF men who taught 0.56 more classes.

NTTFTF women and URM were more likely to receive internal research support than their male colleagues.

Action items:

1. Increase efforts to recruit female TT faculty in the sciences; it will be critical to have females represented on short lists to accomplish this goal.
2. Women are under-represented at the Full Professor and Named Chair positions, and under-represented in new hires for those positions.
3. Increase the efforts to recruit and retain URM in both the TT and contract faculty.
4. Assure that female NTTFTF have equitable starting salaries. Promote more NTTFTF women to the CAP and CP levels and increase the compensation for those females at those levels relative to their colleagues. Increase salaries of all NTTFTF ranks.
5. Nominate women for competitive external awards.

We ask that the FAS dean present to the faculty at large and adopt a formal plan for addressing the above action items.

Detailed comments on the 2012 data set.

1. Characteristics of the FAS faculty:

Over the last 12 years, the total FAS faculty has doubled to 1042 (Figure 1). Now in A&S there are 685 TT and 277 NTTFTF, and 80 NTTFTF in LSP. Students increased from 9,356 degree candidates (17,596 registered in courses) in 1999/2000 to 13,705 candidates (23,971 registered in courses) in 2011/2012, an increase of 46.5%.

a) In the A&S divisions, there has been an increase in the proportion of TT female faculty members (from 24.0 to 30.9%), but overall (Figure 2) and in both the Social Sciences and in the Sciences (Figure 3), the fraction of female faculty lags substantially behind national standards (National Center of Educational Statistics [NCES] < <http://nces.ed.gov/>>). As seen before, the proportion of female TT faculty members is greatest in the Humanities, increasing over the 12 year period from 33.2% AY99/00 to 42.6% in AY11/12. Social sciences have also increased hiring women with the percent changing from 23.6% in AY99/00 to 31.7% in AY11/12. However, *the fraction of female science faculty has barely changed from 14% to 16% over that interval.*

b) The recruitment and retention of under-represented minority (URM) faculty has been less successful than increasing female faculty. The fraction of URM TT faculty remains at only 54 individuals, or 8.3% (Figure 2). The largest proportion of URM is at the AP rank (12%) with only 6% at aP and 7% at the rank of P (Table 1).

c) Currently, more than half of the TT faculty members are full professors 399 of 701 total; 118 are aP, and 168 are AP (Table 1). The fraction of female faculty is highest at the AP rank (41%); 38% are aP and only 25% of the full professors are female, under-represented, and statistically significant.

d) Over the course of the 12 years, 449 new TT faculty have been hired by FAS departments with 157 of them female (34.9%) and only 37 URM (8.2%). Most hires in the 2007-2012 period were at the aP level 117 of 205 TT hires (57.1%). Of these, 38% are female. Altogether, 77 of the 205 newly recruited FAS TT faculty are women (37.6%). Only 19 new hires are URM, just 9.2%. (Table 2)

e) Short-lists for recruitment were available for 59%, or 266 searches in the 12 year period. Over the last 6 years, 33% of 341 offers were made to potential Female TT hires (page 8 and Table 27). In successful searches, 98 females and 168 males were hired from the finalists. However, no women were among 40 (15%) and no men were included in 21 (8%) of the short lists. This was a particular problem for science hires, as shown in the regression analysis (Table 3).

Impressions: Hiring (and retaining) of female TT faculty in the Humanities and Social Sciences has been more successful than for the Sciences or for URM faculty. The fraction in the pipeline exceeds the fraction at the full P level for females; women and URM are under-represented at the full P level. But for URM, the small fraction in the pool at the aP rank and also in NTTFTF (discussed below) raises concerns.

f) Among the 357 NTTFTF (“contract”) in AY11/12, the fraction of female faculty has remained about 50%, but the proportion of both minorities and URM has fallen as the total number of NTTFTF has grown substantially from 37 in AY99/00 to 277 (A&S) and 80 (LSP) in AY11/12 (Figures 1 and 4, Table 4). Most of the female NTTFTF are in Humanities (and LSP), although the fraction has dropped over the 12 year period. At the same time, there has been growth in the hiring of female NTTFTF in the Social Sciences and Sciences (Figure 5), reaching the NCES levels.

g) During the last 12 years, FAS hired 408 NTTFTF members, 214 of which are women (52.4%) and 41 URM (10.0%). Of the 341 NTTFTF hired in the 2 year period 2010-2012, half were women, and only 9% URM, which was lower than the 12% URM hired in the 2010 study (Table 4). Females remain under-represented at higher clinical ranks of the NTTFTF [Clinical AP, Clinical P, Professor without Tenure, and Master Teachers] and over-represented among Language Lecturers and Senior Language Lecturers (Table 4). URM are over-represented at the Clinical Professor level (25%).

h) Starting rank of newly hired NTTFTF indicate that females are under-represented at more senior clinical hires in the 6 year period 2007-2012 (Table 5). During that period, 10.7% of hires were for URM.

Impressions: The numbers of NTTFTF continue to grow in FAS for many reasons that are beyond the scope of this analysis. Contract faculty remain “pink”, especially at lower ranks and for Language Lecturers; it is a concern that there are relatively fewer women at higher NTTFTF ranks. URM remain at a low fraction of this faculty cohort, as they do for the TT faculty.

2. Faculty compensation

a) Although there is a small difference (1-2k) in the mean salary between male and female faculty at the aP and AP ranks among the TT faculty, this differential has actually shrunk over the years of this study and is not statistically significant ($p < .10$). Similarly the difference in compensation for female P and named chairs has also shrunk, but remains \$10-25k, just at the level of significance (Table 6). The mean compensation for URM is not different than for males at the same rank. These mean salary figures were not stratified by department or time at rank. When the data in Table 6 were analyzed by regression for department, rank, and year of hire, there was no contribution of the

gender of the faculty member (Table 7). This is an improvement from the findings in 2000 and 2005, when sex did make a difference.

b) Starting salary analysis for the 5 year period 2007-2012 (Table 8) show a \$3.5-6.8k supplement received by male hires at the aP and AP ranks, but is offset by a \$9k supplement received by newly hired female full professors. Regression analysis of the starting salary data do not reveal a contribution of the sex of the hire, when department, rank and year post hire were taken into consideration. (Tables 9 and 10).

Impressions: Looking at mean salaries alone has been misleading. It should be noted that there is a wide difference in salary ranges when different departments and different divisions are compared. These latter factors are the main drivers in salary differences.

e) For NTTFTF, mean salaries show significantly ($p < .05$) lower compensation for female Clinical AP, Minority AP, Minority and URM Master Teachers (Table 11). This is borne out in the regression analysis (Tables 12 and 15), although improved from the 2010 findings – after which Acting Dean Jess Benhabib made adjustments.

f) The starting salaries of female NTTFTF at the Clinical aP rank are also \$6k lower than their male counterparts. URM Language Lecturers are also \$2.6k less well compensated at the start ($p < .05$) (Table 13). Regression analysis supports this under-compensation (Table 15).

Impression: Attention needs to be given to compensation for the NTTFTF. Overall it is low and not competitive with many peer institutions. URM and female contract faculty are under-compensated compared to their male counterparts.

3. Tenure and Promotion

It takes 6 years for newly hired aP to come up for consideration for promotion, therefore the cohort hired between 2001 and 2006 were examined. There was no difference in the rate of tenure granted or denied when 31 female and 84 male aPs were compared (Figure 6 and 7).

4. Non-salary Opportunities

a) **Internal research grants** were provided to 75% of TT women and 56% of TT men, 74% of URM in AY11/12 (Tables 16 and 17). These rates were essentially consistent over the 12 years of data analysis. For NTTFTF, as well, women (86%) and URM (87%) were more likely than their male counterparts (79%) to receive internal research support funds in AY 11/12 (Tables 18 and 19).

b) **Teaching loads** were examined. For TT faculty, women taught somewhat more courses (2.54) and URM (2.62) compared to 2.25 for men

AY11/12 (Table 20). However, the number of students in classrooms was greater for men 63.37 vs. 52.30 for women or 51.36 for URM (Table 20).

Additional data, not included in the survey indicated that the 20 largest classes were in the Sciences (13; first year premedical courses, Intro course for Psychology, and two additional courses) and Social Sciences (6; first year Economics and Politics), and one MAP course; since the science and social science departments are more likely to have male faculty than females, it is not surprising that this would be reflected in the larger class size statistic.

NTTFTF teaching analysis indicated that men were more likely to teach more courses (5.02) when compared to their women colleagues (4.46) and URM were intermediate (4.88). The class size was also larger for the males (121.5) compared to 82.48 for females and 99.14 for URM (Tables 22 and 23). The same interpretation is pertinent, especially noting that NTTFTF in the sciences are likely to be involved in the large classes while Humanities departments have more Language Lecturers and the Expository Writing faculty, which are likely to have smaller classes.

c) **Faculty Retention** is important to maintain the highest quality TT faculty who are often sought out by other universities. In 11/12, 17 faculty members received outside offers and all were responded to, retaining all 17. Six of these are women, 35%, or approximately the proportion in the FAS TT faculty. Three URM were also made counteroffers in AY11/12. The Retention was higher than in AY09/10 when of 16 faculty, 11 received counteroffers and only 8 were successful (Table 24).

d) **Juried awards** are important recognition for faculty scholarship and potential. Therefore it is important to be nominated from the university to external programs that ultimately make the decisions. For 15 programs, over a two AYs, Women were underrepresented, only 16% of the nominations (Table 25). 18% of TT Minority faculty (not broken down to URM) were more likely to be put forward. It should be noted that one NTTFTF Master Teacher was nominated in AY09/10.

e) The **Golden Dozen** teaching award recognizes the classroom performance. Students and colleagues make nominations. In the two years data have been collected, female TT faculty are more likely than their male colleagues to be recognized for their teaching; half of the GD awards went to women (Table 26). Only 1 of the GD went to an URM TT faculty member. It should be noted that 8 of the 24 awards went to NTTFTF members.

f) Thirty-three percent of **Offers** for TT positions over the last six years were to female candidates; the yield was 71% for those offers (Table 27). For the men, the yield was 62% of offers. Sciences fared lowest in succeeding in recruitment of candidates with offers, only 52% accepted.



NEW YORK UNIVERSITY

**Arts and Science
Faculty Equity Study, 2012**

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Arts and Science Faculty Equity Study, 2012

Overview of the Faculty Equity Study, 2012

This document is the fifth in a series of studies released by this office exploring equity issues among our full time faculty relating to both gender and race. The prior studies found a number of significant relationships between gender, race, and various aspects of the career paths experienced by our faculty. This update aims to explore these relationships more deeply and to continue to monitor other areas previously found to be equitable to confirm that no systemic bias has emerged.

Previous findings included significant correlations of both gender and minority status with rank in the tenure track. This appeared to be a persistent consequence of hiring and tenure patterns of the prior century. **Part I** of this study reviews this distribution and the impact of hiring practices in recent years on the under-representation of women and minorities in higher ranks.

Previous studies found that, when rank, experience, and department were taken into account, gender and minority status did not appear to be contributing factors to salary (or starting salary). **Part II** of this study repeats these prior analyses.

Analysis of career progression in the tenure track showed only one relationship: women who resigned tended to do so one year later than men. The percentage of tenure track hires who ultimately were granted tenure was not found to be related to gender or minority status. **Part III** of this study repeats prior analyses to confirm no negative systemic biases have emerged.

Various other tests have been performed on other aspects of faculty experience, to determine if they were affected by gender or minority status. **Part IV** of this study repeats inquiry into the existence and level of internal research support, the distribution of internal juried awards, housing allocation decisions, and teaching assignments, and adds an inquiry into acceptance rates of offers of employment to potential tenure and tenure eligible faculty.

Description of the data used in this study

To study the current state of our faculty, a cross-sectional dataset was constructed for all full time faculty who were in payroll records with primary appointments in Arts & Science, the Courant Institute, and the Institute of Fine Arts for any part of Fiscal Year 2011-2012. These data were subdivided into tenure and tenure eligible faculty (assistant professors, associate professors, full professors and named professors) and contract faculty (clinical faculty, professors without tenure, language lecturers and master teachers). As per previous studies, post-doctoral teaching fellows, student instructors, visiting, and adjunct faculty were not included. A new category of faculty, the post-

doctoral lecturer, has now also been excluded. Faculty who were hired at the rank of full professor but were considered not tenure eligible are again included with clinical professors in studies of rank distribution, and remain excluded from salary studies. In addition to unit, rank, gender, ethnicity, and salary, the cross section included data elements such as research support, teaching assignments, and retention and nominations data.

References to 2000, 2005, and 2007 data refer to the data sets and results for those fiscal years in the Arts & Science Faculty Equity Study from 2007. References to 2010 data refer to the data sets and results from the 2010 study.

To study hiring and career progression in the tenure track, a dataset of all tenure and tenure eligible faculty hires at the rank of assistant, associate (with or without tenure), full, or named professor between 6/1/2000 and 5/31/2012 was assembled. These data were subdivided into two six year periods: individuals hired between 6/1/00 and 5/30/06 for whom the six year tenure cycle should have completed, and those hired between 6/1/06 and 5/31/12 for whom the cycle might have not completed. Faculty who were hired at the rank of professor but were not tenure eligible (N=15) were excluded from all new hire analyses.

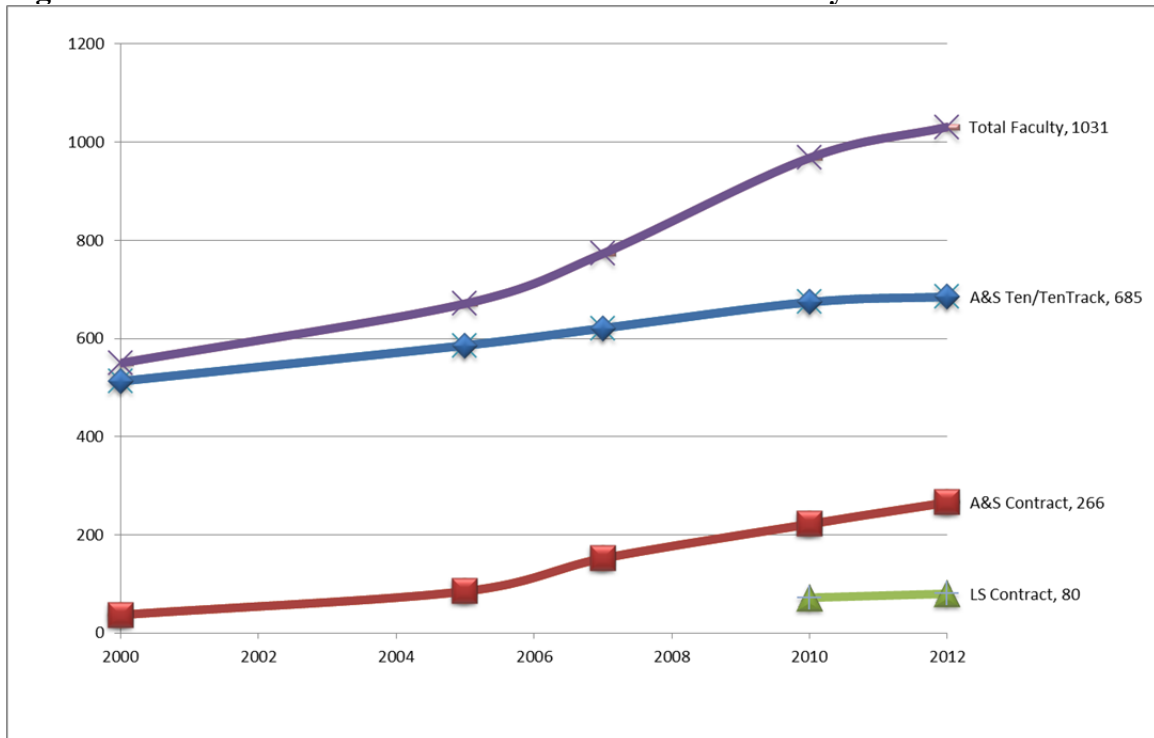
To study offers in the tenure track, a dataset of all tenure/ tenure eligible faculty offers for hires with start dates between 6/1/2006 and 5/31/2012 was assembled.

To study hiring in the non-tenure track, a dataset of all non- tenure eligible faculty hires between 6/1/2000 and 5/31/2012 was assembled. These data were subdivided into two six year periods: those hired between 6/1/00 and 5/30/06, and those hired between 6/1/06 and 5/31/12, to parallel the tenure-eligible faculty analysis. As per previous studies, post-doctoral teaching fellows, student instructors, visiting faculty, and adjunct faculty were not included.

Descriptive statistics of the 2012 tenured and tenure eligible cross-section

The tenured and tenure eligible faculty have grown in number by 33.5% over the past twelve years, with the 2012 cohort numbering 685 individuals. Figure 1 shows this growth in comparison to Arts and Science total faculty, contract faculty, and Liberal Studies faculty. Note that both full time predoctoral and postdoctoral faculty appointments are excluded from the contract faculty total, and that all full time predoctoral teaching positions had been phased out over this period in conjunction with the financial aid reforms of the Graduate School of Arts and Science. Note also that the Liberal Studies faculty was included for the first time in 2010.

