The University of Connecticut Chapter of

AAUP

1875 Storrs Road
Storrs, Connecticut 06268
Campus Mail: AAUP, U-6028
WWW.UCONNAAUP.ORG
Telephone: (860) 487-0450
Fax: (860) 487-0341

THE AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS, INC.

Testimony in Support of HB 5386 – An Act Concerning Various Pay Equity and Fairness Matters

Senator Gomes, Senator Miner, Senator Osten, Representative Porter, and members of the Labor and Public Employees Committee,

The University of Connecticut Chapter of the American Association of University Professors (AAUP) is the exclusive bargaining agent for faculty, researchers, and athletic staff at the State's Flagship University.

We strongly support the passage of HB 5386 – An Act Concerning Various Pay Equity and Fairness Matters, to address the long standing issue of pay inequity in our State.

The issue of gender pay equity for women and underrepresented minority groups persists in every sector of the work force. Public higher education is not shielded from this phenomenon.

In 2012, the UConn-AAUP commissioned a study to look into pay gaps in salary and merit awards for women and underrepresented minority groups at UConn. The report concluded the following [1], " We find sizable, and consistent gaps in salary and merit awards for women and underrepresented minority groups among the faculty at UConn". By and large, female full-time faculty received only 80% of pay of their male peers across ranks when not accounting for other factors such as time in rank, academic rank, or departmental structure. Taking into account the controls, residual gender and racial differences in salary appear to be between 3-5%. Substantively, these gender differences are significant according to the study. When it comes to merit awards, underrepresented minorities on average receive merit raises that are around

[1] Scruggs, Lyle (2012/Rev. 2013) " An Analysis of Gender and Minority Pay Equity among AAUP Faculty Members at the University of Connecticut 2003-2012. See APPENDIX A

15% lower. The report goes on to state that, "these salary differences seem likely to hinder long-term efforts to create and maintain faculty diversity at the University of Connecticut."[2]

By all accounts, with pay freezes and increased contributions to retirement and healthcare, these salary disparities likely remain at UConn.

If such inequity exists in a public institution of higher learning, it is undoubtedly present in other state agencies as well as in the private sector. The need to pass legislation to begin closing this gap is essential for our state's future. The gender and race wage gap is real and hurts women & underrepresented minority groups. It suppresses their earnings and makes it more difficult to balance family and work.

It is also, of course, a matter of economic justice and doing what is just for a population that has been historically marginalized and discriminated against.

Therefore UConn-AAUP stands in strong support in the passage of HB 5386 and urges eliminating the discriminatory phenomenon of pay inequity in our workplaces.

[2] *Id.*

APPENDIX A

An Analysis of Gender and Minority Pay Equity among AAUP Faculty members at the University of Connecticut 2003-2012.

Prepared for AAUP by Lyle Scruggs, Department of Political Science, University of Connecticut

Draft Submitted October 23, 2012
Revised February 28, 2013

Executive summary

- We performed a multivariate regression analysis of payroll data on UConn AAUP faculty members covering the years 2003-2012 to look for evidence of pay discrepancies between women and men, and between members of underrepresented minority groups (URM) and whites.
- We examined evidence of pay discrepancy in three different measures: annual salaries, annual merit pay awards, and starting salaries for recent PhD hires to the faculty.
- We controlled for a number of factors customarily included in pay equity analyses: rank, department, hire date, highest degree, and time since highest degree. We generated separate estimates for gender and racial discrepancies by rank.
- We also performed a decomposition analysis, based the approach pioneered by Oaxaca (1973) and Blinder (1973), though this did not estimate inequity estimates by rank.
- We find evidence of persistent gender and racial/ethnic disparity over the last decade in *salary* and *merit pay awards* even after controls are introduced. The differences among the tenure track faculty are on the order of 3-5%. In dollar terms this is approximately $2700-$4500 for the average 9-month salary of a female tenure track faculty member. Oxacaca/Blinder decomposition analysis suggests salary differences of about 3% for women and URM in the tenure track faculty.
- The absolute difference in average salary between men and women, and between URMs and non-URMs, is quite large. But those differences shrink considerably in the multivariate analysis, suggesting that much of the "headline" differences in salary between groups are probably not attributable pay bias, but to differences in the gender structure of departments, differences in length of service, and (relatedly) differences in rank.
- We also find evidence of salary discrepancies exceeding 10% favoring men among the non-faculty AAUP members excluding athletics. The gender differences in non-faculty would be larger if athletics is included, mainly due to high head and assistant coaches' salaries for males in some sports.
- In non-tenure track faculty ranks, women earn significantly more than men and have tended to receive higher merit awards in the last decade.
- Regression analysis of *merit awards* suggests that they tend to be more equal between men and women in tenure track positions than do salaries. Merit awards favor men at full and assistant professor ranks, and women at the associate level.
- Women in non-tenure track positions receive much higher average merit awards than their male, non-tenure track colleagues.
- Decomposition analysis suggests a small overall bias in merit awards in favor of men.
- Based on regression and decomposition analysis, merit awards are broadly lower among URM than whites and Asians by 15% or more in a given year.

- We evidence that *starting salaries* for female or URM at the junior faculty level are slightly higher than salaries received by whites+ Asians or by men, but only by a few hundred dollars.
- Overall trends in hiring and promotion of women and URM at UConn indicate growth in overall faculty diversity. The University's performance has converged toward overall national averages in higher education, and performance appears too comparable with or slightly better than other R-1 institutions.
- Growth in the representation of minority groups and women is not uniform across the university. The School of Business has performed poorly with respect to gender diversity vis-à-vis the wider university and its peers in the region and nationally. While some schools and colleges, like CANR, have broadened diversity on many fronts, there is clear evidence of disciplinary segmentation: growing representation of just one underrepresented group in a particular division. For example, the Schools of Education and Nursing have considerable gender diversity, but very little racial and ethnic diversity.
- In 2012, there was an unexpected drop in the percentage of URM in the faculty (and overall AAUP membership). While part of this drop could be explained by incomplete information on race/ethnicity of recent hires, this factor is unlikely to account for more than a small fraction of the decline.

I. Introduction

Following requests from the faculty community, UConn AAUP conducted a study of pay equity at the University of Connecticut starting in the Fall of 2012. The study covers academic years beginning Fall 2003- Fall 2012, focusing on recent years (since 2009). The purpose of the study was to look for evidence of systematic differences in pay between women and men and between traditionally underrepresented and other racial and ethnic minority groups and dominant groups.

In conducting the study, we uncovered results from two previous studies of pay equity at the University of Connecticut: Canali (2002) and Geeter (1988). In a previous review, Geeter (1988, summarized in Haignere 2002: 14-15) found that females earned $1806 less than males, and were less likely to receive merit raises. This study applied only to a small subset of largely non-faculty employees. As a result of that study, the University provided an equity based adjustment to reduce the gender gap.

The last review at the University of Connecticut was conducted in 2001-2 by AAUP. That study analyzed differences in faculty salaries as of April 1, 2001 and merit pay increases in that year" for all 1248 AAUP members who were active as of 4/1/2001" (Canali 2002: 2).[3] Controlling for a variety of factors commonly accounted for in gender pay equity studies, it found that women earned between $3770 and $4288 less than men. The study recommended further investigation of the differences in salary level. We were unable to uncover evidence of any further investigation, or of remedial actions to address reported salary inequities.