Figure 1: Arts & Science Tenure Track and Contract Faculty Growth



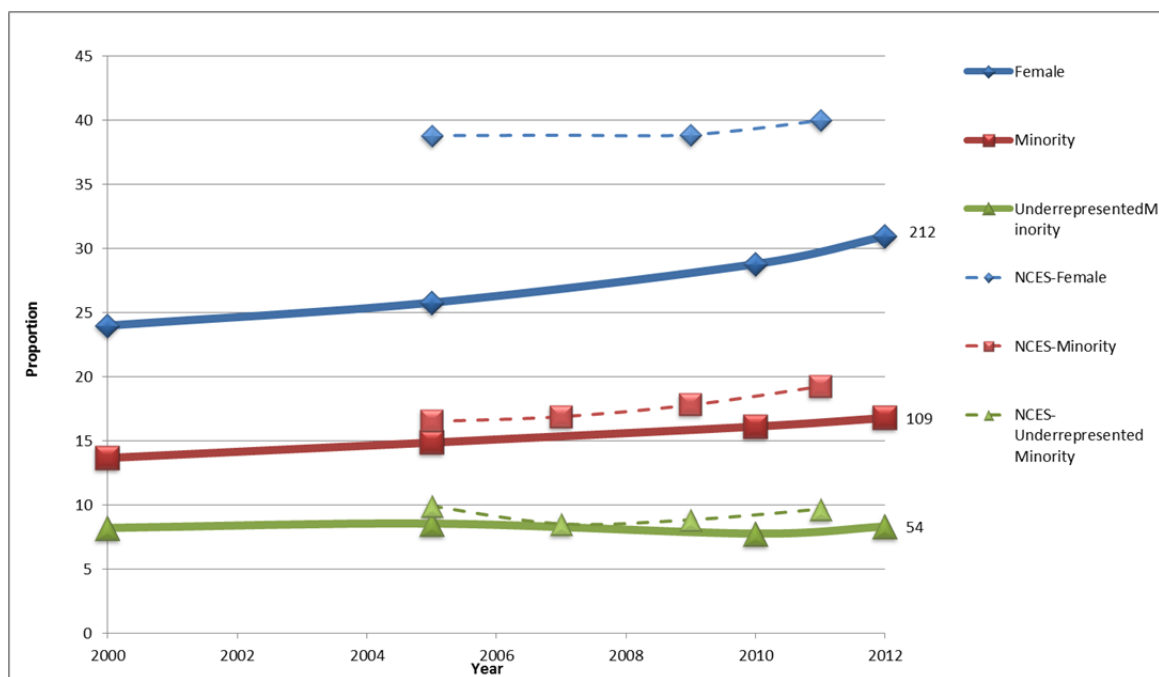
Over this same period, student populations have grown. In Academic Year 1999-2000, Arts and Science had 9,356 individuals registered in its degree programs and had 17,596 distinct individuals enrolled in its courses.¹ These numbers grew to 13,705 registered degree candidates (a growth of 46.5%) and 23,971 individuals in its courses (a growth of 36.2%).²

¹ These 1999-00 counts were drawn from the NYU Student Records Dashboard in March 2013 to capture all students registered in programs GARTS, UARTS, and UACER or enrolled in courses in the G, V, or A series.

² These 2011-12 counts were drawn from the NYU Student Records Dashboard in March 2013 to capture all students registered in programs GARTS, UARTS, UFGLS, and UFLSP or enrolled in courses in the GA, UA, or UF series.

Figure 2 visually depicts the proportion of female, minority³, and underrepresented minority⁴ faculty over this period. The proportion of female faculty has increased at a steady rate from 24.0% to 30.9%. The proportion of minority faculty⁵ has also increased from 13.7% to 16.8% of domestic faculty with reported race or ethnicity information. The proportion of faculty in underrepresented minorities has recovered from a recent dip, ending at 8.3% of faculty. To place these proportions in context, the National Center for Education Statistics reports⁶ that, as of Fall 2011, 40.0% of all faculty with professorial titles at Title IV degree-granting institutions were female, 19.2% were minority, and 9.7% were underrepresented minorities. (National Center for Education Statistics, 2012) (Title IV institutions include 2 and 4-year, private and public, universities and colleges.)

Figure 2: Proportion female, minority, underrepresented minority (tenured and tenure eligible faculty, n=685 for gender proportion, 650 for minority/URM)



³ Minority faculty include faculty who self-identify as Asian/Pacific Islander, Black, Native American, or Hispanic, or partially Asian/Pacific Islander, Black, Native American, or Hispanic. Data is from Human Resources records.

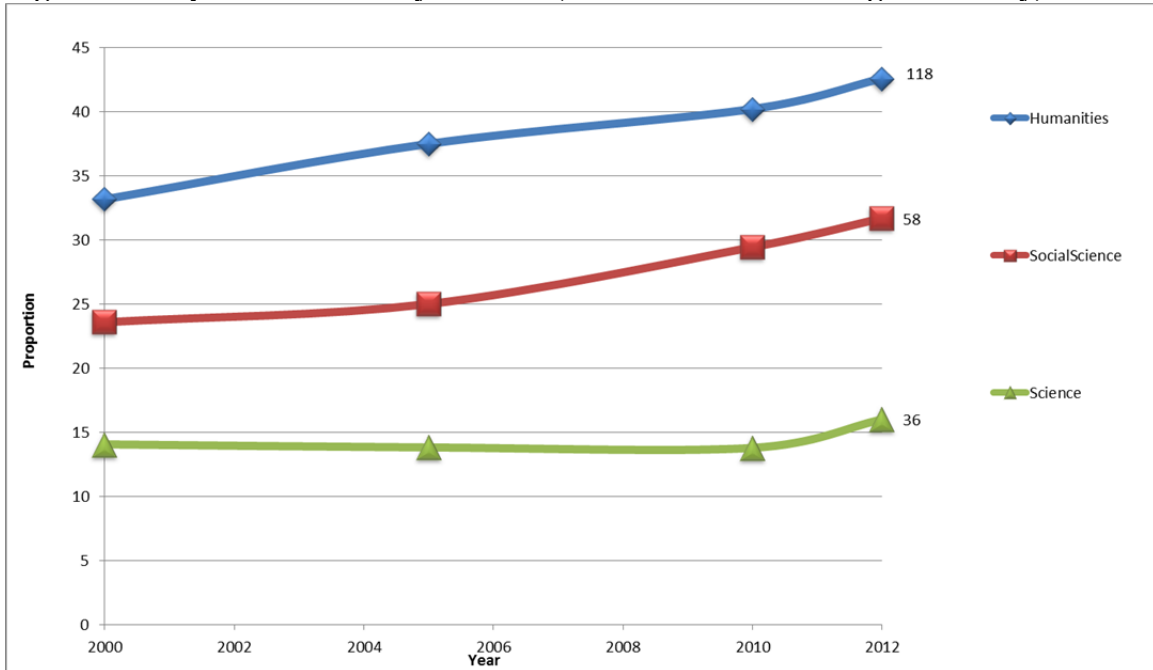
⁴ Underrepresented minority faculty include faculty who self-identify as Black, Native American, or Hispanic, or partially Black, Native American, or Hispanic. Data is from Human Resources records.

⁵ Minority and underrepresented minority faculty proportions are calculated excluding race/ethnicity unknown and non-resident aliens.

⁶ For data after 2007, see NCES 2012 Table 264. Data for Professors, Associate Professors, and Assistant Professors only. Note that these statistics reflect proportions for all degree-granting institutions participating in Title IV federal financial aid programs. Data for 2005 is drawn from “Employees in Postsecondary Institutions, Fall 2009, and Salaries of Full-Time Instructional Staff, 2009-10”, p.12 (Knapp, 2010)

Figure 3 visually depicts the proportion of female faculty by division over this same period. The proportions of female faculty in the humanities and social sciences have increased from 33.2% to 42.6% and 23.6% to 31.7% respectively. The proportion of female faculty in the sciences has grown in the past two years to 16.0% after having been steady around 14% for the past decade.

Figure 3: Proportion female by division (tenured and tenure eligible faculty)

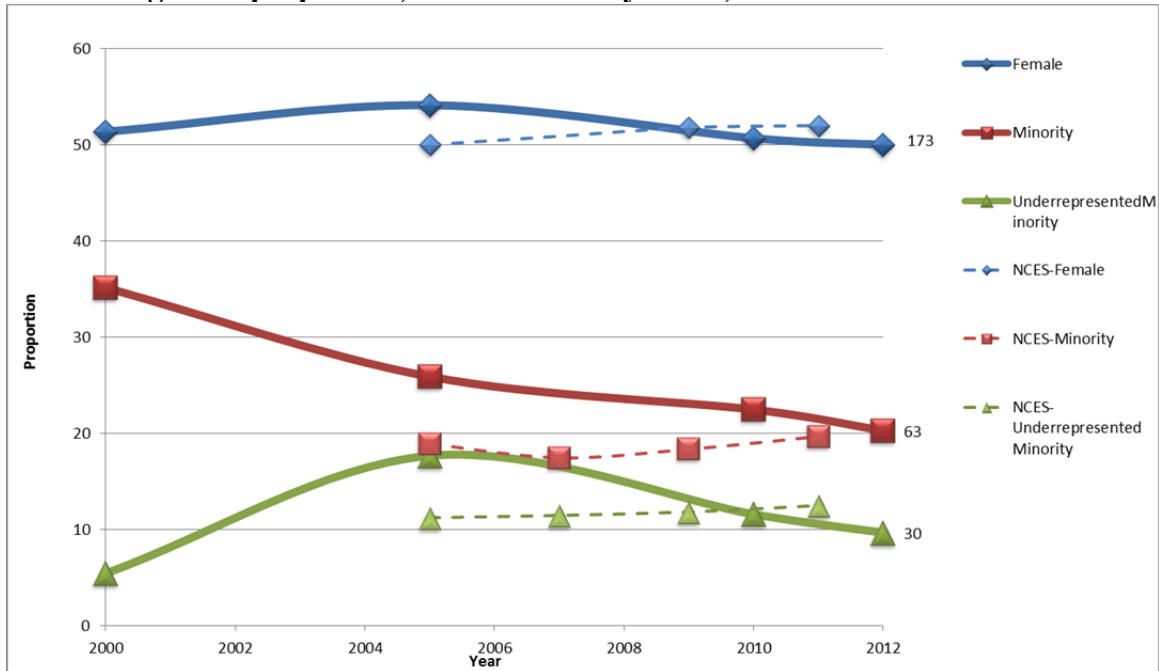


The proportion of minority faculty by division for tenure and tenure eligible faculty is 16.9% in humanities, 18.9% in the social sciences, and 15.0% in the sciences. The proportion of underrepresented minority faculty by division is 10.3% in humanities, 10.9% in the social sciences, and 3.7% in the sciences. All of these proportions have improved moderately since first measured in 2010.

Descriptive statistics of the 2012 contract faculty cross-section

The Arts & Science contract faculty has grown dramatically in number over the past decade, growing from 37 to 346 individuals. A significant portion of the growth is from the addition of the Liberal Studies Program to Arts & Science, which is staffed entirely with contract faculty and accounts for 80 faculty members in 2012. Figure 4 visually depicts the proportion of female, minority, and underrepresented minority faculty over this period. The proportion of female faculty has remained flat around 50%. The proportion of minority faculty⁷, initially high, has dropped to 20% in 2012. The proportion of faculty in underrepresented minorities has been declining and is now 10%. To place these proportions in context, the National Center for Education Statistics reports⁸ that, as of Fall 2011, 52% of all faculty without professorial titles at Title IV degree-granting institutions were female, 20% were minority, and 12% were underrepresented minorities.

Figure 4: Proportion female, minority, underrepresented minority (contract faculty, n=346 for gender proportion, 311 for minority/URM)

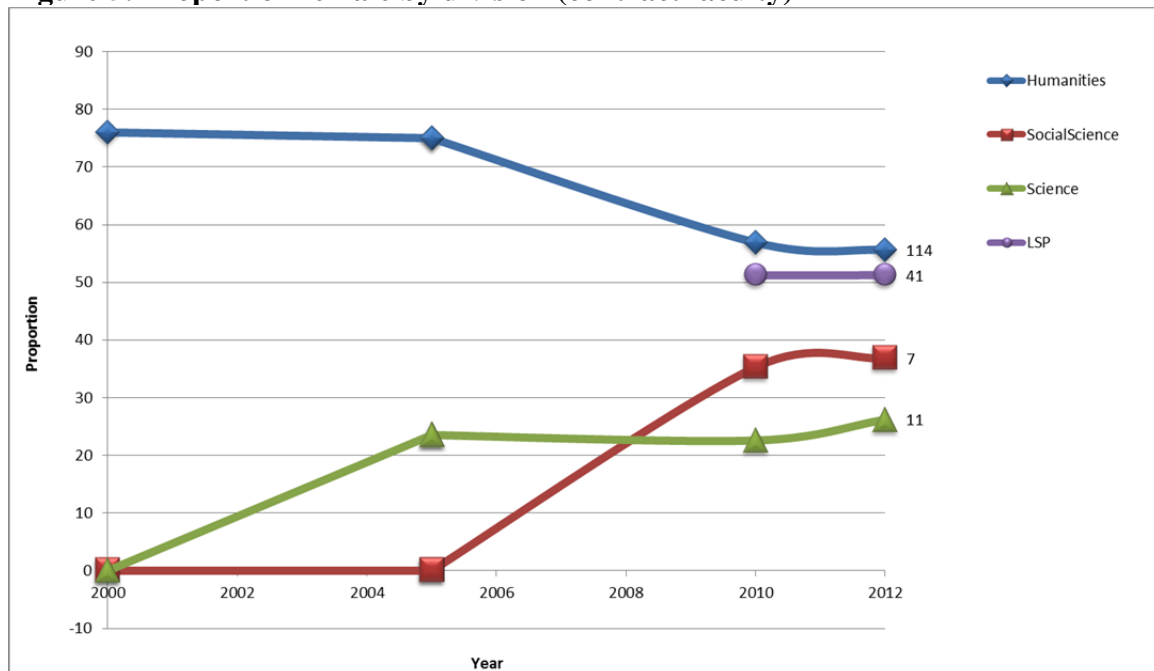


⁷ Minority and underrepresented minority faculty proportions are calculated excluding race/ethnicity unknown and non-resident aliens.

⁸ For data after 2007, see NCEs 2012 Table 264. Data for Instructors, Lecturers, and Other Faculty only. Note that these statistics reflect proportions for all degree-granting institutions participating in Title IV federal financial aid programs. Data for 2005 is drawn from “Employees in Postsecondary Institutions, Fall 2009, and Salaries of Full-Time Instructional Staff, 2009-10”, p.12 (Knapp, 2010)

Figure 5 visually depicts the proportion of female contract faculty by division over this same period. The proportion of female faculty in the humanities, initially high, has dropped to 56%. In 2012, there were 51% female contract faculty in Liberal Studies. The Social Science contract faculty has grown from 5 male faculty in 2005 to 18 total faculty in 2012 (37% female). In Science, the proportion of female faculty has increased from 23% to 26%.

Figure 5: Proportion female by division (contract faculty)



The proportion of minority faculty by division is 21% in humanities, 26% in the social sciences, 19% in the sciences, and 17% in liberal studies. The proportion of underrepresented minority faculty by division is 9% in humanities, 16% in the social sciences, 5% in the sciences, and 12% in LSP. All of these proportions have dropped slightly since the 2010 study.

Descriptive statistics of the faculty hiring cohorts

Over the past twelve years, Arts and Science has hired 449 tenured or tenure eligible faculty members. Of these, 157 have been female and 292 have been male. Of the 398 non-resident aliens with reported minority status, 76 have been minorities and 37 have been underrepresented minorities. Counts of new hires by cohort are presented in Table 2. From 2001 to 2006, 31% of new hires were female, while from 2007 to 2012, 39% were female. From 2001 to 2006, 15% of new non-resident-alien hires were minorities, while from 2007 to 2012, 23% were minorities. From 2001 to 2006, 8% of new non-resident-alien hires were underrepresented minorities, while from 2007 to 2012, 11% were underrepresented minorities.

Over the past six years, Arts and Science has recorded 341 offers to potential tenured or tenure eligible faculty members. Of these, 111 (33%) have been to females and 230 have been to males. Given the missing data on self-reported ethnicities of faculty who declined offers, analysis of this data set by ethnicity is not possible at this time.

Over the past twelve years, Arts and Science has hired 408 contract faculty members. Of these, 214 have been female and 194 have been male. Of the 348 non-resident aliens with reported minority status, 79 have been minorities and 41 have been underrepresented minorities. Counts of new hires by cohort are presented in Table 5. From 2001 to 2006, 56% of new hires were female, while from 2007 to 2012, 51% were female. From 2001 to 2006, 21% of new non-resident-alien hires were minorities, while from 2007 to 2012, 24% were minorities. From 2001 to 2006, 10% of new non-resident-alien hires were underrepresented minorities, while from 2007 to 2012, 13% were underrepresented minorities.

Part I: Gender and minority status versus current and starting rank

I.1. Description of tenured and tenure eligible faculty current rank distribution

Table 1 depicts the number and percentage of faculty per rank in 2012, and prior years.

Table 1: Gender and minority status by rank (tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2012 (N=701)</u>						
Assistant	45 (38%)	73 (62%)	24 (21%)	93 (79%)	7 (6%)	110 (94%)
Associate	69 (41%)	99 (59%)	40 (24%)	124 (76%)	20 (12%)	144 (88%)
Full+Named	98 (25%)	301 (75%)	47 (12%)	348 (88%)	28 (7%)	367 (93%)
Full	78 (25%)	235 (75%)	40 (13%)	269 (87%)	25 (8%)	284 (92%)
Named	20 (23%)	66 (77%)	7 (8%)	79 (92%)	3 (3%)	83 (97%)
<u>2010 (N=674)</u>						
Assistant	41 (37%)	69 (63%)	26 (24%)	84 (76%)	6 (6%)	104 (94%)
Associate	62 (37%)	107 (63%)	42 (25%)	125 (75%)	20 (12%)	147 (88%)
Full+Named	91 (23%)	304 (77%)	40 (10%)	354 (90%)	26 (7%)	368 (93%)
Full	70 (23%)	235 (77%)	32 (11%)	272(89%)	22 (7%)	282 (93%)
Named	21 (23%)	69 (77%)	8 (10%)	82(90%)	4 (4%)	86 (96%)
<u>2005 (N=586)</u>						
Assistant	27 (27%)	73 (73%)	21 (21%)	79 (79%)	8 (8%)	92 (92%)
Associate	53 (38%)	88 (62%)	31 (22%)	110 (78%)	19 (13%)	122 (87%)
Full+Named	71 (21%)	274 (79%)	35 (10%)	310 (90%)	23 (7%)	322 (93%)
<u>2000 (N=513)</u>						
Assistant	33 (41%)	47 (59%)	22 (27%)	58 (73%)	9 (11%)	71 (89%)
Associate	34 (30%)	80 (70%)	17 (15%)	97 (85%)	12 (11%)	102 (89%)
Full+Named	56 (18%)	263 (82%)	31 (10%)	288 (90%)	21 (7%)	298 (93%)

Note: self-reported ethnicity data was missing for 3 faculty in the 2010 cross section, and 9 faculty in the 2012 cross section.

I.2. Analysis of tenured and tenure eligible faculty current rank distribution

Tests against prior year cross sections have established that there are statistically significant relationships for gender and minority status, (but not underrepresented minority status) with rank, and that all three categories are underrepresented at the full professor rank. These relationships persist in the 2012 cross section:

The null hypothesis that gender and rank are independent was again rejected with the chi-square statistic ($\chi^2=18.61$, $p<0.001$). Gender and rank are associated, for instance, females are underrepresented in the professor rank (98 females are observed to be full or named professors compared to the 123 expected under independence).

The null hypothesis that minority status and rank are independent was again rejected with the chi-square statistic ($\chi^2=16.03$, $p<0.01$). Minority status and rank are associated, for instance, minority faculty are underrepresented in the professor rank (47 are observed to be full or named professors compared to the 65 expected under independence).

The null hypothesis that underrepresented minority status and rank are independent was again not rejected with the chi-square statistic ($\chi^2=6.83$, $p<0.08$). However, since $p<0.1$ these results may show a trend towards significance, and the relationship should continue to be monitored in the future.

The study of processes that affect the persistence of these relationships – namely hiring and career progression – will be further examined in the following pages and in Part III.

I.3. Description of tenured and tenure eligible faculty hiring cohorts

Starting rank is analyzed for association with gender, minority status, and underrepresented minority status⁹ for an understanding of each hiring cohort.

Table 2: Starting rank by hiring cohort, by gender and minority status (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2007 to 2012 (N=221, 202 not resident aliens)</u>						
Assistant	51 (40%)	75 (60%)	26 (23%)	86 (77%)	9 (8%)	103 (92%)
Associate without tenure	5 (50%)	5 (50%)	4 (40%)	6 (60%)	2 (20%)	8 (80%)
Associate with tenure	21 (55%)	17 (45%)	12 (39%)	19 (61%)	8 (26%)	23 (74%)
Full	8 (19%)	34 (81%)	3 (8%)	35 (92%)	2 (5%)	36 (95%)
Named	1 (20%)	4 (80%)	1 (20%)	4 (80%)	0 (0%)	5 (100%)
<u>2001 to 2006 (N=228, 196 not resident aliens)</u>						
Assistant	29 (26%)	82 (74%)	16 (17%)	77 (83%)	8 (9%)	85 (91%)
Associate without tenure	2 (50%)	2 (50%)	1 (33%)	2 (67%)	1 (33%)	2 (67%)
Associate with tenure	14 (42%)	20 (59%)	8 (24%)	26 (86%)	4 (12%)	30 (88%)
Full	24 (35%)	44 (65%)	5 (8%)	56 (92%)	3 (5%)	58 (95%)
Named	2 (18%)	9 (82%)	0 (0%)	11 (100%)	0 (0%)	11 (100%)

Note: self-reported ethnicity data was missing for 4 faculty in the 2001-06 cohort cross section.

I.4. Analysis of tenured and tenure eligible starting rank distribution, 2007 to 2010

The null hypothesis that gender and starting rank are independent for the 2007-2010 hiring cohort was rejected using Fisher's Exact Test ($p < 0.01$). Gender and starting rank are associated, for instance, females are underrepresented in the professor rank (8 observed versus 16 expected under independence) and overrepresented in the associate professor with tenure rank (21 observed versus 15 expected under independence).

The null hypothesis that minority status and starting rank are independent for the 2007-2010 hiring cohort was rejected using Fisher's Exact Test ($p = 0.02$). Minority status and starting rank are associated, for instance, minorities are underrepresented in the professor rank (3 observed versus 9 expected under independence) and overrepresented in the associate professor with tenure rank (12 observed versus 7 expected under independence).

The null hypothesis that underrepresented minority status and starting rank are independent for the 2007-2010 hiring cohort was rejected using Fisher's Exact Test ($p = 0.04$). Underrepresented minority status and starting rank are associated, for instance, URM faculty are underrepresented in the professor rank (2 observed versus 4 expected under independence) and overrepresented in the associate professor with tenure rank (8 observed versus 3 expected under independence).

⁹ Minority and underrepresented minority faculty proportions are calculated excluding race/ethnicity unknown and non-resident aliens.

I.5. Analysis of candidate screening for new hires

There were 266 short lists available for open academic positions that led to a new hire from 2001 to 2012. 98 female new hires and 168 male new hires were associated with these short lists. Notably, short lists were only available for 59% of hires.

40 (15%) of these positions had no reported female finalists while 21 (8%) of these positions had no male finalists. Females accounted for 50% or more of the finalists in 92 cases (35%), while in 174 cases the finalist pool was more than 50% male.

A logistic regression model controlling for the division of the position shows that division does not have a statistically significant relationship with whether or not a female applicant is selected as the candidate (Table 3).

Table 3: Logistic regression of female finalists selected from short lists (Tenured and tenure eligible faculty)

	<u>Female applicant hired</u>
Intercept	0.02 (.05)
Proportion female finalists	0.95 (.09)***
<u>Division vs. Social science</u>	
Science	-0.08 (.06)
Humanities	0.03 (.23)
R ²	0.33
N	266

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

I.6. Description of contract faculty rank distribution

Table 4 depicts the number and percentage of contract faculty by rank.

Table 4: Gender and minority status by rank (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2012 (N=341)</u>						
Contract Total	178 (50%)	179 (50%)	74 (21%)	275 (79%)	33 (9%)	316 (91%)
Clin. Assistant	18 (50%)	18 (50%)	7 (20%)	28 (80%)	2 (6%)	33 (94%)
Clin. Associate	12 (27%)	32 (73%)	11 (25%)	33 (75%)	5 (11%)	39 (89%)
Clin. Professor	7 (47%)	8 (53%)	1 (7%)	14 (93%)	0 (0%)	15 (100%)
Prof. w/o Ten.	2 (12%)	14 (88%)	4 (25%)	12 (75%)	4 (25%)	12 (75%)
Lang. Lectr.	64 (57%)	49 (43%)	29 (27%)	79 (73%)	9 (8%)	99 (92%)
Sr. Lang. Lectr.	29 (69%)	13 (31%)	8 (19%)	34 (81%)	3 (7%)	39 (93%)
Master Teacher	41 (51%)	39 (49%)	14 (18%)	65 (82%)	10 (13%)	69 (87%)
<u>2010 (N=294)</u>						
Contract Total	149 (51%)	145 (49%)	66 (22%)	226 (78%)	34 (12%)	258 (88%)
Clin. Assistant	15 (54%)	13 (46%)	8 (29%)	20 (71%)	4 (14%)	24 (86%)
Clin. Associate	13 (33%)	27 (67%)	9 (23%)	31 (77%)	5 (13%)	35 (88%)
Clin. Professor	5 (22%)	18 (78%)	4 (18%)	18 (82%)	3 (14%)	19 (86%)
Lang. Lectr.	66 (59%)	46 (41%)	26 (23%)	85 (77%)	10 (9%)	101 (91%)
Sr. Lang. Lectr.	13 (68%)	6 (32%)	6 (32%)	13 (68%)	3 (16%)	16 (84%)
Master Teacher	37 (51%)	35 (49%)	13 (18%)	59 (82%)	9 (13%)	63 (88%)
<u>2005 (N=85)</u>						
Contract Total	46 (54%)	39 (46%)	22 (26%)	63 (74%)	8 (9%)	77 (91%)
<u>2000 (N=37)</u>						
Contract Total	19 (52%)	18 (48%)	13 (35%)	24 (65%)	2 (5%)	35 (95%)

Note: self-reported ethnicity data was missing for 2 faculty in the 2010 cross section, and 7 faculty in the 2012 cross section.

I.7. Analysis of contract faculty current rank distribution

The null hypothesis that gender and rank are independent was rejected with the chi-square statistic ($\chi^2=26.29$, $p<0.001$). Gender and rank are associated, for instance, females are underrepresented in the professor without tenure rank (2 females are observed to be full or named professors compared to the 8 expected under independence).

The null hypothesis that minority status and rank are independent was not rejected with the chi-square statistic ($\chi^2=5.01$, $p=0.54$). Minority status and rank are not associated.

The null hypothesis that underrepresented minority status and rank are independent was not rejected with the chi-square statistic ($\chi^2=7.97$, $p=0.24$). Underrepresented minority status and rank are not associated.

I.8. Description of contract faculty hiring cohorts

Faculty who were hired at the rank of clinical assistant, clinical associate, clinical full professor, language lecturer, senior language lecturer, or master teacher between academic year 2000-2001 and academic year 2011-2012 were selected for the starting rank and starting salary analyses. Individuals hired to short term postdoctoral lecturer positions were not included.

Table 5: Starting rank by hiring cohort, by gender and minority status (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2007 to 2012 (N=255, 219 not resident aliens)</u>						
Clin. Assistant	17 (49%)	18 (51%)	5 (19%)	21 (81%)	2 (8%)	24 (92%)
Clin. Associate	2 (10%)	19 (90%)	6 (30%)	14 (70%)	3 (15%)	17 (85%)
Clin. Professor	2 (40%)	3 (60%)	Same as URM		0 (0%)	5 (100%)
Lang. Lectr.	92 (56%)	73 (44%)	34 (24%)	105 (76%)	17 (12%)	122 (88%)
Master Teacher	16 (55%)	13 (45%)	7 (24%)	22 (76%)	6 (21%)	23 (79%)
<u>2001 to 2006 (N=153, 129 not resident aliens)</u>						
Clin. Assistant	5 (23%)	17 (77%)	2 (17%)	10 (83%)	0 (0%)	12 (100%)
Clin. Associate	5 (36%)	9 (71%)	Same as URM		1 (8%)	13 (92%)
Clin. Professor	1 (50%)	1 (50%)	Same as URM		0 (0%)	1 (100%)
Lang. Lectr.	51 (67%)	25 (33%)	16 (24%)	50 (76%)	7 (11%)	59 (89%)
Sr. Lang. Lectr.	2 (50%)	2 (50%)	2 (50%)	2 (50%)	1 (25%)	3 (75%)
Master Teacher	21 (58%)	15 (42%)	6 (19%)	26 (81%)	4 (13%)	28 (87%)

Note: self-reported ethnicity data was missing for 9 faculty in the 2001-06 cohort and 1 faculty in the 2007-12 cohort.

I.9. Analysis of contract faculty starting rank distribution

The null hypothesis that gender and starting rank were independent for the 2007-2010 hiring cohort was rejected using Fisher's Exact Test ($p < 0.001$). Gender and starting rank are associated, for instance, females were underrepresented in the clinical associate professor rank (2 observed versus 11 expected under independence) and overrepresented in the language lecturer rank (92 observed versus 83 expected under independence).

The null hypothesis that minority status and starting rank were independent for the 2007-2010 hiring cohort was not rejected using Fisher's Exact Test ($p = 0.78$). Minority status and starting rank were not associated during this period.

The null hypothesis that underrepresented minority status and starting rank were independent for the 2007-2010 hiring cohort was not rejected using Fisher's Exact Test ($p = 0.60$). Underrepresented minority status and starting rank were not associated during this period.

Part II: Gender and minority status versus current and starting salary

II.1. Description of tenured and tenure eligible faculty current salary distribution

Table 6 depicts average salary at each rank in 2012.

Table 6: Mean salary by gender, minority status, and salary (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u> (N=695)	<u>Male</u>	<u>Yes</u> (N=663)	<u>No</u>	<u>Yes</u> (N=663)	<u>No</u>
Assistant	87,900 (17,799)	89,962 (14,403)	91,298 (21,052)	86,496 (12,853)	92,997 (31,557)	87,158 (13,374)
Associate	106,390 (19,411)	107,914 (24,870)	110,151 (20,542)	106,392 (23,879)	113,642 (22,176)	106,430 (23,154)
Full	162,010 (38,967)*	172,432 (57,045)*	167,518 (48,450)	168,395 (53,553)	172,566 (45,977)	167,907 (53,455)
Named	193,796 (46,412)*	218,376 (50,640)*	203,110 (27,639)	215,547 (51,683)	†	†

Note: Salary data was missing for 6 tenure and tenure eligible faculty. Non-resident aliens and unreported ethnicity excluded from minority analyses. †Categories with <=5 faculty are not reportable due to confidentiality concerns. ***p<.01 **p<.05 *p<.10

Two-sample t-tests were run to compare the average salaries of faculty within each rank and category, making 12 tests in total. There remains an apparent trend towards significance¹⁰ upon comparing male and female full professor's salary (p=0.08) and named professor's salary (p=0.05). There is no longer a significant difference between under-represented minority and non-URM salaries at the associate professor rank (p=0.19).

¹⁰ Assuming these are 12 independent tests, it should be noted that there is a 71% chance of reporting at least one false positive with significance at a level of p≤.10, and a 34% chance of reporting two false positives.

II.2. Analysis of tenured and tenure eligible faculty current salary distribution

Prior studies have established that, when taken in isolation, gender appears to be a significant predictor of log salary. However, it was also found that after controlling for department, rank, and year of hire, gender is no longer a significant predictor of log salary. We repeated this regression to verify the continuation of this trend:

Table 7: Regression of log salary by gender, rank, department, and year of hire (Tenured and tenure eligible faculty)

	<u>2012</u>	<u>2010</u>	<u>2005</u>	<u>2000</u>
Intercept	11.90 (0.06)***	11.84 (0.06)	11.69 (0.06)***	11.55 (0.06)***
Female	-0.00 (0.02)	-0.01 (0.02)	-0.03 (0.02)	-0.02 (0.03)
<u>Rank vs. Professor</u>				
Assistant	-0.74 (0.03)***	-0.73 (0.03)***	-0.82 (0.03)***	-0.76 (0.03)***
Associate	-0.45 (0.02)***	-0.43 (0.02)***	-0.47 (0.02)***	-0.47 (0.02)***
Named	0.25 (0.03)***	0.27 (0.03)***	N.S.	N.S.
Department†	***	***	***	***
Year of Hire	0.01 (0.00)***	0.01 (0.00)***	0.01 (0.01)***	0.01 (0.00)***
R ²	0.74	0.73	0.68	0.70
N	672	663	586	513

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of variables, only the overall significance of the variable department is shown.

II.3. Description of tenured and tenure eligible faculty starting salary distribution

Table 8 displays mean starting salaries by rank and gender.

Table 8: Mean starting salary by gender, minority status, and underrepresented minority status (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2007 to 2012</u>						
Assistant	82,167 (17,465)	85,989 (16,390)	83,239 (20,696)	82,191 (13,894)	86,378 (29,400)	82,088 (14,030)
Associate without tenure	†	†	†	†	†	†
Associate with tenure	111,694 (19,465)	117,351 (21,297)	115,972 (22,962)	111,241 (20,867)	111,860 (24,729)	114,934 (21,435)
Full	195,000 (33,058)	190,902 (61,873)	†	†	†*	†*
Named	†	†	†	†	†	†
<u>2001 to 2006</u>						
Assistant	65,977 (18,337)	69,738 (13,696)	63,950 (8,534)**	70,247 (16,059)**	62,531 (9,098)*	69,857 (15,580)*
Associate without tenure	†	†	†	†	†	†
Associate with tenure	90,365 (24,584)	99,449 (13,416)	98,605 (28,192)	94,817 (15,881)	†	†
Full	139,679 (29,141)**	160,147 (38,616)**	160,396 (34,440)	154,017 (36,915)	†	†
Named	†	†	†	†	†	†

†Categories with <=5 faculty are not reportable due to confidentiality concerns. Significant differences between salaries within rank are noted ***p<.01 **p<.05 *p<.10.

Two-sample t-tests were run to compare the average salaries of faculty within each cohort, starting rank, and category, making 30 tests in total. There was an apparent trend towards significance¹¹ upon comparing male and female full professors' starting salary (p=0.016) and upon comparing minority and nonminority assistant professors' starting salary (p=0.03) for faculty in the early cohort. These tendencies are both reversed, though not to a statistically significant degree, in the recent cohort.

¹¹ Assuming these are 30 independent tests, it should be noted that there is a 96% chance of reporting at least one false positive with significance at a level of p<0.1, an 82% chance of reporting two false positives, a 59% chance of reporting three, and a 35% chance of reporting four.

II.4. Analysis of tenured and tenure eligible faculty starting salary distribution

A linear regression model on log starting salary was constructed to test the relationship between log starting salary and gender for new hires (Table 9). After controlling for starting rank, department, and year of hire, gender continues to not be a significant predictor of log starting salary. Instead, rank, department, and year of hire appear to explain the majority of the variance in log salary. In this analysis, 4 faculty members were missing starting salary information due to incomplete faculty records.

Table 9: Linear regression of log starting salary (Tenured and tenure eligible faculty)

	<u>Full model</u>
Intercept	11.82 (0.05)***
Female	0.01 (0.02)
<u>Starting Rank vs. Professor</u>	
Assistant	-0.80 (0.02)***
Associate without tenure	-0.59 (0.05)***
Associate with tenure	-0.43 (0.02)***
Named Professor	0.05 (0.05)
Department†	***
Year of hire	0.04 (0.00)***
R ²	0.88
N	445

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

To further explore the apparent trend toward significant differences in starting salary at lower ranks, a second linear regression (Table 10) was run identical to the one above, including only assistant and associate starting salaries for individuals hired from 2007 to 2012. This subset regression confirms the findings of the larger analysis.

Table 10: Linear regression of log starting salary (Assistant and Associate Professors, 2007 - 2012)

	<u>Full model</u>
Intercept	11.47 (0.06)***
Female	-0.00 (0.02)
<u>Starting Rank vs. AP with Tenure</u>	
Assistant	-0.40 (0.02)***
Associate without tenure	-0.19 (0.05)***
Department†	***
Year of hire	0.03 (0.01)***
R ²	0.79
N	171

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

II.5. Description of contract faculty salary distribution

Table 11 displays mean salaries by rank and gender for contract faculty.