The 2001-2 study also found that differences in pay between whites and other racial and minority groups could mostly be accounted for by differences in their degree dates: as a group minority faculty had more recent degree dates. After controlling for this factor, there were gaps, but not statistically significant differences in the merit awards for that year.[4] No further action was apparently taken.

II. Overview of the Data in the Current Review

Information used for the analysis reported here uses a population concept of University of Connecticut employees similar to the last pay equity study: regular payroll employees who are members of the AAUP bargaining unit and covered by the AAUP contract. This includes all, or almost all, full time faculty, athletic staff (e.g., coaches), academic assistants, research associates, and research assistants at the University of Connecticut, Storrs and the branch campuses.[5] The definition excludes management exempt employees (many of whom have

---

[3] That study did not clearly indicate whether the year of merit pay increases that was analyzed was for 2000 or 2001.

[4] As several analyses have noted, exclusive focus on conventional statistical significance in population studies of pay inequities among minority groups is extremely problematic. Statistical significance is discussed in the appendix.

[5] The exact population covered in Canali (2002) is not mentioned explicitly in the report, and the population concept in the 1998 not known. Merit raises are generally only provided on a regular basis to full-time, tenure track faculty. Thus, we are not certain whether these studies looked at all bargaining

faculty appointments), employees who are paid only on special payroll, e.g., adjuncts, most support staff at Storrs and branch campuses, and all faculty and staff at the UConn Health Center. Reference to "employees" in the report refers to this limited definition unless otherwise specified.

Unlike the earlier 2001 report, which analyzed salaries for a single year, this study examines information for multiple years. This enables more reliable estimate of effects, and can also help us determine whether or not gaps in any particular year are idiosyncratic. The records used are payroll records, so cover the population of full-time AAUP members in a particular year. Information was originally drawn from a snapshot of payroll records taken on the following dates: 8/6/2004, 8/5/2005, 8/4/2006, 8/3/2007, 8/1/2008, 8/14/2009, 8/13/2010, 8/12/2011, and 8/7/2012. Information for academic year 2012-13 was updated to include individuals entering and continuing on the payroll through 1/22/2013, though degree and race/ethnicity data are missing for the 29 new hires.

Using information on bargaining unit entry dates, we were able to generate annual salaries for full academic years 2003-2011.[6] We report on the incomplete 2012-13 information, because payroll data from that date comprise all continuing faculty, and historically have included almost all new full time bargaining unit members. Data on annual pay increases or starting salaries is for academic years 2004/5-2012/13. The number of payroll files for each academic year is: 2004/5:

A. Definition of gender and under-represented minority groups. Gender and racial/ethnic group designations were provided in the University's human resources records, and are generally based on self-reporting. As with any administrative data, there are some missing and miscoded observations, but spot checks suggest that their number is small relative to the total number of records, and are not a significant source of error.[7]

We examine differences in gender equity by comparing differences among males and females. We examine possible differences in hiring and rank among racial and ethnic groups, distinguishing between traditionally underrepresented minorities (URM)-- African-Americans, Hispanics, and Native Americans—Asians, and whites.[8] Hispanic combined the following categories in the human resources files: Mexican, Other Hispanic, and Puerto Rican. The Asian grouping combines the HR categories: Chinese, East Asian, East Indian, Japanese, and Other Asian. We do not make distinctions about the representation of particular URM primarily because the number in each specific group is small. In fact, even with this aggregation of URM groups the total number of individuals in infrequently used academic ranks (e.g., professor in

---

unit members, full-time bargaining unit members, all teaching faculty members, or tenure track faculty members.

[6] Because the salary records for AY2003-4 are based on the August 6, 2004 payroll, it does not include bargaining unit members who were employed in 2003-4, but retired at the end of Fiscal Year 2004 (i.e., June 30, 2004).

[7] In an effort to increase number of records available for statistical analysis, the authors of the report also experimented with (re)coding gender based on photographs and traditional gender names where possible. Because their overall numbers are small, incorporating these additional data does not substantially affect the results.

[8] The distinction between URM and Asians in higher education is common (e.g., MIT 2010).

residence) is typically very small, often resulting in estimates that swing wildly from one year to the next.

B. Non-salary measures of gender and racial/ethnic group equity. Salary equity is only one measure of equity among higher education faculty. Studies of higher education also consider other indicators (West and Curtis 2006, Haignere 2002). Among the most frequently examined are gender differentials in employment, and rank. One reason to consider these indicators is the comparatively slow faculty turnover and career progression. Salary differentials by gender or race/ethnicity in the faculty may more reflect differences in past market, hiring, and promotional practices. While these may be discriminatory in their own right, their effect on gender pay differences is not evidence of discrimination *in pay*. Furthermore, hiring differences at lower ranks may point to emerging inequalities early in the faculty career ladder.

Since salaries and merit pay awards were the primary purpose of this study, we only provide a cursory investigation of broad trends in employment and status differences in the next two sections, reserving the remainder of the report for analysis of pay.

In reading the report, it is important to keep in mind that statistical differences in salaries or hiring among groups do not *prove* discriminatory treatment based on group differences. Gender or racial discrimination can occur even in the presence of salary equality. Conversely, observed differences in salary among groups may be unrelated to pay discrimination. Finally, while it can affect it, the university does not completely control the pool of qualified candidates eligible for or applying for faculty positions. Thus, this report can say little about the adequacy of the recruitment and candidate selection processes as such. Such an evaluation is beyond the scope and resources available for this study.