Table 11: Mean salary by gender, minority status, and underrepresented minority status (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u> (N=341)	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Clin. Assistant	65,523 (9,162)	68,963 (8,300)	71,185 (6,156)	65,656 (8,597)	†††	†††
Clin. Associate	76,179 (11,801)**	86,641 (17,119)**	74,959 (12,647)**	86,717 (17,091)**	††† *	††† *
Clin. Professor	104,721 (20,087)	110,134 (23,291)	†††	†††	†††	†††
Lang. Lectr.	48,647 (2,644)	47,947 (2,773)	47,657 (3,164)*	49,037 (2,210)*	45,798 (2,631)**	48,978 (2,341)**
Sr. Lang. Lectr.	55,184 (5,530)	57,006 (10,000)	55,299 (3,316)	55,667 (7,842)	†††	†††
Master Teacher	63,838 (9,103)	68,037 (19,252)	61,794 (4,785)**	66,939 (16,463)**	61,294 (3,240)**	66,703 (16,078)**

NOTE: Non-resident aliens and unreported ethnicity excluded from minority analyses. †Categories with <=5 faculty are not reportable due to confidentiality concerns. ***p<.01 **p<.05 *p<.10

Within each rank and category, salaries were tested with a two-sample t-test, making 18 tests in all. In 8 of the tests, there are apparent trends towards significant differences,¹² the greatest differences appearing between genders for clinical associate professors (p=0.03), between minority and nonminority clinical associate professors (p=0.02) and master teachers (p=0.04), and between URM and non-URM master teachers (p=0.02) and language lecturers (p=0.02).

¹² Assuming these are 18 independent tests, it should be noted that there is an 85% chance of reporting at least one false positive with significance at a level of $p \leq .10$, a 55% chance of reporting two false positives, and a 27% chance of three false positives.

II.6. Analysis of contract faculty current salary distribution

Prior studies have established that, when taken in isolation, gender appears to be a significant predictor of log salary. In 2010, it was also found that after controlling for department, rank, and year of hire, gender remained a significant predictor of log salary. We repeated this regression to verify the continuation of this trend. In 2012, it appears that there is a decreased but still significant relationship between gender and log salary after controlling for rank, department, and year of hire.

Table 12: Regression of log salary by gender, rank, department, and year of hire (Contract faculty)

	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2012</u>
Intercept	10.65 (0.32)***	10.45 (0.06)***	10.83 (0.15)***	10.87 (0.12)***
Female	-0.00 (0.08)	0.00 (0.03)	-0.04 (0.02)**	-0.03 (0.01)**
Contract	-0.01 (0.25)	0.18 (0.05)		
Clin. Assistant			0.27 (0.05)***	0.25 (0.04)***
Clin. Associate			0.37 (0.05)***	0.34 (0.03)***
Clin. Professor			0.62 (0.06)***	0.50 (0.04)***
Lang. Lectr.			-0.09 (0.04)**	-0.07 (0.02)***
Master Teacher			0.26 (0.15)*	0.27 (0.12) **
Department†	N.S.	***	***	***
Year of hire	-0.04 (0.12)***	-0.02 (0.00)***	-0.01 (0.00)***	-0.01 (0.00)***
R ²	.69	.77	.81	.84
N	46	124	293	330

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of variables, only the overall significance of the variable department is shown.

II.7. Description of contract faculty starting salary distribution

Table 13 displays mean starting salaries by rank and gender.

Table 13: Mean starting salary by gender, minority status, and underrepresented minority status (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2007 to 2012</u>						
Clin. Assistant	62,616 (10,243)*	68,833 (10,728)*	†	†	†	†
Clin. Associate	†	†	76,417 (12,878)	83,642 (20,600)	†	†
Clin. Professor	†	†	Same as URM		†	†
Lang. Lectr.	44,990 (4,783)	45,927 (3,366)	44,188 (4,142)*	45,743 (3,924)*	42,900 (4,088)**	45,706 (3,904)**
Master Teacher	56,044 (3,355)	55,808 (1,921)	57,021 (2,615)	55,593 (2,774)	57,400 (2,645)	55,557 (2,716)
<u>2001 to 2006</u>						
Clin. Assistant	†	†	†	†	†	†
Clin. Associate	†	†	Same as URM		†	†
Clin. Professor	†	†	Same as URM		†	†
Lang. Lectr.	40,288 (3,817)*	42,169 (3,648)*	40,438 (3,076)	40,878 (3,642)	39,241 (3,085)	40,952 (3,521)
Sr. Lang. Lectr.	†	†	†	†	†	†
Master Teacher	53,181 (3,467)	59,755 (22,236)	53,050 (3,685)	56,692 (17,099)	†	†

Note: Citizenship/Ethnicity data was missing for 9 contract new hires from the 2001 to 2006 cohort and 2 from the 2007 to 2012 cohort †Categories with <=5 faculty are not reportable due to confidentiality concerns. Means are compared with a two sample t-test ***p<.01 **p<.05 *p<.10

Two-sample t-tests were run to compare the average salaries of faculty within each cohort, starting rank, and category, making 30 distinct tests (given the absence on non-underrepresented minority hires at the clinical ranks, three of the tests were not necessary). There was an apparent trend towards significance¹³ upon comparing male and female language lecturer starting salary for faculty in the early cohort (p=0.06). There was also an apparent significant difference between underrepresented minority and non-underrepresented minority language lecturer starting salary in the recent cohort (p=0.03).

¹³ Assuming these are 30 independent tests, it should be noted that there is a 98% chance of reporting at least one false positive with significance at a level of p≤0.1, a 90% chance of reporting two false positives, a 73% chance of reporting three, and a 51% chance of reporting four.

II.8. Analysis of contract faculty starting salary distribution

A linear regression model on log starting salary was constructed to test the relationship between log starting salary and gender for new contract faculty hires (Table 14). After controlling for starting rank, department, and year of hire, gender remained a significant predictor of log starting salary.

Table 14: Linear regression of log starting salary (Contract faculty, 2001-2012)

Intercept	10.67 (0.18)***
Female	-0.03 (0.01)**
<u>Starting Rank vs. Sen. Lang. Lectr.</u>	
Clin. Assistant	0.32 (0.07)***
Clin. Associate	0.59 (0.07)***
Clin. Professor	1.01 (0.10)***
Lang. Lectr.	-0.04 (0.06)
Master Teacher	0.23 (0.16)***
Department†	††† ***
Year of hire	-0.00 (0.00)**
R ²	0.72
N	442

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

A second linear regression model was constructed to control for highest degree attained at the time of hire. Due to incomplete data, this second analysis was restricted only to the cohort of hires from 2007 to 2012. After controlling for starting rank, department, highest degree at hire, and year of hire, gender no longer is significant predictor of log starting salary.

Table 15: Linear regression of log starting salary (Contract faculty, 2007-2012)

Intercept	10.73 (0.14)***
Female	- 0.01 (0.01)
<u>Starting Rank vs. Master Teacher</u>	
Clin. Assistant	0.33 (0.10)***
Clin. Associate	0.46 (0.09)***
Clin. Professor	0.78 (0.11)***
Lang. Lectr.	-0.12 (0.08)
<u>Degree Attained vs. "No Graduate Degree"</u>	
PhD, JD, MD	0.08 (0.02)***
MA, MFA, MS	0.04 (0.02)***
Department†	††† ***
Year of hire	0.01 (0.00)***
R ²	0.91
N	255

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

Part III: Tenured and tenure eligible career progression

III.1. Descriptive statistics of tenure results of tenure-eligible new hires

Out of the 115 tenure-eligible hires from 2001 to 2006, all individuals have been denied tenure, granted tenure, or have resigned as of 2012. The null hypothesis that gender and tenure outcome are independent was not rejected using the chi-square statistic ($\chi^2=0.19$, $p=0.91$). Gender and tenure outcome are not associated. The similar distribution of outcomes for male and female tenure-track faculty in this cohort are visually depicted in figures 6 and 7:

Figure 6: 2012 Status of female tenure eligible new hires (2001 to 2006)

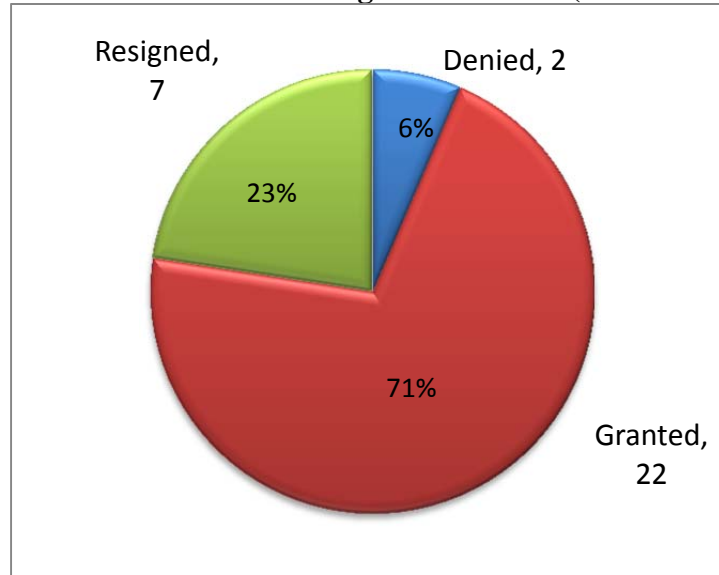
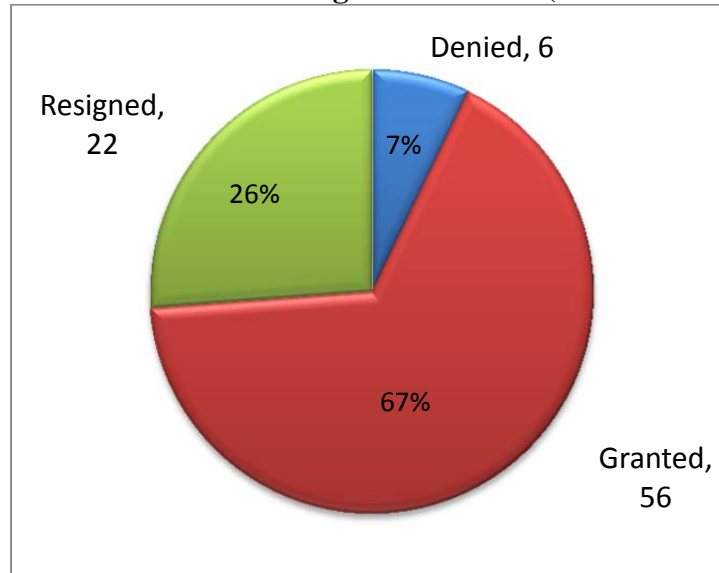


Figure 7: 2012 Status of male tenure eligible new hires (2001 to 2006)



Part IV: Gender and minority status versus non-salaried opportunities

IV.1. Internal research support (Tenured and tenure eligible faculty)

The proportion of tenure and tenure eligible faculty receiving internal research support is shown in Table 16, and analysis of the amount of support in Table 17. Support is defined as a transfer into an internal fund managed by or for the faculty member.

Table 16: Received internal research support by gender and minority status (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
2012	160 (75%)	265 (56%)	70 (64%)	339 (63%)	40 (74%)	369 (62%)
2010	149 (77%)	256 (53%)	71 (66%)	332 (59%)	42 (81%)	361 (58%)
2005	107 (70%)	213 (49%)	57 (65%)	263 (52%)	38 (76%)	282 (52%)
2000	72 (59%)	143 (37%)	36 (51%)	179 (40%)	27 (64%)	188 (40%)

Gender and underrepresented minority status are both associated with whether or not a tenured or tenure eligible faculty member receives support, with female faculty being 2.4 times more likely to receive support ($\chi^2=23.51$, $p<.0001$) and underrepresented minority faculty being 1.7 times more likely to receive support ($\chi^2=3.14$, $p=.08$). Minority status is not associated with receiving research support ($\chi^2=0.09$ $p=0.76$).

Table 17: Linear regression on log internal research support (Tenured and tenure eligible faculty)

	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2012</u>
Intercept	8.62 (0.21)***	8.64 (0.16)***	9.18 (0.15)***	9.02 (0.18)***
Female	0.06 (0.09)	0.00 (0.06)	-0.01 (0.06)	-0.03 (0.06)
<u>Rank vs. Professor</u>				
Assistant	-0.87 (0.13)***	-0.99 (0.09)***	-0.72 (0.09)***	-0.69 (0.10)***
Associate	-0.61 (0.13)***	-0.49 (0.08)	-0.32 (0.07)***	-0.33 (0.08)***
Named			0.73 (0.09)***	0.57 (0.10)***
Department†	*	***	***	***
Year of hire	0.02 (0.01)***	0.03 (0.00)***	0.02 (0.00)***	0.02 (0.00)***
R ²	0.42	0.45	0.49	0.47
N	215	320	405	420

Notes: Standard errors are in parentheses. *** $p<.01$ ** $p<.05$ * $p<.10$

†Due the number of dummy variables, only the overall significance of the variable department is shown.

Gender is again not a significant predictor of the amount of log internal research support after considering rank, department, and year of hire.

IV.2. Internal research support (Contract faculty)

The proportion of tenure and tenure eligible faculty receiving internal research support is shown in Table 18, and analysis of the amount of support in Table 19. Support is defined as a transfer into an internal fund managed by or for the faculty member.

Table 18: Received internal research support by gender and minority status (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
2012	149 (86%)	136 (79%)	52 (83%)	208 (84%)	26 (87%)	234 (83%)
2010	129 (87%)	112 (77%)	56 (84%)	184 (81%)	28 (82%)	212 (82%)
2005	46 (74%)	29 (47%)	20 (69%)	55 (58%)	7 (77%)	68 (59%)
2000	4 (17%)	5 (22%)	3 (20%)	6 (19%)	1 (50%)	8 (18%)

In 2012, gender is again associated with whether or not a contract faculty member receives support, with female faculty being 1.6 times as likely to receive support ($\chi^2=3.36$, $p=0.07$). However, as before, this relationship is no longer significant upon controlling for division and using Fisher's Exact Test ($p=0.20$). Neither minority nor underrepresented minority status is associated with receiving research support ($\chi^2=0.06$, $p=0.80$, $\chi^2=0.23$, $p=0.63$).

Table 19: Linear regression on log internal research support (Contract faculty)

	<u>2005</u>	<u>2010</u>	<u>2012</u>
Intercept	7.06 (0.08)***	7.68 (0.37)***	7.67 (0.33)***
Female	0.00 (0.06)	-0.03 (0.05)	-0.03 (0.04)
Department†	***	***	***
Year of hire	-0.05 (0.01)***	-0.02 (0.00)***	-0.02 (0.00)***
R ²	0.76	0.55	0.54
N	75	241	274

Notes: Standard errors are in parentheses. *** $p<.01$ ** $p<.05$ * $p<.10$

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

In 2012 gender is again not a significant predictor of the amount of log internal research support after considering rank, department, and year of hire.

IV.3. Instructional Load (Tenured and tenure eligible faculty)

Table 20 shows that there is a tendency toward significance in the difference between the number of courses assigned to male and female faculty, and in the difference between the number of students taught by underrepresented minority and non-underrepresented minority faculty. Table 21 shows that gender is not a significant predictor of the number of students taught after considering rank, department, and year of hire.

Table 20: Courses assigned with enrollments by gender, minority status (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Number of Courses	2.54 (1.94)*	2.25 (1.72)*	2.57 (1.94)	2.36 (1.78)	2.62 (1.22)	2.38 (1.15)
Number of Students	52.30 (51.94)**	63.37 (89.11)**	57.44 (63.93)	62.24 (83.71)	51.36 (64.92)	62.35 (81.98)

Note: Standard deviations are in parentheses. Significant differences in means are indicated by: ***p<.01 **p<.05 *p<.10

Table 21: Regression on log number of students (Tenured and tenure eligible faculty)

	<u>2010</u>	<u>2012</u>	<u>2012</u>
Intercept	3.78 (0.08)***	3.11 (0.11)***	3.42 (1.53)**
Female	-0.14 (0.09)	0.02 (0.14)	0.01 (0.14)
Year of Hire	-0.01 (0.00)***	-0.02 (0.01)***	-0.02 (0.01)***
<u>Rank vs. Professor</u>			
Assistant	0.24 (0.14)*	0.11 (0.20)	0.09 (0.19)
Associate	0.24 (0.11)**	0.45 (0.17)***	0.38 (0.16)**
Named	-0.57 (0.14)***	-0.51 (0.20)**	-0.20 (0.20)
Department†			**
R ²	0.07	0.04	0.22
N	554	676	676

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

IV.4. Instructional Load (Contract faculty)

Table 22 shows that females, on average, have fewer students than their male contract faculty counterparts. This relationship is explored further in the regression that follows. Female contract faculty teach significantly fewer students, on average, in the 2010 academic year, however, when the log of students is taken and these means are compared, there is no difference indicating that a few courses with large enrollments may be biasing these means. There are no significant differences in the number of courses or number of students taught when faculty are grouped by minority status.

Table 23 shows that gender is not a significant predictor of the number of students taught after considering rank, department, and year of hire.

Table 22: 2010 mean course assignments and course enrollments by gender, minority status, and salary (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Number of Courses	4.46 (2.38)*	5.02 (3.31)*	5.17 (2.87)	4.53 (2.65)	4.88 (1.60)	4.64 (2.79)
Number of Students	82.48 (90.84)***	121.5 (150.2)***	102.0 (107.9)	100.7 (127.8)	99.14 (105.4)	101.2 (125.7)

Note: Standard deviations are in parentheses. Significant differences in means are indicated by: ***p<.01 **p<.05 *p<.10

Table 23: Regression on log number of students (Contract faculty)

	<u>2012</u>
Intercept	0.17 (1.25)
Female	-0.05 (0.14)
Year of Hire	-0.01 (0.01)
<u>Rank vs. Sen. Lang. Lectr.</u>	
Clinical Assistant Professor	-0.01 (0.41)
Clinical Associate Professor	-0.76 (0.36)**
Clinical Professor	-0.51 (0.47)
Language Lecturer	0.28 (0.25)
Master Teacher	4.05 (1.25)***
Department†	***
R ²	0.33
N	330

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

IV.5. Faculty Retention

17 faculty members received outside offers in the 2011-2012 academic year. All of these outside offers were followed up by a counter offer from NYU, and all of the faculty were retained. Table 24 displays counts by gender, minority status, and rank.

Table 24: Outside Offers & Counter Offers

	Outside Offer	2012 Counter Offer Issued	Counter Offer Accepted	Outside Offer	2010 Counter Offer Issued	Counter Offer Accepted
<u>Gender</u>						
Female	6	6	6	6	4	3
Male	11	11	11	10	7	5
<u>Minority (excluding nonresident aliens)</u>						
Yes	5	5	5	7	6	4
No	11	11	11	9	5	4
<u>URM (excluding nonresident aliens)</u>						
Yes	3	3	3	0	0	0
No	13	13	13	16	11	8
<u>Rank</u>						
Assistant Professor	3	3	3	4	2	1
Associate Professor	5	5	5	7	6	4
Professor	9	9	9	3	1	1
Named Professor	0	0	0	2	2	2

IV.6. Juried Awards

Table 25 displays counts of nominations for 15 external awards programs in the 2010 and 2012 academic years. Awards included topic specific awards, early career awards, and major national research awards.¹⁴ Faculty who were nominated for more than one award are counted multiple times. If there were multiple nominees for an award, then all nominees are included in these counts. As the majority of these award programs reside in the tenure eligible ranks in the sciences, a distribution by gender, minority, and rank in the sciences from the 2012 cross section is shown for comparison.

Table 25: External Award Nominations

	2009-10	2011-12	Total	Percent	Percent in Sciences, 2012
<u>Gender</u>					
Female	3	3	6	16%	16%
Male	17	14	31	84%	84%
<u>Minority</u>					
Yes	2	4	6	18%	14%
No	17	10	27	82%	86%
<u>Rank</u>					
Assistant Professor	9	14	23	62%	18%
Associate Professor	1	1	2	5%	19%
Professor	5	2	7	19%	52%
Named Professor	1	0	1	3%	11%
Master Teacher	1	0	1	3%	0%
Emeritus	3	0	3	8%	0%

17% of nominations were of female faculty, and 19% of awards to non-resident-aliens were of minority faculty. 0% were underrepresented minority. 64% of nominations were of faculty at the assistant professor rank, and 17% were of faculty at the professor rank.

Fisher's exact tests comparing nominees against the 2012 faculty show that there is again no association between gender and receiving a nomination ($p=0.75$), minority status and receiving a nomination ($p=0.99$), and URM status and receiving a nomination ($p=0.99$).

¹⁴ The external awards programs include: Andrew Mellon New Directions Fellowship, Blavatnik Awards for Young Scientists, Dana Foundation Program in the Neuroimmunology of Brain Infections and Cancers, Ellison Medical Foundation, Holberg Prize, James S. McDonnell Foundation, Mellon Foundation Emeritus Fellowship Program, National Endowment for the Humanities Awards, National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT), National Science Foundation Major Research Instrumentation Award, Pew Scholars Program in the Biomedical Science, Packard Fellowship for Science & Engineering, Searle Scholars Program, Sloan Research Fellowship, and the William T. Grant Scholars Program

Table 26: Golden Dozen Nominations

	2009-10	2011-12	Total	Percent
<u>Gender</u>				
Female	5	7	12	50%
Male	7	5	12	50%
<u>Minority</u>				
Yes	1	1	2	9%
No	10	10	20	91%
<u>Underrepresented Minority</u>				
Yes	0	1	1	5%
No	11	10	21	95%
<u>Rank</u>				
Assistant Professor	0	2	2	8%
Associate Professor	4	2	6	25%
Professor	4	4	8	33%
Clinical Associate Professor	2	0	2	8%
Language Lecturer	2	1	3	13%
Senior Language Lecturer	0	3	3	13%

Of the dozen faculty who received the Golden Dozen award in 2012, 5 were male, and 7 were female, 1 was an underrepresented minority, 8 were tenured or tenure eligible, and 4 were not tenure eligible.

Fisher's exact tests comparing nominees against the 2012 faculty show no association between gender and receiving a Golden Dozen award ($p=0.15$), minority status and receiving an award ($p=0.70$), and URM status and receiving an award ($p=0.99$).

IV.7. Offers of Employment to Tenure and Tenure Track Candidate

Table 27 displays offers of employment, made and accepted, for a six year hiring cohort window starting in 2007, with detail by gender, division, and starting rank.

Table 27: Offers of Employment, Made and Accepted, 2007-2012

	Made	Accepted	Yield
<u>Gender</u>			
Female	111	79	71%
Male	230	143	62%
<u>Division</u>			
Humanities	133	100	75%
Social Sciences	103	67	65%
Science	105	55	52%
<u>Starting Rank</u>			
Assistant Professor	185	130	70%
Associate Professor	77	46	60%
Professor	79	46	58%

The null hypothesis that gender and offer acceptance are independent was again not rejected with the chi-square statistic ($\chi^2=2.67$, $p=0.102$). However, since p was very near a value of 0.10, cross sectional analyses were performed, examining offer acceptance by rank and division.

The null hypothesis that gender and offer acceptance are independent across the entire collection of offers, controlling for division and rank was not rejected with the Breslow-Day Test for Homogeneity of the Odds Ratios ($\chi^2=9.55$, $p=0.30$) Gender and acceptance are independent.

Bibliography

- Knapp, L. G. (2010). *Employees in Postsecondary Institutions, Fall 2009, and Salaries of Full time Instructional Staff, 2009-10*. Washington, DC: U.S. Department of Education.
- National Center for Education Statistics. (2008). *1999 and 2004 National Study of Postsecondary Faculty*. Washington DC: U.S. Department of Education.
- National Center for Education Statistics. (2012). *Digest of Education Statistics: 2011*. Washington, DC: U.S. Department of Education.



NEW YORK UNIVERSITY

**Arts and Science
Faculty Equity Study, 2012**

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Arts and Science Faculty Equity Study, 2012

Overview of the Faculty Equity Study, 2012

This document is the fifth in a series of studies released by this office exploring equity issues among our full time faculty relating to both gender and race. The prior studies found a number of significant relationships between gender, race, and various aspects of the career paths experienced by our faculty. This update aims to explore these relationships more deeply and to continue to monitor other areas previously found to be equitable to confirm that no systemic bias has emerged.

Previous findings included significant correlations of both gender and minority status with rank in the tenure track. This appeared to be a persistent consequence of hiring and tenure patterns of the prior century. **Part I** of this study reviews this distribution and the impact of hiring practices in recent years on the under-representation of women and minorities in higher ranks.

Previous studies found that, when rank, experience, and department were taken into account, gender and minority status did not appear to be contributing factors to salary (or starting salary). **Part II** of this study repeats these prior analyses.

Analysis of career progression in the tenure track showed only one relationship: women who resigned tended to do so one year later than men. The percentage of tenure track hires who ultimately were granted tenure was not found to be related to gender or minority status. **Part III** of this study repeats prior analyses to confirm no negative systemic biases have emerged.

Various other tests have been performed on other aspects of faculty experience, to determine if they were affected by gender or minority status. **Part IV** of this study repeats inquiry into the existence and level of internal research support, the distribution of internal juried awards, housing allocation decisions, and teaching assignments, and adds an inquiry into acceptance rates of offers of employment to potential tenure and tenure eligible faculty.

Description of the data used in this study

To study the current state of our faculty, a cross-sectional dataset was constructed for all full time faculty who were in payroll records with primary appointments in Arts & Science, the Courant Institute, and the Institute of Fine Arts for any part of Fiscal Year 2011-2012. These data were subdivided into tenure and tenure eligible faculty (assistant professors, associate professors, full professors and named professors) and contract faculty (clinical faculty, professors without tenure, language lecturers and master teachers). As per previous studies, post-doctoral teaching fellows, student instructors, visiting, and adjunct faculty were not included. A new category of faculty, the post-

doctoral lecturer, has now also been excluded. Faculty who were hired at the rank of full professor but were considered not tenure eligible are again included with clinical professors in studies of rank distribution, and remain excluded from salary studies. In addition to unit, rank, gender, ethnicity, and salary, the cross section included data elements such as research support, teaching assignments, and retention and nominations data.

References to 2000, 2005, and 2007 data refer to the data sets and results for those fiscal years in the Arts & Science Faculty Equity Study from 2007. References to 2010 data refer to the data sets and results from the 2010 study.

To study hiring and career progression in the tenure track, a dataset of all tenure and tenure eligible faculty hires at the rank of assistant, associate (with or without tenure), full, or named professor between 6/1/2000 and 5/31/2012 was assembled. These data were subdivided into two six year periods: individuals hired between 6/1/00 and 5/30/06 for whom the six year tenure cycle should have completed, and those hired between 6/1/06 and 5/31/12 for whom the cycle might have not completed. Faculty who were hired at the rank of professor but were not tenure eligible (N=15) were excluded from all new hire analyses.

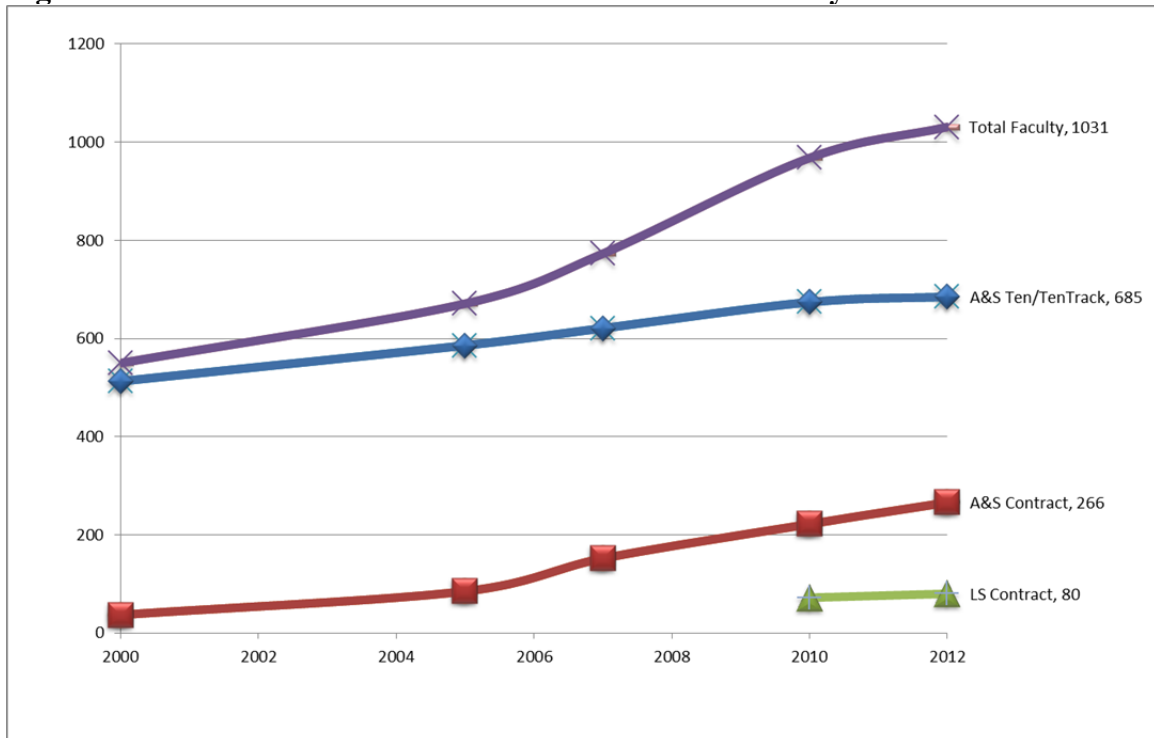
To study offers in the tenure track, a dataset of all tenure/ tenure eligible faculty offers for hires with start dates between 6/1/2006 and 5/31/2012 was assembled.

To study hiring in the non-tenure track, a dataset of all non- tenure eligible faculty hires between 6/1/2000 and 5/31/2012 was assembled. These data were subdivided into two six year periods: those hired between 6/1/00 and 5/30/06, and those hired between 6/1/06 and 5/31/12, to parallel the tenure-eligible faculty analysis. As per previous studies, post-doctoral teaching fellows, student instructors, visiting faculty, and adjunct faculty were not included.

Descriptive statistics of the 2012 tenured and tenure eligible cross-section

The tenured and tenure eligible faculty have grown in number by 33.5% over the past twelve years, with the 2012 cohort numbering 685 individuals. Figure 1 shows this growth in comparison to Arts and Science total faculty, contract faculty, and Liberal Studies faculty. Note that both full time predoctoral and postdoctoral faculty appointments are excluded from the contract faculty total, and that all full time predoctoral teaching positions had been phased out over this period in conjunction with the financial aid reforms of the Graduate School of Arts and Science. Note also that the Liberal Studies faculty was included for the first time in 2010.

Figure 1: Arts & Science Tenure Track and Contract Faculty Growth



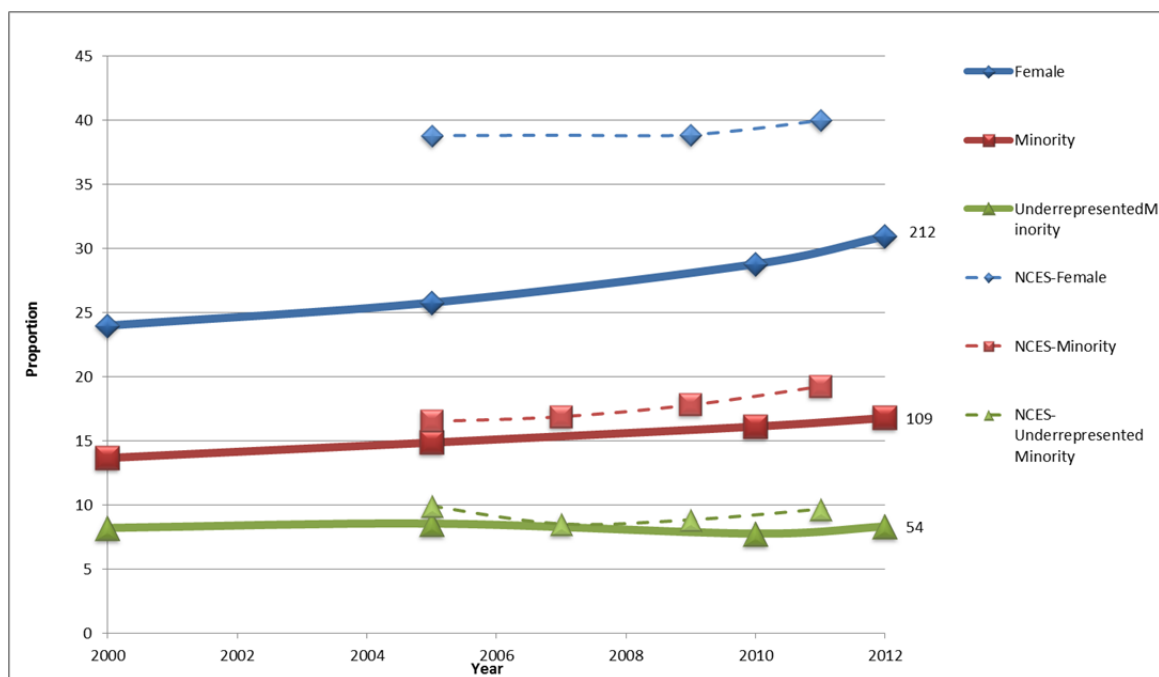
Over this same period, student populations have grown. In Academic Year 1999-2000, Arts and Science had 9,356 individuals registered in its degree programs and had 17,596 distinct individuals enrolled in its courses.¹ These numbers grew to 13,705 registered degree candidates (a growth of 46.5%) and 23,971 individuals in its courses (a growth of 36.2%).²

¹ These 1999-00 counts were drawn from the NYU Student Records Dashboard in March 2013 to capture all students registered in programs GARTS, UARTS, and UACER or enrolled in courses in the G, V, or A series.

² These 2011-12 counts were drawn from the NYU Student Records Dashboard in March 2013 to capture all students registered in programs GARTS, UARTS, UFGLS, and UFLSP or enrolled in courses in the GA, UA, or UF series.

Figure 2 visually depicts the proportion of female, minority³, and underrepresented minority⁴ faculty over this period. The proportion of female faculty has increased at a steady rate from 24.0% to 30.9%. The proportion of minority faculty⁵ has also increased from 13.7% to 16.8% of domestic faculty with reported race or ethnicity information. The proportion of faculty in underrepresented minorities has recovered from a recent dip, ending at 8.3% of faculty. To place these proportions in context, the National Center for Education Statistics reports⁶ that, as of Fall 2011, 40.0% of all faculty with professorial titles at Title IV degree-granting institutions were female, 19.2% were minority, and 9.7% were underrepresented minorities. (National Center for Education Statistics, 2012) (Title IV institutions include 2 and 4-year, private and public, universities and colleges.)

Figure 2: Proportion female, minority, underrepresented minority (tenured and tenure eligible faculty, n=685 for gender proportion, 650 for minority/URM)



³ Minority faculty include faculty who self-identify as Asian/Pacific Islander, Black, Native American, or Hispanic, or partially Asian/Pacific Islander, Black, Native American, or Hispanic. Data is from Human Resources records.

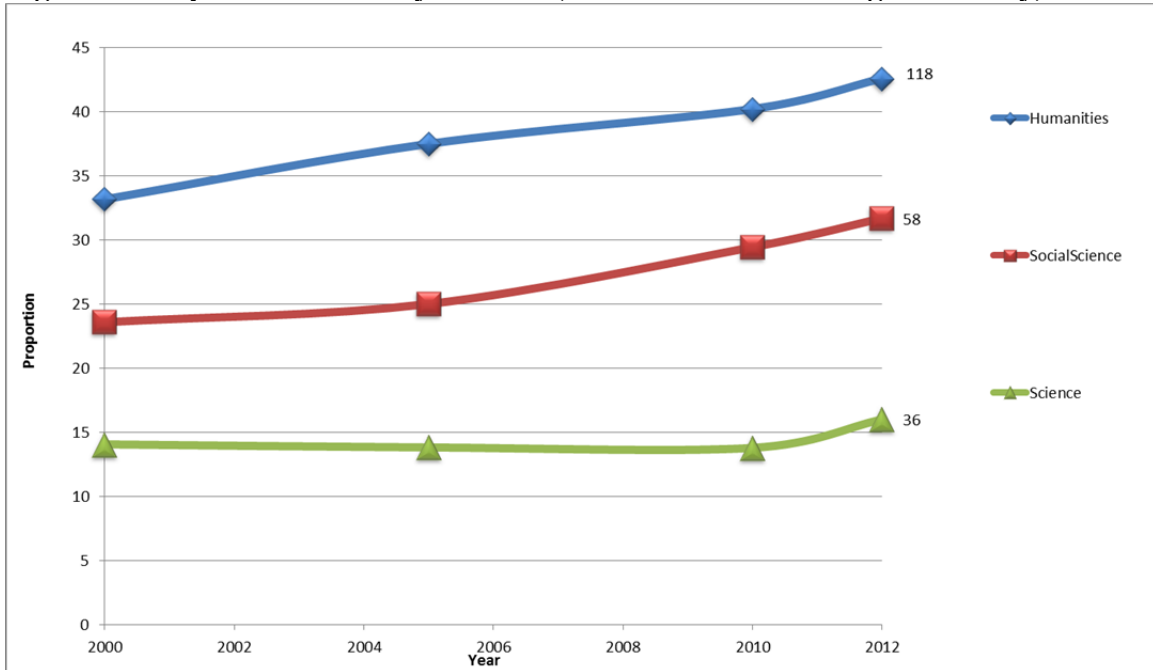
⁴ Underrepresented minority faculty include faculty who self-identify as Black, Native American, or Hispanic, or partially Black, Native American, or Hispanic. Data is from Human Resources records.