III. Trends in Gender and Racial and Ethnic Diversity in Higher Education

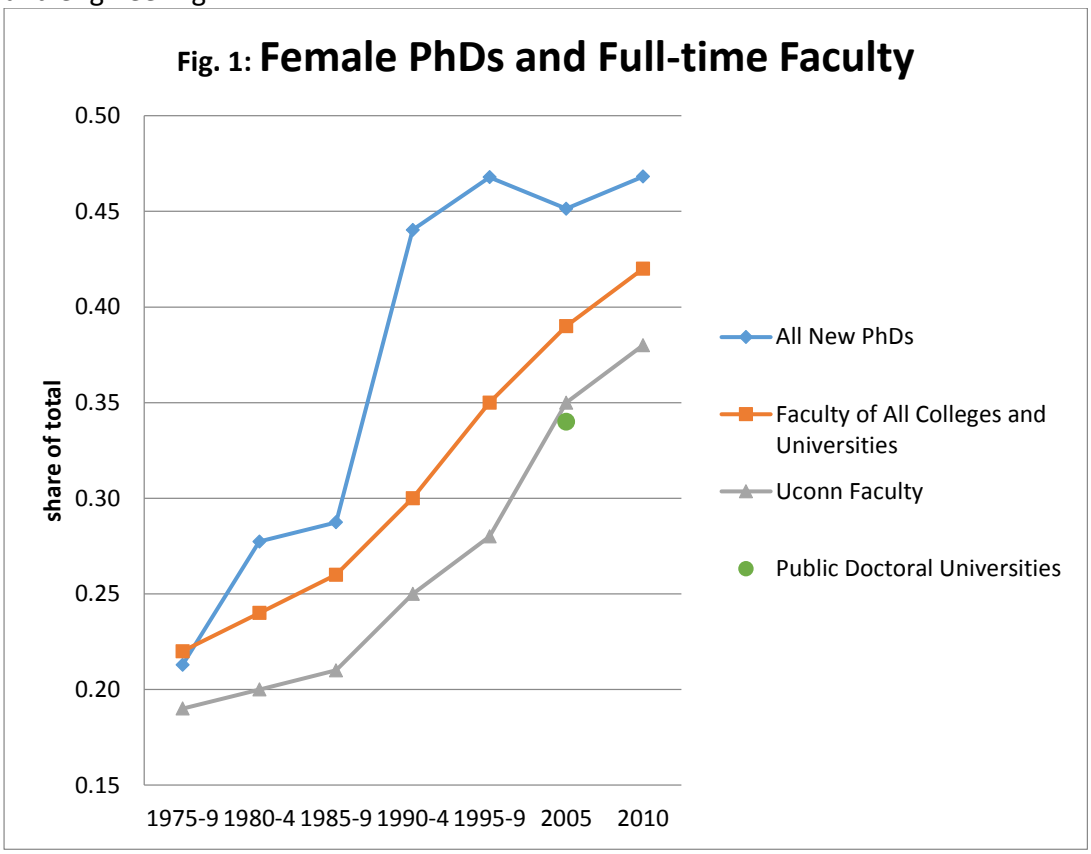
In higher education at major research universities like the University of Connecticut, a terminal degree in one's field (typically a doctorate) is generally a requirement for a faculty position, and has been so for some time. It is thus important to understand trends in representation of groups in higher education teaching and research faculty in the context of trends the generation of PhDs by members of a particular group. Historical rates of PhD attainment do not, and should not, define limits to achieving diversity of faculty and staff; but they do establish a context in which university departments operate when attempting to increase the diversity of faculty and staff.

A. Gender. Over the past several decades, women have increased their share of PhDs earned by permanent US residents, in some cases substantially (Figure 1).[9] The number of PhD's awarded to women in the United States approached equality with men in 1990s (NSF 2006). The percentage of full time faculty positions occupied by women has also grown considerably, and largely in line with women's share of doctorates awarded. According to the National Science Foundation, between 2003 and 2010 about 45% of all new PhDs awarded in the United States were awarded to women. While women remain somewhat underrepresented in STEM fields (Science, Technology, Engineering and Math), they received a majority of the non-STEM PhDs

[9] Information in Figure 1 from author's calculation of information in NSF (2006) Fiegener (2011), National Center Education Statistics (various), UConn Office of Institutional Research.

awarded in recent years. In 2010, approximately 40% of PhDs in STEM fields and 60% of non-STEM PhDs went to women (Fiegener 2011).

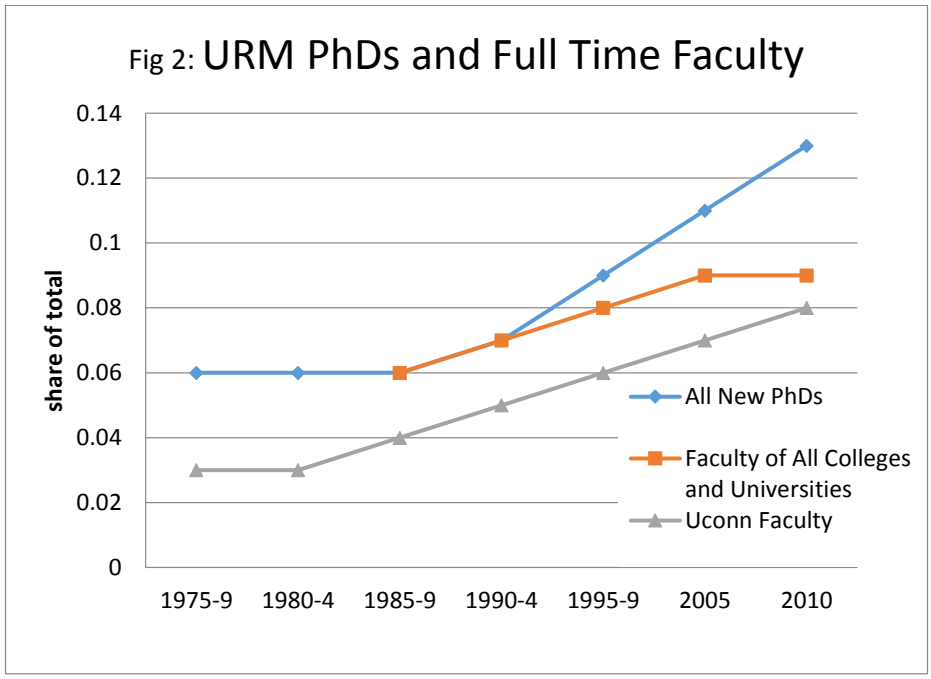
Within the STEM fields, women's PhD attainment varies. The government generally considers STEM fields to include Engineering, Physical and Earth Sciences, Agricultural and Biological Sciences, Computer Science, Mathematics, Psychology, and Social Sciences (economics, political science, and sociology). Within these fields, female PhDs former a higher share in the social, psychological, and biological sciences than other STEM fields (NSF 2006). For this reason, overall STEM statistics overstate female educational attainment in math, the physical sciences, and engineering.



B. Underrepresented Minority Groups. The national share of PhDs awarded to minority ethnic groups has increased in recent decades, from around 8% in the late 1970s to approximately 16% in 2010 (Figure 2) (NSF 2006, Fiegener 2012).[10] Blacks and Hispanics, two traditionally underrepresented groups in higher education, have increased their share of PhDs during the last two decades, but both groups remain underrepresented relative to their share of the national population. African-Americans obtained around 4% of PhD's awarded to American citizens in the late 1970s, and around 6% of PhDs in 2010. The corresponding figures for

[10] Information in Figure 2 from author's calculation of information in NSF (2006) Fiegener (2011), National Center Education Statistics (various), UConn Office of Institutional Research website.