⁵ Minority and underrepresented minority faculty proportions are calculated excluding race/ethnicity unknown and non-resident aliens.

⁶ For data after 2007, see NCES 2012 Table 264. Data for Professors, Associate Professors, and Assistant Professors only. Note that these statistics reflect proportions for all degree-granting institutions participating in Title IV federal financial aid programs. Data for 2005 is drawn from “Employees in Postsecondary Institutions, Fall 2009, and Salaries of Full-Time Instructional Staff, 2009-10”, p.12 (Knapp, 2010)

Figure 3 visually depicts the proportion of female faculty by division over this same period. The proportions of female faculty in the humanities and social sciences have increased from 33.2% to 42.6% and 23.6% to 31.7% respectively. The proportion of female faculty in the sciences has grown in the past two years to 16.0% after having been steady around 14% for the past decade.

Figure 3: Proportion female by division (tenured and tenure eligible faculty)

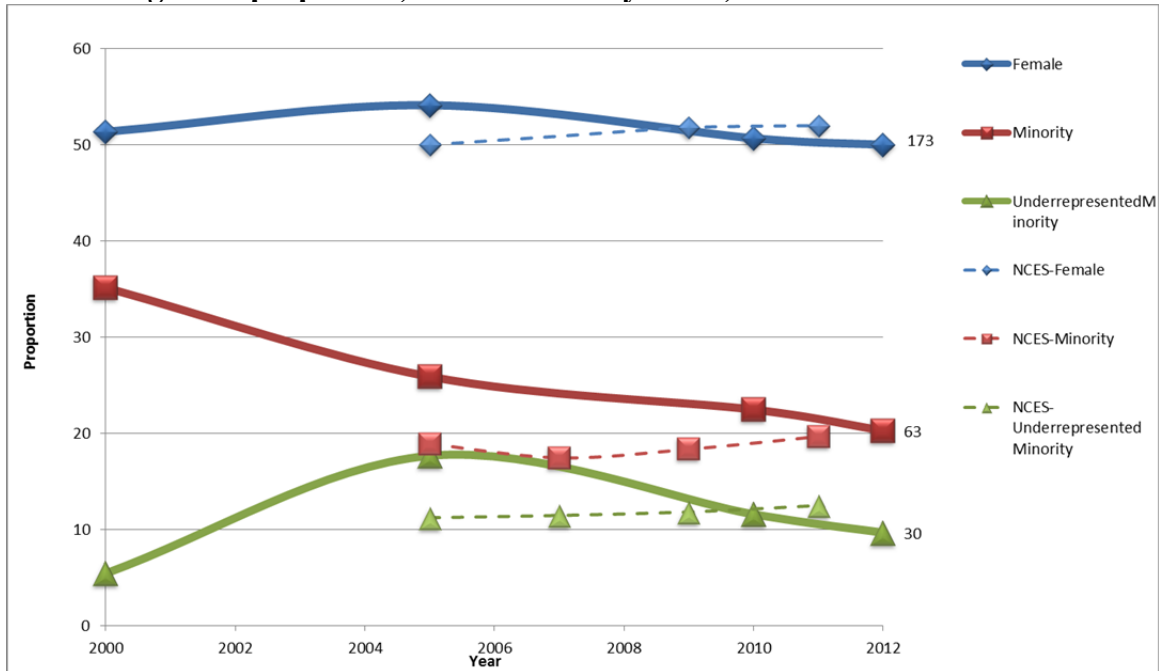


The proportion of minority faculty by division for tenure and tenure eligible faculty is 16.9% in humanities, 18.9% in the social sciences, and 15.0% in the sciences. The proportion of underrepresented minority faculty by division is 10.3% in humanities, 10.9% in the social sciences, and 3.7% in the sciences. All of these proportions have improved moderately since first measured in 2010.

Descriptive statistics of the 2012 contract faculty cross-section

The Arts & Science contract faculty has grown dramatically in number over the past decade, growing from 37 to 346 individuals. A significant portion of the growth is from the addition of the Liberal Studies Program to Arts & Science, which is staffed entirely with contract faculty and accounts for 80 faculty members in 2012. Figure 4 visually depicts the proportion of female, minority, and underrepresented minority faculty over this period. The proportion of female faculty has remained flat around 50%. The proportion of minority faculty⁷, initially high, has dropped to 20% in 2012. The proportion of faculty in underrepresented minorities has been declining and is now 10%. To place these proportions in context, the National Center for Education Statistics reports⁸ that, as of Fall 2011, 52% of all faculty without professorial titles at Title IV degree-granting institutions were female, 20% were minority, and 12% were underrepresented minorities.

Figure 4: Proportion female, minority, underrepresented minority (contract faculty, n=346 for gender proportion, 311 for minority/URM)

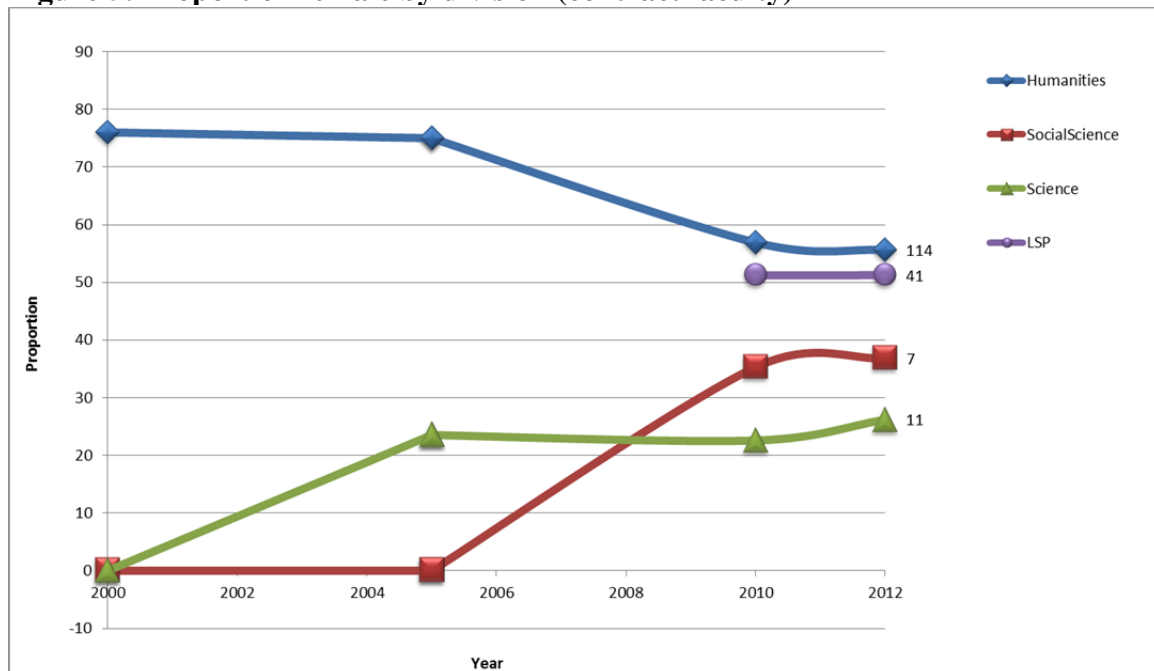


⁷ Minority and underrepresented minority faculty proportions are calculated excluding race/ethnicity unknown and non-resident aliens.

⁸ For data after 2007, see NCEs 2012 Table 264. Data for Instructors, Lecturers, and Other Faculty only. Note that these statistics reflect proportions for all degree-granting institutions participating in Title IV federal financial aid programs. Data for 2005 is drawn from “Employees in Postsecondary Institutions, Fall 2009, and Salaries of Full-Time Instructional Staff, 2009-10”, p.12 (Knapp, 2010)

Figure 5 visually depicts the proportion of female contract faculty by division over this same period. The proportion of female faculty in the humanities, initially high, has dropped to 56%. In 2012, there were 51% female contract faculty in Liberal Studies. The Social Science contract faculty has grown from 5 male faculty in 2005 to 18 total faculty in 2012 (37% female). In Science, the proportion of female faculty has increased from 23% to 26%.

Figure 5: Proportion female by division (contract faculty)



The proportion of minority faculty by division is 21% in humanities, 26% in the social sciences, 19% in the sciences, and 17% in liberal studies. The proportion of underrepresented minority faculty by division is 9% in humanities, 16% in the social sciences, 5% in the sciences, and 12% in LSP. All of these proportions have dropped slightly since the 2010 study.

Descriptive statistics of the faculty hiring cohorts

Over the past twelve years, Arts and Science has hired 449 tenured or tenure eligible faculty members. Of these, 157 have been female and 292 have been male. Of the 398 non-resident aliens with reported minority status, 76 have been minorities and 37 have been underrepresented minorities. Counts of new hires by cohort are presented in Table 2. From 2001 to 2006, 31% of new hires were female, while from 2007 to 2012, 39% were female. From 2001 to 2006, 15% of new non-resident-alien hires were minorities, while from 2007 to 2012, 23% were minorities. From 2001 to 2006, 8% of new non-resident-alien hires were underrepresented minorities, while from 2007 to 2012, 11% were underrepresented minorities.

Over the past six years, Arts and Science has recorded 341 offers to potential tenured or tenure eligible faculty members. Of these, 111 (33%) have been to females and 230 have been to males. Given the missing data on self-reported ethnicities of faculty who declined offers, analysis of this data set by ethnicity is not possible at this time.

Over the past twelve years, Arts and Science has hired 408 contract faculty members. Of these, 214 have been female and 194 have been male. Of the 348 non-resident aliens with reported minority status, 79 have been minorities and 41 have been underrepresented minorities. Counts of new hires by cohort are presented in Table 5. From 2001 to 2006, 56% of new hires were female, while from 2007 to 2012, 51% were female. From 2001 to 2006, 21% of new non-resident-alien hires were minorities, while from 2007 to 2012, 24% were minorities. From 2001 to 2006, 10% of new non-resident-alien hires were underrepresented minorities, while from 2007 to 2012, 13% were underrepresented minorities.

Part I: Gender and minority status versus current and starting rank

I.1. Description of tenured and tenure eligible faculty current rank distribution

Table 1 depicts the number and percentage of faculty per rank in 2012, and prior years.

Table 1: Gender and minority status by rank (tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2012 (N=701)</u>						
Assistant	45 (38%)	73 (62%)	24 (21%)	93 (79%)	7 (6%)	110 (94%)
Associate	69 (41%)	99 (59%)	40 (24%)	124 (76%)	20 (12%)	144 (88%)
Full+Named	98 (25%)	301 (75%)	47 (12%)	348 (88%)	28 (7%)	367 (93%)
Full	78 (25%)	235 (75%)	40 (13%)	269 (87%)	25 (8%)	284 (92%)
Named	20 (23%)	66 (77%)	7 (8%)	79 (92%)	3 (3%)	83 (97%)
<u>2010 (N=674)</u>						
Assistant	41 (37%)	69 (63%)	26 (24%)	84 (76%)	6 (6%)	104 (94%)
Associate	62 (37%)	107 (63%)	42 (25%)	125 (75%)	20 (12%)	147 (88%)
Full+Named	91 (23%)	304 (77%)	40 (10%)	354 (90%)	26 (7%)	368 (93%)
Full	70 (23%)	235 (77%)	32 (11%)	272(89%)	22 (7%)	282 (93%)
Named	21 (23%)	69 (77%)	8 (10%)	82(90%)	4 (4%)	86 (96%)
<u>2005 (N=586)</u>						
Assistant	27 (27%)	73 (73%)	21 (21%)	79 (79%)	8 (8%)	92 (92%)
Associate	53 (38%)	88 (62%)	31 (22%)	110 (78%)	19 (13%)	122 (87%)
Full+Named	71 (21%)	274 (79%)	35 (10%)	310 (90%)	23 (7%)	322 (93%)
<u>2000 (N=513)</u>						
Assistant	33 (41%)	47 (59%)	22 (27%)	58 (73%)	9 (11%)	71 (89%)
Associate	34 (30%)	80 (70%)	17 (15%)	97 (85%)	12 (11%)	102 (89%)
Full+Named	56 (18%)	263 (82%)	31 (10%)	288 (90%)	21 (7%)	298 (93%)

Note: self-reported ethnicity data was missing for 3 faculty in the 2010 cross section, and 9 faculty in the 2012 cross section.

I.2. Analysis of tenured and tenure eligible faculty current rank distribution

Tests against prior year cross sections have established that there are statistically significant relationships for gender and minority status, (but not underrepresented minority status) with rank, and that all three categories are underrepresented at the full professor rank. These relationships persist in the 2012 cross section:

The null hypothesis that gender and rank are independent was again rejected with the chi-square statistic ($\chi^2=18.61$, $p<0.001$). Gender and rank are associated, for instance, females are underrepresented in the professor rank (98 females are observed to be full or named professors compared to the 123 expected under independence).

The null hypothesis that minority status and rank are independent was again rejected with the chi-square statistic ($\chi^2=16.03$, $p<0.01$). Minority status and rank are associated, for instance, minority faculty are underrepresented in the professor rank (47 are observed to be full or named professors compared to the 65 expected under independence).

The null hypothesis that underrepresented minority status and rank are independent was again not rejected with the chi-square statistic ($\chi^2=6.83$, $p<0.08$). However, since $p<0.1$ these results may show a trend towards significance, and the relationship should continue to be monitored in the future.

The study of processes that affect the persistence of these relationships – namely hiring and career progression – will be further examined in the following pages and in Part III.

I.3. Description of tenured and tenure eligible faculty hiring cohorts

Starting rank is analyzed for association with gender, minority status, and underrepresented minority status⁹ for an understanding of each hiring cohort.

Table 2: Starting rank by hiring cohort, by gender and minority status (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2007 to 2012 (N=221, 202 not resident aliens)</u>						
Assistant	51 (40%)	75 (60%)	26 (23%)	86 (77%)	9 (8%)	103 (92%)
Associate without tenure	5 (50%)	5 (50%)	4 (40%)	6 (60%)	2 (20%)	8 (80%)
Associate with tenure	21 (55%)	17 (45%)	12 (39%)	19 (61%)	8 (26%)	23 (74%)
Full	8 (19%)	34 (81%)	3 (8%)	35 (92%)	2 (5%)	36 (95%)
Named	1 (20%)	4 (80%)	1 (20%)	4 (80%)	0 (0%)	5 (100%)
<u>2001 to 2006 (N=228, 196 not resident aliens)</u>						
Assistant	29 (26%)	82 (74%)	16 (17%)	77 (83%)	8 (9%)	85 (91%)
Associate without tenure	2 (50%)	2 (50%)	1 (33%)	2 (67%)	1 (33%)	2 (67%)
Associate with tenure	14 (42%)	20 (59%)	8 (24%)	26 (86%)	4 (12%)	30 (88%)
Full	24 (35%)	44 (65%)	5 (8%)	56 (92%)	3 (5%)	58 (95%)
Named	2 (18%)	9 (82%)	0 (0%)	11 (100%)	0 (0%)	11 (100%)

Note: self-reported ethnicity data was missing for 4 faculty in the 2001-06 cohort cross section.

I.4. Analysis of tenured and tenure eligible starting rank distribution, 2007 to 2010

The null hypothesis that gender and starting rank are independent for the 2007-2010 hiring cohort was rejected using Fisher's Exact Test ($p < 0.01$). Gender and starting rank are associated, for instance, females are underrepresented in the professor rank (8 observed versus 16 expected under independence) and overrepresented in the associate professor with tenure rank (21 observed versus 15 expected under independence).

The null hypothesis that minority status and starting rank are independent for the 2007-2010 hiring cohort was rejected using Fisher's Exact Test ($p = 0.02$). Minority status and starting rank are associated, for instance, minorities are underrepresented in the professor rank (3 observed versus 9 expected under independence) and overrepresented in the associate professor with tenure rank (12 observed versus 7 expected under independence).

The null hypothesis that underrepresented minority status and starting rank are independent for the 2007-2010 hiring cohort was rejected using Fisher's Exact Test ($p = 0.04$). Underrepresented minority status and starting rank are associated, for instance, URM faculty are underrepresented in the professor rank (2 observed versus 4 expected under independence) and overrepresented in the associate professor with tenure rank (8 observed versus 3 expected under independence).

⁹ Minority and underrepresented minority faculty proportions are calculated excluding race/ethnicity unknown and non-resident aliens.

I.5. Analysis of candidate screening for new hires

There were 266 short lists available for open academic positions that led to a new hire from 2001 to 2012. 98 female new hires and 168 male new hires were associated with these short lists. Notably, short lists were only available for 59% of hires.

40 (15%) of these positions had no reported female finalists while 21 (8%) of these positions had no male finalists. Females accounted for 50% or more of the finalists in 92 cases (35%), while in 174 cases the finalist pool was more than 50% male.

A logistic regression model controlling for the division of the position shows that division does not have a statistically significant relationship with whether or not a female applicant is selected as the candidate (Table 3).

Table 3: Logistic regression of female finalists selected from short lists (Tenured and tenure eligible faculty)

	<u>Female applicant hired</u>
Intercept	0.02 (.05)
Proportion female finalists	0.95 (.09)***
<u>Division vs. Social science</u>	
Science	-0.08 (.06)
Humanities	0.03 (.23)
R ²	0.33
N	266

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

I.6. Description of contract faculty rank distribution

Table 4 depicts the number and percentage of contract faculty by rank.

Table 4: Gender and minority status by rank (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2012 (N=341)</u>						
Contract Total	178 (50%)	179 (50%)	74 (21%)	275 (79%)	33 (9%)	316 (91%)
Clin. Assistant	18 (50%)	18 (50%)	7 (20%)	28 (80%)	2 (6%)	33 (94%)
Clin. Associate	12 (27%)	32 (73%)	11 (25%)	33 (75%)	5 (11%)	39 (89%)
Clin. Professor	7 (47%)	8 (53%)	1 (7%)	14 (93%)	0 (0%)	15 (100%)
Prof. w/o Ten.	2 (12%)	14 (88%)	4 (25%)	12 (75%)	4 (25%)	12 (75%)
Lang. Lectr.	64 (57%)	49 (43%)	29 (27%)	79 (73%)	9 (8%)	99 (92%)
Sr. Lang. Lectr.	29 (69%)	13 (31%)	8 (19%)	34 (81%)	3 (7%)	39 (93%)
Master Teacher	41 (51%)	39 (49%)	14 (18%)	65 (82%)	10 (13%)	69 (87%)
<u>2010 (N=294)</u>						
Contract Total	149 (51%)	145 (49%)	66 (22%)	226 (78%)	34 (12%)	258 (88%)
Clin. Assistant	15 (54%)	13 (46%)	8 (29%)	20 (71%)	4 (14%)	24 (86%)
Clin. Associate	13 (33%)	27 (67%)	9 (23%)	31 (77%)	5 (13%)	35 (88%)
Clin. Professor	5 (22%)	18 (78%)	4 (18%)	18 (82%)	3 (14%)	19 (86%)
Lang. Lectr.	66 (59%)	46 (41%)	26 (23%)	85 (77%)	10 (9%)	101 (91%)
Sr. Lang. Lectr.	13 (68%)	6 (32%)	6 (32%)	13 (68%)	3 (16%)	16 (84%)
Master Teacher	37 (51%)	35 (49%)	13 (18%)	59 (82%)	9 (13%)	63 (88%)
<u>2005 (N=85)</u>						
Contract Total	46 (54%)	39 (46%)	22 (26%)	63 (74%)	8 (9%)	77 (91%)
<u>2000 (N=37)</u>						
Contract Total	19 (52%)	18 (48%)	13 (35%)	24 (65%)	2 (5%)	35 (95%)

Note: self-reported ethnicity data was missing for 2 faculty in the 2010 cross section, and 7 faculty in the 2012 cross section.

I.7. Analysis of contract faculty current rank distribution

The null hypothesis that gender and rank are independent was rejected with the chi-square statistic ($\chi^2=26.29$, $p<0.001$). Gender and rank are associated, for instance, females are underrepresented in the professor without tenure rank (2 females are observed to be full or named professors compared to the 8 expected under independence).

The null hypothesis that minority status and rank are independent was not rejected with the chi-square statistic ($\chi^2=5.01$, $p=0.54$). Minority status and rank are not associated.

The null hypothesis that underrepresented minority status and rank are independent was not rejected with the chi-square statistic ($\chi^2=7.97$, $p=0.24$). Underrepresented minority status and rank are not associated.

I.8. Description of contract faculty hiring cohorts

Faculty who were hired at the rank of clinical assistant, clinical associate, clinical full professor, language lecturer, senior language lecturer, or master teacher between academic year 2000-2001 and academic year 2011-2012 were selected for the starting rank and starting salary analyses. Individuals hired to short term postdoctoral lecturer positions were not included.

Table 5: Starting rank by hiring cohort, by gender and minority status (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2007 to 2012 (N=255, 219 not resident aliens)</u>						
Clin. Assistant	17 (49%)	18 (51%)	5 (19%)	21 (81%)	2 (8%)	24 (92%)
Clin. Associate	2 (10%)	19 (90%)	6 (30%)	14 (70%)	3 (15%)	17 (85%)
Clin. Professor	2 (40%)	3 (60%)	Same as URM		0 (0%)	5 (100%)
Lang. Lectr.	92 (56%)	73 (44%)	34 (24%)	105 (76%)	17 (12%)	122 (88%)
Master Teacher	16 (55%)	13 (45%)	7 (24%)	22 (76%)	6 (21%)	23 (79%)
<u>2001 to 2006 (N=153, 129 not resident aliens)</u>						
Clin. Assistant	5 (23%)	17 (77%)	2 (17%)	10 (83%)	0 (0%)	12 (100%)
Clin. Associate	5 (36%)	9 (71%)	Same as URM		1 (8%)	13 (92%)
Clin. Professor	1 (50%)	1 (50%)	Same as URM		0 (0%)	1 (100%)
Lang. Lectr.	51 (67%)	25 (33%)	16 (24%)	50 (76%)	7 (11%)	59 (89%)
Sr. Lang. Lectr.	2 (50%)	2 (50%)	2 (50%)	2 (50%)	1 (25%)	3 (75%)
Master Teacher	21 (58%)	15 (42%)	6 (19%)	26 (81%)	4 (13%)	28 (87%)

Note: self-reported ethnicity data was missing for 9 faculty in the 2001-06 cohort and 1 faculty in the 2007-12 cohort.

I.9. Analysis of contract faculty starting rank distribution

The null hypothesis that gender and starting rank were independent for the 2007-2010 hiring cohort was rejected using Fisher's Exact Test ($p < 0.001$). Gender and starting rank are associated, for instance, females were underrepresented in the clinical associate professor rank (2 observed versus 11 expected under independence) and overrepresented in the language lecturer rank (92 observed versus 83 expected under independence).

The null hypothesis that minority status and starting rank were independent for the 2007-2010 hiring cohort was not rejected using Fisher's Exact Test ($p = 0.78$). Minority status and starting rank were not associated during this period.

The null hypothesis that underrepresented minority status and starting rank were independent for the 2007-2010 hiring cohort was not rejected using Fisher's Exact Test ($p = 0.60$). Underrepresented minority status and starting rank were not associated during this period.

Part II: Gender and minority status versus current and starting salary

II.1. Description of tenured and tenure eligible faculty current salary distribution

Table 6 depicts average salary at each rank in 2012.

Table 6: Mean salary by gender, minority status, and salary (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u> (N=695)	<u>Male</u>	<u>Yes</u> (N=663)	<u>No</u>	<u>Yes</u> (N=663)	<u>No</u>
Assistant	87,900 (17,799)	89,962 (14,403)	91,298 (21,052)	86,496 (12,853)	92,997 (31,557)	87,158 (13,374)
Associate	106,390 (19,411)	107,914 (24,870)	110,151 (20,542)	106,392 (23,879)	113,642 (22,176)	106,430 (23,154)
Full	162,010 (38,967)*	172,432 (57,045)*	167,518 (48,450)	168,395 (53,553)	172,566 (45,977)	167,907 (53,455)
Named	193,796 (46,412)*	218,376 (50,640)*	203,110 (27,639)	215,547 (51,683)	†	†

Note: Salary data was missing for 6 tenure and tenure eligible faculty. Non-resident aliens and unreported ethnicity excluded from minority analyses. †Categories with <=5 faculty are not reportable due to confidentiality concerns. ***p<.01 **p<.05 *p<.10

Two-sample t-tests were run to compare the average salaries of faculty within each rank and category, making 12 tests in total. There remains an apparent trend towards significance¹⁰ upon comparing male and female full professor's salary (p=0.08) and named professor's salary (p=0.05). There is no longer a significant difference between under-represented minority and non-URM salaries at the associate professor rank (p=0.19).

¹⁰ Assuming these are 12 independent tests, it should be noted that there is a 71% chance of reporting at least one false positive with significance at a level of p≤.10, and a 34% chance of reporting two false positives.

II.2. Analysis of tenured and tenure eligible faculty current salary distribution

Prior studies have established that, when taken in isolation, gender appears to be a significant predictor of log salary. However, it was also found that after controlling for department, rank, and year of hire, gender is no longer a significant predictor of log salary. We repeated this regression to verify the continuation of this trend:

Table 7: Regression of log salary by gender, rank, department, and year of hire (Tenured and tenure eligible faculty)

	<u>2012</u>	<u>2010</u>	<u>2005</u>	<u>2000</u>
Intercept	11.90 (0.06)***	11.84 (0.06)	11.69 (0.06)***	11.55 (0.06)***
Female	-0.00 (0.02)	-0.01 (0.02)	-0.03 (0.02)	-0.02 (0.03)
<u>Rank vs. Professor</u>				
Assistant	-0.74 (0.03)***	-0.73 (0.03)***	-0.82 (0.03)***	-0.76 (0.03)***
Associate	-0.45 (0.02)***	-0.43 (0.02)***	-0.47 (0.02)***	-0.47 (0.02)***
Named	0.25 (0.03)***	0.27 (0.03)***	N.S.	N.S.
Department†	***	***	***	***
Year of Hire	0.01 (0.00)***	0.01 (0.00)***	0.01 (0.01)***	0.01 (0.00)***
R ²	0.74	0.73	0.68	0.70
N	672	663	586	513

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of variables, only the overall significance of the variable department is shown.

II.3. Description of tenured and tenure eligible faculty starting salary distribution

Table 8 displays mean starting salaries by rank and gender.

Table 8: Mean starting salary by gender, minority status, and underrepresented minority status (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2007 to 2012</u>						
Assistant	82,167 (17,465)	85,989 (16,390)	83,239 (20,696)	82,191 (13,894)	86,378 (29,400)	82,088 (14,030)
Associate without tenure	†	†	†	†	†	†
Associate with tenure	111,694 (19,465)	117,351 (21,297)	115,972 (22,962)	111,241 (20,867)	111,860 (24,729)	114,934 (21,435)
Full	195,000 (33,058)	190,902 (61,873)	†	†	†*	†*
Named	†	†	†	†	†	†
<u>2001 to 2006</u>						
Assistant	65,977 (18,337)	69,738 (13,696)	63,950 (8,534)**	70,247 (16,059)**	62,531 (9,098)*	69,857 (15,580)*
Associate without tenure	†	†	†	†	†	†
Associate with tenure	90,365 (24,584)	99,449 (13,416)	98,605 (28,192)	94,817 (15,881)	†	†
Full	139,679 (29,141)**	160,147 (38,616)**	160,396 (34,440)	154,017 (36,915)	†	†
Named	†	†	†	†	†	†

†Categories with <=5 faculty are not reportable due to confidentiality concerns. Significant differences between salaries within rank are noted ***p<.01 **p<.05 *p<.10.

Two-sample t-tests were run to compare the average salaries of faculty within each cohort, starting rank, and category, making 30 tests in total. There was an apparent trend towards significance¹¹ upon comparing male and female full professors' starting salary (p=0.016) and upon comparing minority and nonminority assistant professors' starting salary (p=0.03) for faculty in the early cohort. These tendencies are both reversed, though not to a statistically significant degree, in the recent cohort.

¹¹ Assuming these are 30 independent tests, it should be noted that there is a 96% chance of reporting at least one false positive with significance at a level of p<0.1, an 82% chance of reporting two false positives, a 59% chance of reporting three, and a 35% chance of reporting four.

II.4. Analysis of tenured and tenure eligible faculty starting salary distribution

A linear regression model on log starting salary was constructed to test the relationship between log starting salary and gender for new hires (Table 9). After controlling for starting rank, department, and year of hire, gender continues to not be a significant predictor of log starting salary. Instead, rank, department, and year of hire appear to explain the majority of the variance in log salary. In this analysis, 4 faculty members were missing starting salary information due to incomplete faculty records.

Table 9: Linear regression of log starting salary (Tenured and tenure eligible faculty)

	<u>Full model</u>
Intercept	11.82 (0.05)***
Female	0.01 (0.02)
<u>Starting Rank vs. Professor</u>	
Assistant	-0.80 (0.02)***
Associate without tenure	-0.59 (0.05)***
Associate with tenure	-0.43 (0.02)***
Named Professor	0.05 (0.05)
Department†	***
Year of hire	0.04 (0.00)***
R ²	0.88
N	445

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

To further explore the apparent trend toward significant differences in starting salary at lower ranks, a second linear regression (Table 10) was run identical to the one above, including only assistant and associate starting salaries for individuals hired from 2007 to 2012. This subset regression confirms the findings of the larger analysis.

Table 10: Linear regression of log starting salary (Assistant and Associate Professors, 2007 - 2012)

	<u>Full model</u>
Intercept	11.47 (0.06)***
Female	-0.00 (0.02)
<u>Starting Rank vs. AP with Tenure</u>	
Assistant	-0.40 (0.02)***
Associate without tenure	-0.19 (0.05)***
Department†	***
Year of hire	0.03 (0.01)***
R ²	0.79
N	171

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

II.5. Description of contract faculty salary distribution

Table 11 displays mean salaries by rank and gender for contract faculty.

Table 11: Mean salary by gender, minority status, and underrepresented minority status (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u> (N=341)	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Clin. Assistant	65,523 (9,162)	68,963 (8,300)	71,185 (6,156)	65,656 (8,597)	†††	†††
Clin. Associate	76,179 (11,801)**	86,641 (17,119)**	74,959 (12,647)**	86,717 (17,091)**	††† *	††† *
Clin. Professor	104,721 (20,087)	110,134 (23,291)	†††	†††	†††	†††
Lang. Lectr.	48,647 (2,644)	47,947 (2,773)	47,657 (3,164)*	49,037 (2,210)*	45,798 (2,631)**	48,978 (2,341)**
Sr. Lang. Lectr.	55,184 (5,530)	57,006 (10,000)	55,299 (3,316)	55,667 (7,842)	†††	†††
Master Teacher	63,838 (9,103)	68,037 (19,252)	61,794 (4,785)**	66,939 (16,463)**	61,294 (3,240)**	66,703 (16,078)**

NOTE: Non-resident aliens and unreported ethnicity excluded from minority analyses. †Categories with <=5 faculty are not reportable due to confidentiality concerns. ***p<.01 **p<.05 *p<.10

Within each rank and category, salaries were tested with a two-sample t-test, making 18 tests in all. In 8 of the tests, there are apparent trends towards significant differences,¹² the greatest differences appearing between genders for clinical associate professors (p=0.03), between minority and nonminority clinical associate professors (p=0.02) and master teachers (p=0.04), and between URM and non-URM master teachers (p=0.02) and language lecturers (p=0.02).

¹² Assuming these are 18 independent tests, it should be noted that there is an 85% chance of reporting at least one false positive with significance at a level of $p \leq .10$, a 55% chance of reporting two false positives, and a 27% chance of three false positives.

II.6. Analysis of contract faculty current salary distribution

Prior studies have established that, when taken in isolation, gender appears to be a significant predictor of log salary. In 2010, it was also found that after controlling for department, rank, and year of hire, gender remained a significant predictor of log salary. We repeated this regression to verify the continuation of this trend. In 2012, it appears that there is a decreased but still significant relationship between gender and log salary after controlling for rank, department, and year of hire.

Table 12: Regression of log salary by gender, rank, department, and year of hire (Contract faculty)

	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2012</u>
Intercept	10.65 (0.32)***	10.45 (0.06)***	10.83 (0.15)***	10.87 (0.12)***
Female	-0.00 (0.08)	0.00 (0.03)	-0.04 (0.02)**	-0.03 (0.01)**
Contract	-0.01 (0.25)	0.18 (0.05)		
Clin. Assistant			0.27 (0.05)***	0.25 (0.04)***
Clin. Associate			0.37 (0.05)***	0.34 (0.03)***
Clin. Professor			0.62 (0.06)***	0.50 (0.04)***
Lang. Lectr.			-0.09 (0.04)**	-0.07 (0.02)***
Master Teacher			0.26 (0.15)*	0.27 (0.12) **
Department†	N.S.	***	***	***
Year of hire	-0.04 (0.12)***	-0.02 (0.00)***	-0.01 (0.00)***	-0.01 (0.00)***
R ²	.69	.77	.81	.84
N	46	124	293	330

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of variables, only the overall significance of the variable department is shown.

II.7. Description of contract faculty starting salary distribution

Table 13 displays mean starting salaries by rank and gender.

Table 13: Mean starting salary by gender, minority status, and underrepresented minority status (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>2007 to 2012</u>						
Clin. Assistant	62,616 (10,243)*	68,833 (10,728)*	†	†	†	†
Clin. Associate	†	†	76,417 (12,878)	83,642 (20,600)	†	†
Clin. Professor	†	†	Same as URM		†	†
Lang. Lectr.	44,990 (4,783)	45,927 (3,366)	44,188 (4,142)*	45,743 (3,924)*	42,900 (4,088)**	45,706 (3,904)**
Master Teacher	56,044 (3,355)	55,808 (1,921)	57,021 (2,615)	55,593 (2,774)	57,400 (2,645)	55,557 (2,716)
<u>2001 to 2006</u>						
Clin. Assistant	†	†	†	†	†	†
Clin. Associate	†	†	Same as URM		†	†
Clin. Professor	†	†	Same as URM		†	†
Lang. Lectr.	40,288 (3,817)*	42,169 (3,648)*	40,438 (3,076)	40,878 (3,642)	39,241 (3,085)	40,952 (3,521)
Sr. Lang. Lectr.	†	†	†	†	†	†
Master Teacher	53,181 (3,467)	59,755 (22,236)	53,050 (3,685)	56,692 (17,099)	†	†

Note: Citizenship/Ethnicity data was missing for 9 contract new hires from the 2001 to 2006 cohort and 2 from the 2007 to 2012 cohort †Categories with <=5 faculty are not reportable due to confidentiality concerns. Means are compared with a two sample t-test ***p<.01 **p<.05 *p<.10

Two-sample t-tests were run to compare the average salaries of faculty within each cohort, starting rank, and category, making 30 distinct tests (given the absence on non-underrepresented minority hires at the clinical ranks, three of the tests were not necessary). There was an apparent trend towards significance¹³ upon comparing male and female language lecturer starting salary for faculty in the early cohort (p=0.06). There was also an apparent significant difference between underrepresented minority and non-underrepresented minority language lecturer starting salary in the recent cohort (p=0.03).

¹³ Assuming these are 30 independent tests, it should be noted that there is a 98% chance of reporting at least one false positive with significance at a level of p≤0.1, a 90% chance of reporting two false positives, a 73% chance of reporting three, and a 51% chance of reporting four.

II.8. Analysis of contract faculty starting salary distribution

A linear regression model on log starting salary was constructed to test the relationship between log starting salary and gender for new contract faculty hires (Table 14). After controlling for starting rank, department, and year of hire, gender remained a significant predictor of log starting salary.