Hispanics were 2% and 5.9%. PhDs awarded to Native Americans were <.5% in the late 1970s and remain very low at less than .4% (NSF 2006).
URM share of PhDs in STEM fields are lower still. In 2010, about 5.5% of PhD's in STEM fields were awarded to African Americans and 5.8% were awarded to Hispanics.[11] A very high percentage of PhDs awarded to blacks are in one non-STEM discipline: education.[12]



Nationally, representation of URM in faculty positions could be said to reflect limited progress in degree attainment. A report by the Irvine Foundation (2006) found that between 2000 and 2004 URM faculty involved in the campuses they studied only grew from 6 to 8% despite an explicit initiative and extra resources to increase diversity. Those percentages are almost identical to national figures in the same period. Around 60% of URM hiring simply replaced new diversity hires who had left for other institutions.
C. Asian-Americans and Asian nationals. Advanced degrees awarded in the United States to Asians and Asian Americans comprise the large majority of growth in the overall share of minority group PhD attainment in recent decades. Asian-Americans and Asian permanent residents obtained about 2% of all PhDs awarded in the United States in the late 1970s and about 6% in 2010. Much faster growth occurred among Asian nationals who were temporary residents. In the late 1970s, less than 15% of PhDs were awarded to Asian-Americans and Asian nationals. In the mid-1990s the percentage had more than doubled to 31%. In the late 1990s, approximately 45% of all Engineering PhDs were awarded to Asian nationals (NSF 2006). This growth has leveled or declined slightly since then. Today, perhaps one-quarter of all PhDs

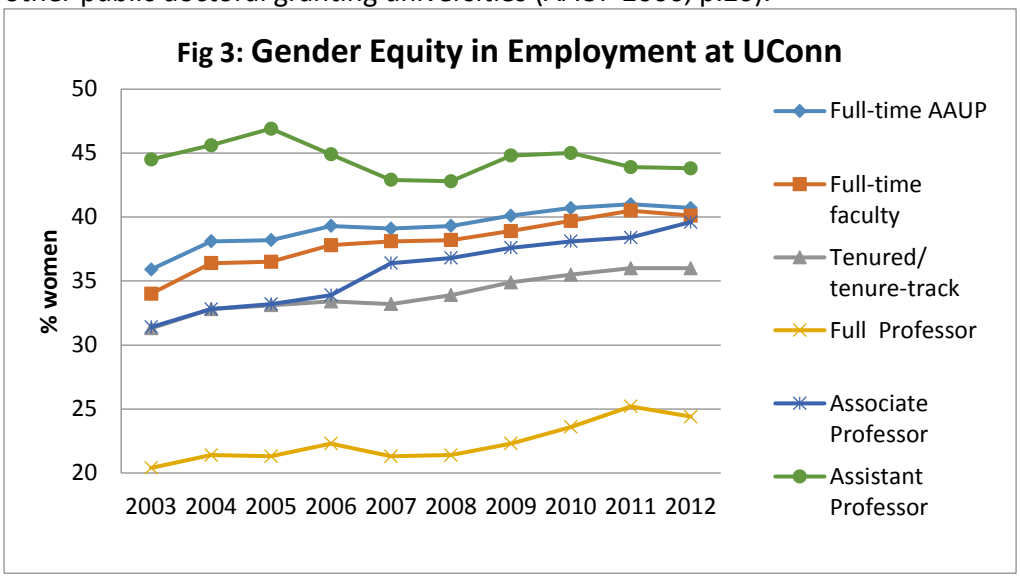
[11] According to the US Census, Blacks, Hispanics, and Native Americans comprised 13.6%, 16.3%, and 1.7% of the US population in 2010 (US Census 2011a,b, 2012)).
[12] About 25% of the doctorates awarded to blacks in 2006-2010 were in Education (National Center on Education Statistics). The comparable figure for whites and Hispanics was about 12%.

warded each year in the United States are awarded to Asian-Americans or Asian nationals, and are predominantly in the STEM fields.

IV. Detailed trends in employment by gender and race/ethnicity at the University of Connecticut

This section briefly examines the employment, tenure, and rank differences among the UConn faculty and compares them to national trends introduced in the last section.

A. Gender. Figure 3 shows the percentage of women in full-time positions at the University of Connecticut in various employment categories for academic years 2003-2012.[13] In the middle AY 2012/13, approximately 41% of the faculty, 44% of junior faculty and 24% of full professors were female. Based on a 2006 national AAUP study, this ratio is slightly better than average for other public doctoral granting universities (AAUP 2006, p.20).[14]



Viewed across disciplines, the picture of growing gender equity in hiring is more varied. Table 1 reports the share of female tenure track faculty by school or college, with the College of Liberal Arts and Sciences further divided into four categories: Humanities, Life and Behavioral Science, Physical Science and Social Science.[15] There is clear evidence of division between male and

[13] Our classification for 2003-2012 differs slightly from OIR records, because we include continuing and new employees hired during the academic year, and include only bargaining unit members.

[14] According to the AAUP report, at UCLA in 2006, 37% of tenure track (assistant) professors were female, and 23% were full professors. At Wisconsin-Madison, 42% of tenure-track faculty and 25% of full professors were female.

[15] The CLAS departments in each subdivision are: Humanities – English, History, Journalism, Modern and Classical Languages, Philosophy; Life and Behavioral Science—Ecology and Evolutionary Biology, Linguistics, Physiology and Neurobiology, Psychology, and Micro and Cell Biology; Physical Science--Chemistry, Geography, Marine Science, Mathematics, Physics, Statistics, Social Science- Anthropology,

female dominated disciplines. Engineering, Business, and to a lesser extent CLAS-Physical Science, are male-dominated: more than 80% of tenured/tenure-track faculty in all three schools/divisions is male. The School of Social Work and School of Nursing—both professions historically dominated by women—have an overwhelmingly female faculty. Education, CLAS-Humanities and CLAS-Social Science are closer to gender parity. The other schools fall somewhere between 30% and 40% female. By far the largest gains have been made in the (relatively small) School of Pharmacy.

Table 1- Percentage of female tenured/tenure-track faculty by school or division of CLAS

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Social Work	77.3	76.9	75.0	76.9	80.8	80.0	80.0	81.5	81.5	81.5
Nursing	89	87.5	90.5	94.4	90.0	81.8	82.4	81.3	80.0	81.3
Education	43.9	42.6	44.1	41.6	41.1	43.7	47.8	47.7	48.4	47.5
Fine Arts	36.2	36.2	33.3	35.5	35.0	38.7	40.7	40.4	39.3	40.0
CLAS	31.3	33.6	34.3	34.7	34.4	34.8	35.7	36.4	37.4	36.9
CLAS-Humanities	*42.9*	43.7	43.4	43.8	44.7	45.5	45.5	45.7	46.8	45.7
CLAS-Social Sci	*38.2*	43.2	46.0	46.5	44.0	43.4	44.0	46.6	46.8	48.4
CLAS- Life/Beh	*32*	33.1	32.4	32.6	32.1	33.3	35.0	34.3	34.5	33.3
CLAS-Physical	*13.9*	14.6	14.6	15.0	16.7	16.8	17.1	17.6	20.0	17.5
CANR	33.7	33.3	32.7	29.9	30.2	34.4	36.6	36.9	39	41.9
Pharmacy	20	23.8	26.1	28.0	26.9	23.1	25.0	33.3	38.5	37.0
Business	17.7	16.2	16.8	14.3	14.7	17.1	18.6	18.8	17.6	16.2
Engineering	11.2	11.7	13.2	15.4	13.2	12.7	12.6	13.7	13.1	13.6

* on 1/22/13

The paucity of female faculty nationally in physical sciences and engineering is well documented (National Research Council 2010). Trends at the University of Connecticut are not out of line with those trends. Similarly, high female employment ratios among tenure track faculty in CLAS-Social Science and CLAS-Humanities also appear to be consistent with national trends.