Table 14: Linear regression of log starting salary (Contract faculty, 2001-2012)

Intercept	10.67 (0.18)***
Female	-0.03 (0.01)**
<u>Starting Rank vs. Sen. Lang. Lectr.</u>	
Clin. Assistant	0.32 (0.07)***
Clin. Associate	0.59 (0.07)***
Clin. Professor	1.01 (0.10)***
Lang. Lectr.	-0.04 (0.06)
Master Teacher	0.23 (0.16)***
Department†	††† ***
Year of hire	-0.00 (0.00)**
R ²	0.72
N	442

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

A second linear regression model was constructed to control for highest degree attained at the time of hire. Due to incomplete data, this second analysis was restricted only to the cohort of hires from 2007 to 2012. After controlling for starting rank, department, highest degree at hire, and year of hire, gender no longer is significant predictor of log starting salary.

Table 15: Linear regression of log starting salary (Contract faculty, 2007-2012)

Intercept	10.73 (0.14)***
Female	- 0.01 (0.01)
<u>Starting Rank vs. Master Teacher</u>	
Clin. Assistant	0.33 (0.10)***
Clin. Associate	0.46 (0.09)***
Clin. Professor	0.78 (0.11)***
Lang. Lectr.	-0.12 (0.08)
<u>Degree Attained vs. "No Graduate Degree"</u>	
PhD, JD, MD	0.08 (0.02)***
MA, MFA, MS	0.04 (0.02)***
Department†	††† ***
Year of hire	0.01 (0.00)***
R ²	0.91
N	255

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

Part III: Tenured and tenure eligible career progression

III.1. Descriptive statistics of tenure results of tenure-eligible new hires

Out of the 115 tenure-eligible hires from 2001 to 2006, all individuals have been denied tenure, granted tenure, or have resigned as of 2012. The null hypothesis that gender and tenure outcome are independent was not rejected using the chi-square statistic ($\chi^2=0.19$, $p=0.91$). Gender and tenure outcome are not associated. The similar distribution of outcomes for male and female tenure-track faculty in this cohort are visually depicted in figures 6 and 7:

Figure 6: 2012 Status of female tenure eligible new hires (2001 to 2006)

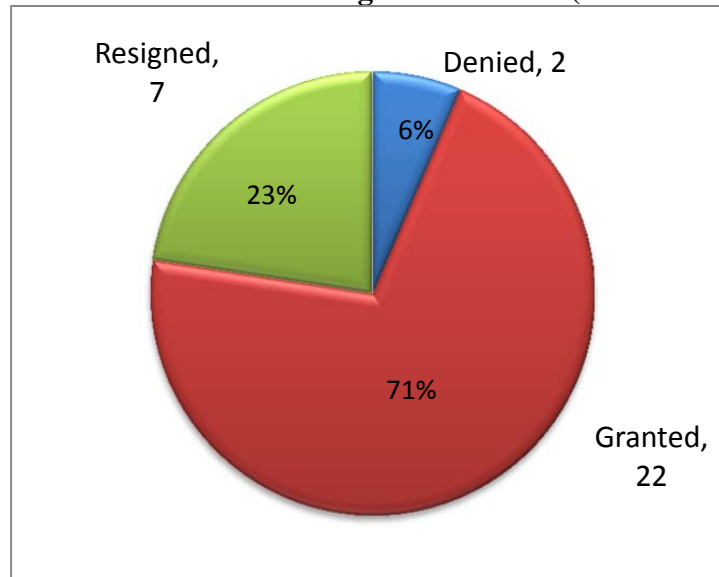
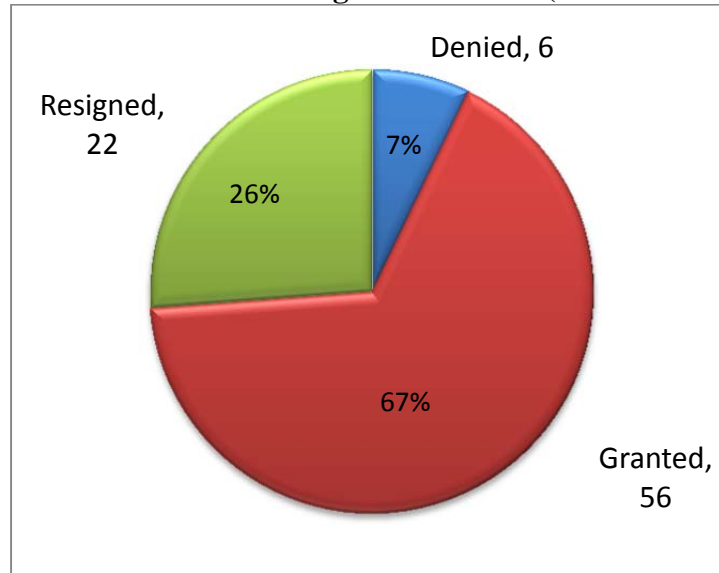


Figure 7: 2012 Status of male tenure eligible new hires (2001 to 2006)



Part IV: Gender and minority status versus non-salaried opportunities

IV.1. Internal research support (Tenured and tenure eligible faculty)

The proportion of tenure and tenure eligible faculty receiving internal research support is shown in Table 16, and analysis of the amount of support in Table 17. Support is defined as a transfer into an internal fund managed by or for the faculty member.

Table 16: Received internal research support by gender and minority status (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
2012	160 (75%)	265 (56%)	70 (64%)	339 (63%)	40 (74%)	369 (62%)
2010	149 (77%)	256 (53%)	71 (66%)	332 (59%)	42 (81%)	361 (58%)
2005	107 (70%)	213 (49%)	57 (65%)	263 (52%)	38 (76%)	282 (52%)
2000	72 (59%)	143 (37%)	36 (51%)	179 (40%)	27 (64%)	188 (40%)

Gender and underrepresented minority status are both associated with whether or not a tenured or tenure eligible faculty member receives support, with female faculty being 2.4 times more likely to receive support ($\chi^2=23.51$, $p<.0001$) and underrepresented minority faculty being 1.7 times more likely to receive support ($\chi^2=3.14$, $p=.08$). Minority status is not associated with receiving research support ($\chi^2=0.09$ $p=0.76$).

Table 17: Linear regression on log internal research support (Tenured and tenure eligible faculty)

	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2012</u>
Intercept	8.62 (0.21)***	8.64 (0.16)***	9.18 (0.15)***	9.02 (0.18)***
Female	0.06 (0.09)	0.00 (0.06)	-0.01 (0.06)	-0.03 (0.06)
<u>Rank vs. Professor</u>				
Assistant	-0.87 (0.13)***	-0.99 (0.09)***	-0.72 (0.09)***	-0.69 (0.10)***
Associate	-0.61 (0.13)***	-0.49 (0.08)	-0.32 (0.07)***	-0.33 (0.08)***
Named			0.73 (0.09)***	0.57 (0.10)***
Department†	*	***	***	***
Year of hire	0.02 (0.01)***	0.03 (0.00)***	0.02 (0.00)***	0.02 (0.00)***
R ²	0.42	0.45	0.49	0.47
N	215	320	405	420

Notes: Standard errors are in parentheses. *** $p<.01$ ** $p<.05$ * $p<.10$

†Due the number of dummy variables, only the overall significance of the variable department is shown.

Gender is again not a significant predictor of the amount of log internal research support after considering rank, department, and year of hire.

IV.2. Internal research support (Contract faculty)

The proportion of tenure and tenure eligible faculty receiving internal research support is shown in Table 18, and analysis of the amount of support in Table 19. Support is defined as a transfer into an internal fund managed by or for the faculty member.

Table 18: Received internal research support by gender and minority status (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
2012	149 (86%)	136 (79%)	52 (83%)	208 (84%)	26 (87%)	234 (83%)
2010	129 (87%)	112 (77%)	56 (84%)	184 (81%)	28 (82%)	212 (82%)
2005	46 (74%)	29 (47%)	20 (69%)	55 (58%)	7 (77%)	68 (59%)
2000	4 (17%)	5 (22%)	3 (20%)	6 (19%)	1 (50%)	8 (18%)

In 2012, gender is again associated with whether or not a contract faculty member receives support, with female faculty being 1.6 times as likely to receive support ($\chi^2=3.36$, $p=0.07$). However, as before, this relationship is no longer significant upon controlling for division and using Fisher's Exact Test ($p=0.20$). Neither minority nor underrepresented minority status is associated with receiving research support ($\chi^2=0.06$ $p=0.80$, $\chi^2=0.23$ $p=0.63$).

Table 19: Linear regression on log internal research support (Contract faculty)

	<u>2005</u>	<u>2010</u>	<u>2012</u>
Intercept	7.06 (0.08)***	7.68 (0.37)***	7.67 (0.33)***
Female	0.00 (0.06)	-0.03 (0.05)	-0.03 (0.04)
Department†	***	***	***
Year of hire	-0.05 (0.01)***	-0.02 (0.00)***	-0.02 (0.00)***
R ²	0.76	0.55	0.54
N	75	241	274

Notes: Standard errors are in parentheses. *** $p<.01$ ** $p<.05$ * $p<.10$

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

In 2012 gender is again not a significant predictor of the amount of log internal research support after considering rank, department, and year of hire.

IV.3. Instructional Load (Tenured and tenure eligible faculty)

Table 20 shows that there is a tendency toward significance in the difference between the number of courses assigned to male and female faculty, and in the difference between the number of students taught by underrepresented minority and non-underrepresented minority faculty. Table 21 shows that gender is not a significant predictor of the number of students taught after considering rank, department, and year of hire.

Table 20: Courses assigned with enrollments by gender, minority status (Tenured and tenure eligible faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Number of Courses	2.54 (1.94)*	2.25 (1.72)*	2.57 (1.94)	2.36 (1.78)	2.62 (1.22)	2.38 (1.15)
Number of Students	52.30 (51.94)**	63.37 (89.11)**	57.44 (63.93)	62.24 (83.71)	51.36 (64.92)	62.35 (81.98)

Note: Standard deviations are in parentheses. Significant differences in means are indicated by: ***p<.01 **p<.05 *p<.10

Table 21: Regression on log number of students (Tenured and tenure eligible faculty)

	<u>2010</u>	<u>2012</u>	<u>2012</u>
Intercept	3.78 (0.08)***	3.11 (0.11)***	3.42 (1.53)**
Female	-0.14 (0.09)	0.02 (0.14)	0.01 (0.14)
Year of Hire	-0.01 (0.00)***	-0.02 (0.01)***	-0.02 (0.01)***
<u>Rank vs. Professor</u>			
Assistant	0.24 (0.14)*	0.11 (0.20)	0.09 (0.19)
Associate	0.24 (0.11)**	0.45 (0.17)***	0.38 (0.16)**
Named	-0.57 (0.14)***	-0.51 (0.20)**	-0.20 (0.20)
Department†			**
R ²	0.07	0.04	0.22
N	554	676	676

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

IV.4. Instructional Load (Contract faculty)

Table 22 shows that females, on average, have fewer students than their male contract faculty counterparts. This relationship is explored further in the regression that follows. Female contract faculty teach significantly fewer students, on average, in the 2010 academic year, however, when the log of students is taken and these means are compared, there is no difference indicating that a few courses with large enrollments may be biasing these means. There are no significant differences in the number of courses or number of students taught when faculty are grouped by minority status.

Table 23 shows that gender is not a significant predictor of the number of students taught after considering rank, department, and year of hire.

Table 22: 2010 mean course assignments and course enrollments by gender, minority status, and salary (Contract faculty)

	<u>Gender</u>		<u>Minority</u>		<u>Underrepresented Minority</u>	
	<u>Female</u>	<u>Male</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Number of Courses	4.46 (2.38)*	5.02 (3.31)*	5.17 (2.87)	4.53 (2.65)	4.88 (1.60)	4.64 (2.79)
Number of Students	82.48 (90.84)***	121.5 (150.2)***	102.0 (107.9)	100.7 (127.8)	99.14 (105.4)	101.2 (125.7)

Note: Standard deviations are in parentheses. Significant differences in means are indicated by: ***p<.01 **p<.05 *p<.10

Table 23: Regression on log number of students (Contract faculty)

	<u>2012</u>
Intercept	0.17 (1.25)
Female	-0.05 (0.14)
Year of Hire	-0.01 (0.01)
<u>Rank vs. Sen. Lang. Lectr.</u>	
Clinical Assistant Professor	-0.01 (0.41)
Clinical Associate Professor	-0.76 (0.36)**
Clinical Professor	-0.51 (0.47)
Language Lecturer	0.28 (0.25)
Master Teacher	4.05 (1.25)***
Department†	***
R ²	0.33
N	330

Notes: Standard errors are in parentheses. ***p<.01 **p<.05 *p<.10

†Due to the number of dummy variables, only the overall significance of the variable department is shown.

IV.5. Faculty Retention

17 faculty members received outside offers in the 2011-2012 academic year. All of these outside offers were followed up by a counter off from NYU, and all of the faculty were retained. Table 24 displays counts by gender, minority status, and rank.

Table 24: Outside Offers & Counter Offers

	Outside Offer	2012 Counter Offer Issued	Counter Offer Accepted	Outside Offer	2010 Counter Offer Issued	Counter Offer Accepted
<u>Gender</u>						
Female	6	6	6	6	4	3
Male	11	11	11	10	7	5
<u>Minority (excluding nonresident aliens)</u>						
Yes	5	5	5	7	6	4
No	11	11	11	9	5	4
<u>URM (excluding nonresident aliens)</u>						
Yes	3	3	3	0	0	0
No	13	13	13	16	11	8
<u>Rank</u>						
Assistant Professor	3	3	3	4	2	1
Associate Professor	5	5	5	7	6	4
Professor	9	9	9	3	1	1
Named Professor	0	0	0	2	2	2

IV.6. Juried Awards

Table 25 displays counts of nominations for 15 external awards programs in the 2010 and 2012 academic years. Awards included topic specific awards, early career awards, and major national research awards.¹⁴ Faculty who were nominated for more than one award are counted multiple times. If there were multiple nominees for an award, then all nominees are included in these counts. As the majority of these award programs reside in the tenure eligible ranks in the sciences, a distribution by gender, minority, and rank in the sciences from the 2012 cross section is shown for comparison.

Table 25: External Award Nominations

	2009-10	2011-12	Total	Percent	Percent in Sciences, 2012
<u>Gender</u>					
Female	3	3	6	16%	16%
Male	17	14	31	84%	84%
<u>Minority</u>					
Yes	2	4	6	18%	14%
No	17	10	27	82%	86%
<u>Rank</u>					
Assistant Professor	9	14	23	62%	18%
Associate Professor	1	1	2	5%	19%
Professor	5	2	7	19%	52%
Named Professor	1	0	1	3%	11%
Master Teacher	1	0	1	3%	0%
Emeritus	3	0	3	8%	0%

17% of nominations were of female faculty, and 19% of awards to non-resident-aliens were of minority faculty. 0% were underrepresented minority. 64% of nominations were of faculty at the assistant professor rank, and 17% were of faculty at the professor rank.

Fisher's exact tests comparing nominees against the 2012 faculty show that there is again no association between gender and receiving a nomination ($p=0.75$), minority status and receiving a nomination ($p=0.99$), and URM status and receiving a nomination ($p=0.99$).

¹⁴ The external awards programs include: Andrew Mellon New Directions Fellowship, Blavatnik Awards for Young Scientists, Dana Foundation Program in the Neuroimmunology of Brain Infections and Cancers, Ellison Medical Foundation, Holberg Prize, James S. McDonnell Foundation, Mellon Foundation Emeritus Fellowship Program, National Endowment for the Humanities Awards, National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT), National Science Foundation Major Research Instrumentation Award, Pew Scholars Program in the Biomedical Science, Packard Fellowship for Science & Engineering, Searle Scholars Program, Sloan Research Fellowship, and the William T. Grant Scholars Program

Table 26: Golden Dozen Nominations

	2009-10	2011-12	Total	Percent
<u>Gender</u>				
Female	5	7	12	50%
Male	7	5	12	50%
<u>Minority</u>				
Yes	1	1	2	9%
No	10	10	20	91%
<u>Underrepresented Minority</u>				
Yes	0	1	1	5%
No	11	10	21	95%
<u>Rank</u>				
Assistant Professor	0	2	2	8%
Associate Professor	4	2	6	25%
Professor	4	4	8	33%
Clinical Associate Professor	2	0	2	8%
Language Lecturer	2	1	3	13%
Senior Language Lecturer	0	3	3	13%

Of the dozen faculty who received the Golden Dozen award in 2012, 5 were male, and 7 were female, 1 was an underrepresented minority, 8 were tenured or tenure eligible, and 4 were not tenure eligible.

Fisher's exact tests comparing nominees against the 2012 faculty show no association between gender and receiving a Golden Dozen award ($p=0.15$), minority status and receiving an award ($p=0.70$), and URM status and receiving an award ($p=0.99$).

IV.7. Offers of Employment to Tenure and Tenure Track Candidate

Table 27 displays offers of employment, made and accepted, for a six year hiring cohort window starting in 2007, with detail by gender, division, and starting rank.

Table 27: Offers of Employment, Made and Accepted, 2007-2012

	Made	Accepted	Yield
<u>Gender</u>			
Female	111	79	71%
Male	230	143	62%
<u>Division</u>			
Humanities	133	100	75%
Social Sciences	103	67	65%
Science	105	55	52%
<u>Starting Rank</u>			
Assistant Professor	185	130	70%
Associate Professor	77	46	60%
Professor	79	46	58%

The null hypothesis that gender and offer acceptance are independent was again not rejected with the chi-square statistic ($\chi^2=2.67$, $p=0.102$). However, since p was very near a value of 0.10, cross sectional analyses were performed, examining offer acceptance by rank and division.

The null hypothesis that gender and offer acceptance are independent across the entire collection of offers, controlling for division and rank was not rejected with the Breslow-Day Test for Homogeneity of the Odds Ratios ($\chi^2=9.55$, $p=0.30$) Gender and acceptance are independent.

Bibliography

- Knapp, L. G. (2010). *Employees in Postsecondary Institutions, Fall 2009, and Salaries of Full time Instructional Staff, 2009-10*. Washington, DC: U.S. Department of Education.
- National Center for Education Statistics. (2008). *1999 and 2004 National Study of Postsecondary Faculty*. Washington DC: U.S. Department of Education.
- National Center for Education Statistics. (2012). *Digest of Education Statistics: 2011*. Washington, DC: U.S. Department of Education.