An apparent underperformer in gender hiring and promotion is the School of Business. In a study of faculty at nationally accredited business schools between 2002-2009, Barber and Palmer (2009) also reached this conclusion. They documented a significant increase in female tenure track faculty nationally between 2002 and 2009 from 21% to 25%, a trend that is not in evidence at the School of Business. They found that the University of Connecticut had significantly lower female faculty representation than its large faculty size, public status, percent of tenured faculty, and geographical location would predict. Their full model suggested a percentage of female faculty that was 10-12 percentage points higher than observed.

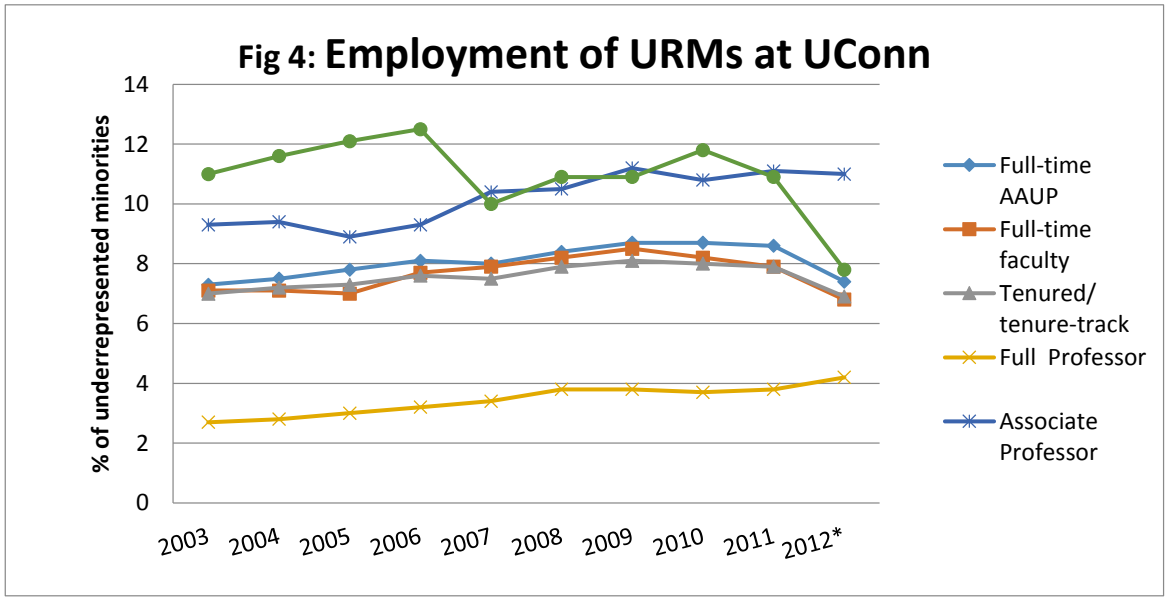
Communications, Economics, Human Development and Family Studies, Political Science, Sociology, Women's Studies and Public Policy.

Overall, trends in faculty hiring at the University of Connecticut suggest that women have increased their share of faculty positions in most areas of the university. The percentage of assistant professors who are women is about equal to the percentage of new female PhDs, and has been for at least a decade. The trends for associate and full professors are consistent with the pipeline metaphor: as female faculty move through early career, their representation at higher ranks should increase. It is, of course, impossible to say whether this progress will continue to until it reaches effective parity at all levels of the faculty, but progress is being made in that direction.

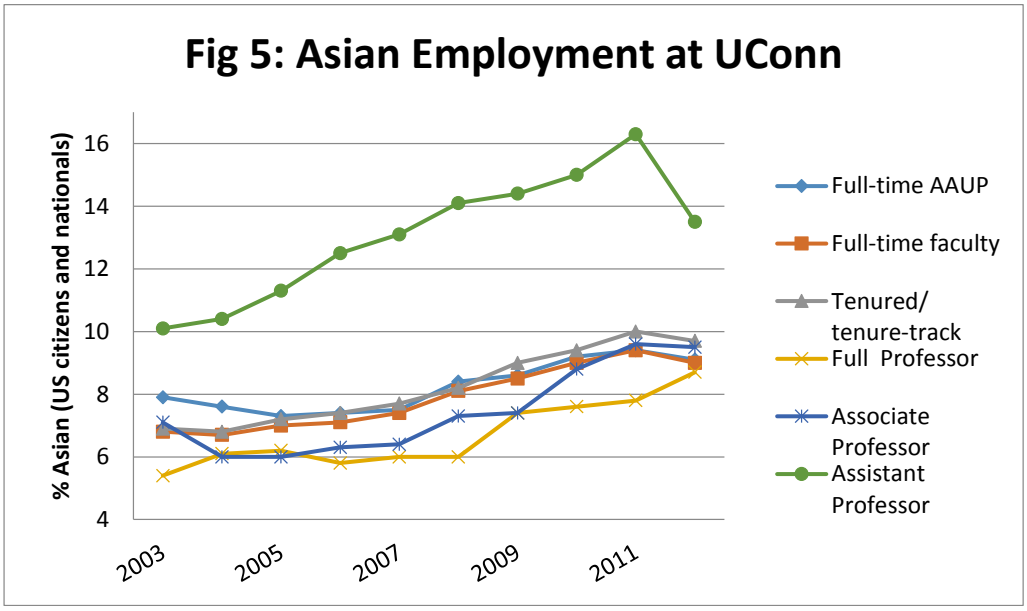
Challenges still exist. Engineering and Physical Science are fields where many research universities struggle with female recruitment and retention, no doubt due in part to a paucity of female PhDs in those fields. Lackluster performance in the School of Business may be more unexpected given the performance of similarly situated business programs in the region and around the country.

B. URMs and Asians. Figure 4 shows the percentage of full time positions held by underrepresented minority groups (blacks, Hispanics, and Native Americans) in various employment categories for 2003-2012. As discussed below, higher education attainment and employment for Asians has been above parity with whites for some time, so results for that group are reported separately.

There have been only small changes in the proportion of URM employed at the University of Connecticut. This change has been mostly in the direction of more diversity, particularly at higher ranks of the faculty. (2012 appears to be a notable exception.) The percentage of URM at the assistant and associate levels at the University of Connecticut now appears to be near or above the mean among all higher education institutions and relative to the share of new PhDs, though it remains quite low relative to the share of these groups in the national population. The recent drop in URM junior faculty, from around 11% in 2011 to around 8% in 2012, points to some possible retention problems with long-term implications.



On the other hand, there is clear evidence that Asians as a group have increased their proportion in the faculty, mainly in tenured/tenure-track positions (Figure 5). Overall employment grew from 8 to 9 percent between 2003 and 2012. But growth in that period in tenured/tenure track positions was even faster, increasing from 7% to 10%. At the junior faculty level about 14% of the UConn faculty in 2012 identifies as Asian. This is an increase from 10% in 2003.



The academic PhD market is a global one. About one-quarter of the 48,000+ PhDs earned in the United States each year are awarded to temporary visa holders (i.e., non-residents); and most of these are awarded in STEM fields to citizens from Asian countries (particularly India and China). Because individuals in this group have increasingly sought to remain in the United States, they have provided a large increase in manpower for US PhDs in Science and Engineering faculties (NSF 2006).[16]

Table 2 provides further information about URMs in tenure track faculty by School and CLAS subdivision. This table suggests that there are clear pockets of greater and lesser representation of URM groups around the University. As with gender, these patterns conform to diversity trends nationally. Members of URMs are more than one-third of the faculty only in the School of Social Work. In Fine Arts, Agriculture and Natural Resources CLAS-Humanities, and CLAS-Social Sciences, there are somewhat larger percentages of URM. All of the schools with above average URM faculty, except Fine Arts, have seen modest gains over the last several years. Truly large gains in the aggregate have come only in the School of Social Work. Performance in URM recruitment is surprisingly poor in the School of Education, where there has been a large decline in representation of URM faculty. Despite being a field with a

[16] Between 1990 and 1995, roughly 2/3s of 80,000 PhDs awarded to non-permanent residents from Asia. That figure is much more than the total number of PhDs awarded to Asian-Americans. Since the vast majority of these (80%) indicated an intention to stay in the US

disproportionate number of URM PhDs-- albeit many PhDs are not trained for research faculty positions-- it has one of the least ethnically diverse faculties, and it has become less ethnically diverse in the last decade.

Table 2- Percentage of underrepresented minorities by school or division of CLAS

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Social Work	27.3	30.8	32.1	34.6	34.6	36.0	36.0	40.7	37.0	40.7
Nursing	0	0.0	0.0	0.0	5.0	4.6	5.9	6.3	0.0	0.0
Education	12.2	11.1	8.5	7.7	6.9	8.5	7.5	7.7	4.7	4.8
Fine Arts	13.8	13.8	13.3	12.9	11.7	12.9	13.0	10.5	12.5	6.8
CLAS	5.9	6.1	6.3	6.8	6.3	6.7	7.0	7.0	7.6	6.3
CLAS-Humanities	*6.7*	7.4	8.4	9.0	7.3	9.1	9.1	9.3	10.3	9.6
CLAS-Social Sci	*9.2*	8.1	8.0	8.3	8.8	8.4	8.8	8.7	9.5	8.2
CLAS- Life/Beh	*1.6*	2.2	2.8	2.9	2.9	3.5	3.6	2.9	3.6	3.4
CLAS-Physical	*4.6*	5.1	5.6	6.1	5.3	5.2	5.5	6.1	6.0	4.1
CANR	7	7.5	8.2	8.3	9.3	11.1	12.2	10.7	10.0	9.6
Pharmacy	5.0	4.8	4.4	4	3.9	3.9	4.2	4.2	3.9	3.7
Business	5.9	6.7	6.5	5.7	6.7	6.6	7.1	5.8	5.4	5.6
Engineering	4.1	3.9	3.8	4.8	4.7	3.6	3.6	4.3	4.1	4.0

The distribution of tenure/tenure track faculty of Asian descent across disciplines is, in some respects, a mirror image of gender (Table 3). Schools and Colleges with high female representation—Social Work, Nursing, Education, CLAS-Humanities, CLAS-Social Science—have few faculty of Asian descent. Conversely, disciplines with historically low female representation—engineering, physical sciences, and business—have much higher and increasing faculty of Asian descent.

Table 3- Percentage of Asians by school or division of CLAS

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Social Work	9.1	7.7	3.6	3.9	3.9	0	0	0	0	0
Nursing	5.3	8.3	9.5	5.6	0	4.6	5.9	6.3	6.7	6.3
Education	0	0	1.7	1.5	1.4	1.4	1.5	1.5	1.6	1.6
Fine Arts	1.7	1.7	1.7	1.6	3.3	3.2	3.7	3.5	3.6	1.7
CLAS	4.7	4.6	4.6	4.7	4.8	5.3	5.5	5.3	6	6
CLAS-Humanities	1.7	1.5	1.4	1.4	2.7	2.6	2.6	2	2.6	2.6
CLAS-Social Sci	2.3	2.7	2.7	2.6	2.5	3.6	4.4	4.4	5.3	6.3
CLAS- Life/Beh	2.4	2.2	2.1	2.2	2.2	2.1	2.1	2.2	2.9	2.7
CLAS-Physical	10.8	11	11.1	10.9	11.3	12.9	13	12.8	13.3	12.9
CANR	8.1	7.5	7.1	6.2	7	8.9	8.5	10.7	12.2	11.7
Pharmacy	5	4.8	4.4	4	3.9	3.9	4.2	4.2	7.7	7.4
Business	10.3	9.5	11.7	17.1	18.7	18.4	21.4	21.7	17.6	19.4
Engineering	19.4	21.4	23.6	26	26.4	28.2	30.6	31.6	33.6	31.7

An ostensible goal of gender and ethnic diversity in the faculty is to provide diverse perspectives and role models for students in all fields of study. Yet a pattern of segmentation that may be at odds with that goal has developed at UConn (and perhaps at other institutions).

Faculty in disciplines like Nursing, CLAS-Life and Behavioral Science, and Education exhibit gender diversity, but are almost all white. Faculty in Engineering, CLAS-Physical Science, and Business have low gender and URM diversity, but have high and rapidly growing faculty of Asian descent. Still other faculty—Fine Arts, CLAS-Humanities, and CLAS-Social Science-- have high gender and URM diversity, but quite limited numbers of Asian faculty. Only one UConn division, College of Agriculture and Natural Resources-- appears to have achieved reasonable diversity in all three areas. Thus, while the UConn aggregate gender and ethnic diversity has grown, in almost all Schools and Colleges diversity remains incomplete in arguably important ways.

V. Gender and Racial/Ethnic Pay Equity

The basic methodological approach to evaluating salary inequity in this study is multivariate regression analysis. Because pay is a complex function of multiple factors that might be incidentally correlated with gender or racial or ethnic group status, multiple regression analysis is generally considered an essential step to isolating salary equity in large-scale studies (Haignere 2002). We looked at three different perspectives of pay in order to evaluate equity between women and men and between underrepresented minority groups and whites.

1. *9-month salary*. This is the standard indicator used in evaluating faculty pay equity in most studies. Total, annual "regular" payroll salary at the start of the academic year is divided by the appointment term (9,10, 11, or 12 months).
2. *Merit raises.* Merit raises are based on changes in salary based on discretionary increases each year. Not all elements of annual raises for UConn faculty are discretionary. AAUP contracts typically provide for flat rate and mandatory percentage increases, flat rate increments for changes in rank (e.g., following promotion from assistant to associate professor), in addition to merit pay. Merit comprises three components: normal merit procedures, additional merit award, special achievement, and other discretionary awards.[17] We look at merit increases awarded annually combining the three categories.
3. *Starting salary* for new hires. One possible source of persistent bias in salary might arise from systematic differences in initial salaries provided to mean and women or ethnic minorities. To explore this possibility, the study looks for systematic differences in starting salary based on gender and minority status among new assistant professors with a PhD date within 3 years of the hire date in order to control for other work experience.

[17] The payroll we analyze includes the vast majority (>95%) of merit awarded in the August snapshots in a merit category. However, we did find some cases where the merit category did not match the final salary increases from one year to the next after subtracting mandatory increases. These "off-cycle raises" are included as merit awards, since they are discretionary.

Our dataset contains more or less complete payroll records of bargaining unit members for up to ten years. Each person has records for their period of employment on the faculty. Individuals employed after 2003 or leaving before 2012 will have fewer records in the dataset. For technical reasons, we compute annual estimates for overall salary, but pool observations across time for merit and starting salaries.[18]

We discuss the results of our analysis for each of the three types of pay equity measurement in a different subsection. Each subsection is broadly organized in the following way. First, we provide a basic comparison between the average difference in pay for the groups being compared, i.e., between men and women, between URM and non-URM, and between Asian and non-Asian. These specific results are provided for illustrative purposes; they should not be taken as accurately representing the amount gender or ethnic bias, because there are no controls for things other than gender or race that may affect salaries.

Next, we employ a multivariate regression model to estimate the size of differences in pay between genders and racial/ethnic groups after controlling for a series of other determinants salary that appear in many pay equity studies. These estimates of gender and ethnic group pay differences that provide a more appropriate basis for inferring whether or not systematic differences between men and women or URM and dominant racial groups actually exist.

Finally, we report the results of a decomposition analysis based methods developed by Oaxaca (1973) and Blinder (1973). This is a conventional, general approach to estimate occupational wage inequality in the general labor force. The approach decomposes the multiple regression model run on both groups (i.e., males and females, or URM and non-URM) and estimates how much differences are based on different endowments (i.e., degrees, experience, etc.). The residual difference in effect will be considered the inequity.

In three years covered in the study, there were no contractual pay increases, or regular merit raises. These freezes were effective at the start of AY2009, AY 2011, and AY2012, awarded at the end of the prior academic years. Promotional raises were still paid, but they are flat, contractual amounts, not discretionary merit raises. There were also some "off-cycle" raises made to a small percentage of employees for equity, retention, or other reasons, and these are counted as merit in the freeze years.

A. Nine-Month Salary Analysis.

1.<u>Average salaries by year and group</u>. Table 4 provides, for each year, the mean nine-month salary and difference in mean salaries between the comparison groups. For individuals with an appointment term greater than nine months in the year, nine-month salary is determined by dividing salary by the appointment period and then multiplying by nine.

Among the faculty, there are very large differences in the average salary of men and women and URMs and non-URMs. Female faculty salaries are only around 80% of men's. URM faculty salaries are 85-90% of the salaries for whites and Asians; but this gap has narrowed somewhat in recent years. Overall differences in salary between Asian and non-Asian faculty are comparatively small.

[18] The main reason we do not pool salaries, is that we essentially end up having to analyze change in salaries, though discretionary change in salaries is examined by looking at merit.

Table 4: Differences in Average Salary among Women and Minority Racial/Ethnic Groups

		Difference in mean salary for:		
Year	Average 9-month salary (combined)	Women/ men	URM / non-URM	Asian/ non-Asian
		Faculty*		
2003	81500	0.83	0.83	1.00
…				
2009	95900	0.82	0.86	1.01
2010	99000	0.81	0.87	1.01
2011	98800	0.81	0.88	1.00
2012	98300	0.81	0.91	1.02
		Non-Faculty (non-Athletics)*		
2003	49600	0.79	0.78	0.78
…				
2009	59400	0.88	0.83	0.83
2010	62200	0.89	0.76	0.83
2011	60700	0.86	0.73	0.85
2012	61400	0.81	0.86	0.91

*- differences statistically significant at p<.01 except all for Asian/non-Asian

Note: because the ratio of treatment to control group varies, the means for treatment and control groups salaries cannot be computed from the table entries

For non-faculty outside of Athletics, average salaries are lower. There is a similar pattern of large differences between average salaries of men and women, though there is generally more parity in this group smaller. We also see much lower salaries for Asians compared to non-Asians in the non-faculty group. We see larger, gaps between salaries in URM and Whites+ Asians in the non-faculty ranks, and these seem to vary considerably from year to year.[19]

2.Regression analysis. Multivariate regression permits us control for factors that explain differences in pay that are not attributable to bias. For example, full professors of any gender or race are paid much more on average than assistant professors (at least within the same discipline!). The fact that the University has a higher ratio of male to female full professors than its ratio of male to female assistant professors means that, even if all faculty *of the same rank* had identical salaries, average pay across all ranks would be higher for men than women.[20]

[19] Average salaries and the discrepancies for women and Asians would be higher if we include Athletics in non-Faculty, but the URM gap declines considerably.

[20]Building a more gender-diverse faculty might involve increasing the ratio of female assistant professors faster than the ratio of female full professors. Hiring more female full professors at the going full professor salary would work. But, while that would raise the (new) average of women's salaries, it confirms that it is the shortage of women at higher ranks, not bias in *salary-determination* at a given rank that is the problem.

Such a difference is not due to gender bias in salary setting, but to gender distributions in each faculty rank. [21]

There is some dispute in the literature about whether or not promotion decisions are also gender biased by the same processes that determine pay. This leads some to advocate omitting rank from regression models in estimating pay. However, there is little dispute that rank is a widely accepted and reasonable measure of professional performance, as judged both internally and externally, since evaluation is partly by outside peers and the wider university. One seldom finds alternative measures of performance— research grants, publications, teaching performance, etc.-- in studies of pay equity that omit rank, and in the absence of such measures, rank is a good proxy. If rank is both a proxy for quality and for bias, then omitting it leads to overestimates bias that are as large, or larger, than the costs of including it.

Several studies looking specifically at the question of rank bias have found that including rank imparts little substantive impact on estimates of pay bias (Boudreau, et al. 1997, Strathman 2000, Becker and Toutkoushian 2003). Therefore, we include rank, and partially resolve the possible bias by estimating (when technically feasible) an interaction between gender/race and rank, acknowledging that the ideal solution is direct controls for productivity or quality and an appropriate instrument for rank (Strathman 2000).

Pay equity studies typically include a number of other control variables that can be expected to account for differences in salaries that are not due to bias (Haignere 2002). These are:

1. *Highest degree.* We distinguish between Doctoral-level degrees, MA-level degrees and other. A list of which degrees are considered in which category is provided in the Appendix.
2. *Years since highest degree*. This provides an estimate of likely experience at the professional level.
3. *Years since hire*. The amount of time at an institution is often considered an indicator of institutional experience.
4. *Square of years since hire and years since degree*. Previous research indicates that the effect of degree and hire dates is often curvilinear, with the positive effect of experience declining in the "out years." This is reasonably approximated with a square term.
5. *Current rank*. As explained above, rank does in part reflect assessment of performance, and thus a basis of higher salary. To address possible correlation of pay bias and rank bias, we will estimate an additional term in the model interacting rank and the group identifier- Female or URM. We should not see within rank gender/race differences net of other factors.

[21] This distribution in rank problem might be best remedied in the short run by hiring externally to equalize gender distribution at higher ranks.

6. *Special title*: we also include an indicator to represent an "administrative promotion," such as serving as department head or a program/center/institute director.[22]
7. *Department*. This is widely used in gender equity studies as a way to control for discipline-specific market differences in salary. For example, Business or Engineering faculty tend to start at higher salaries than Sociology or English faculty due to the overall supply and demand.[23] Because studies (including previous equity studies at UConn) examination salary data for a single year, they are unable to control for all 50+ departments at UConn. We can do so here, because we use salary information for a number of years.
8. *Year*. Since salaries and raises increase over time, based primarily on the contractual raise pools, we should expect the average salary and merit amounts to differ by year. We introduce a dummy variable for each year save the most recent in all of the time-varying models.

The logic behind the multiple regression approach to uncovering salary inequity is simple. If we find that, after holding constant all of the above factors, being female (or a URM) predicts a lower (higher) salary then there is evidence for systematic salary inequity.

Table 5 shows, for each rank and controlling for all of the other factors in the model, the percentage difference between salaries of a) women and men and b) URMs and non-URM. The results again exclude staff in athletics, largely to control for the effect of salaries of coaches in revenue sports. Reported coefficients are the percentage differences in salary (or salary increase) for women or URM relative to men (or non-URM).[24] Estimates for control variables (excluding fixed effects for department) are provided in the Appendix (A4).

The results indicate non-trivial disparities by gender among AAUP members who are tenured or tenure track faculty. In recent years, female faculty earn about 3-5% less than men. For example, among assistant professors in 2012, after accounting for differences in salaries by department, due to years since degree, degree level, date of hire, and whether they hold a special title like department head or director, women earned almost 5% less than men. Among associate professors, the difference was over 3%, and among full professors it is almost 4%. There are also disparities in the non-faculty are even higher, around 10%.

Among non-tenure track faculty-- lecturers, instructors and assistant professors in residence (APIR) -- female salaries are *higher* than male salaries on average, suggesting the possibility of

---

[22] A t-test indicates that women, URMs and Asians are half as likely to have special titles as men, non-URMs and non-Asians, respectively. However, including or excluding this in the model does not have a noticeable effect on the estimated effects of gender and race or ethnicity.

[23] There is a problem with this common claim. Lower salaries in non-STEM fields have been interpreted as a market response to greater supply in fields that women enter. However, if the lower labor supply curve idea is correct for the social and life sciences and humanities, then the rapid expansion of foreign national PhDs should have lowered the labor supply curve in physical science and engineering fields. That begs the question why salary differences across the disciplines have not remained equal.

[24] Because salary and raises are log-normally distributed, we use the log of salary or raises as the dependent variable in the regression models.

reverse bias. For example, female APIR earn around 10% *more* than their male counterparts controlling for rank, degree, department, experience, and years at the university. Substantively, these gender differences significant. First, they persist over time. In all of the ranks mentioned pay gaps have been large for some time, and may have become larger in the last few years. Second, the average gender gaps are large in dollar terms. The average 9-month salary of a female tenure track faculty member is around $91,000. A 3% discrepancy represents around $2700 per year. For non-tenure track faculty, whose average salary is about $59,000, a 10% disparity amounts to $5900.

Table 5: Regression estimates of differences in salary by by Rank for Women and URM faculty

	Full Professor		*Associate Professor*		*Assistant Professor*		*Lecturer*		*Instructor*		*Non-faculty (non athletics)*		*Professor in Res/Visiting*		*Associate in Res/Visiting*		*Assista Res/Vis*
									Women								
2005	-0.011	ns	-0.022	ns	-0.012	ns	**-0.171**	**	**0.22**	**	**-0.118**	**	**0.182**	*	-0.011	ns	0.028
2006	-0.013	ns	-0.013	ns	**-0.032**	!	**-0.136**	*	**0.24**	**	**-0.08**	**	**0.21**	*	-0.019	ns	0.029
2007	-0.011	ns	-0.002	ns	**-0.043**	+	**-0.134**	*	**0.192**	**	**-0.089**	**	**0.217**	*	0.003	ns	**0.075**
2008	-0.02	ns	-0.01	ns	**-0.027**	!	**-0.115**	+	**0.119**	+	**-0.106**	**	0.081	ns	0.086	ns	**0.114**
2009	-0.025	ns	-0.019	ns	**-0.035**	+	-0.065	ns	0.026	ns	**-0.091**	**	**0.129**	!	0.058	ns	**0.102**
2010	**-0.031**	!	**-0.028**	!	**-0.049**	*	**-0.149**	*	-0.007	ns	**-0.096**	**	0.071	ns	-0.01	ns	**0.103**
2011	**-0.043**	*	**-0.035**	+	**-0.04**	+	**-0.123**	!	-0.006	ns	**-0.108**	**	0.151	ns	-0.002	ns	**0.09**
2012	**-0.031**	+	**-0.034**	+	**-0.048**	*	0.039	ns	0.046	ns	**-0.073**	*	0.139	ns	0.009	ns	**0.11**
									Underrepresented Minorities								
2005	**-0.099**	*	-0.026	ns	-0.009	ns					**-0.118**	**					-0.011
2006	-0.048	ns	-0.051	+	-0.013	ns			-0.153	ns	**-0.073**	**!**					0.012
2007	-0.051	ns	**-0.063**	*	-0.017	ns			-0.045	ns	-0.051	ns			-0.127	ns	0.026
2008	-0.017	ns	-0.057	*	-0.005	ns					-0.019	ns	-0.05	ns	-0.166	!	0.073
2009	-0.012	ns	***-0.053***	+	-0.042	ns					0.04	ns	**-0.142**	ns	**-0.166**	!	**0.078**
2010	-0.011	ns	**-0.053**	+	-0.025	ns			-0.036	ns	0.003	ns	**-0.14**	!			**0.071**
2011	-0.019	ns	-0.025	ns	-0.017	ns					-0.018	!			**-0.168**	!	0.035
2012	-0.026	ns	-0.005	ns	-0.021	ns					0.00	ns					-0.002

Estimates are coefficients on ln(salary), so they are percentages. For example, -.0011 in the topleft cell of the table means that in 2
earned 1.1% less than males, after taking into account the efect sof the control variables in determining salary
Blanks for URM are due to the face that there was not enough data to compute estimates.
! p<.20, + p<.10, * p<.05, ** p<.01 ns p>.20

Results for pay inequity based on race or ethnicity indicate somewhat smaller, disparities among the tenure track faculty. Discrepancies appear to have declined somewhat over time, though at all ranks of tenure track, URM still earn 2-3% less than whites + Asians in recent years. The move to salary parity for URM is perhaps most pronounced among the non-faculty. The fact that regression estimates for non-faculty alternate between just above and just below parity from one year to the next (column 6) suggests that differences from parity in any one year are reasonably attributed to random fluctuations. For a number of ranks, there are not enough observations to generate unique estimates for URM.

3. Decomposition Method. The decomposition method of estimating salary bias involves estimating the general regression model for the last section for both categories (e.g., male and female) and separating differences based on characteristics of the groups and residual differences. The former can be thought of as differences in qualifications, while the latter is usually interpreted as "bias" (Oaxaca and Ransom 1999).

Table 6 shows results which suggest that the overall amount of bias in recent years is around 3-4% for both women and URM groups. We are unable to specify separate estimates for different ranks, but we instead generate an estimate of the overall "average" bias. So roughly speaking, women/URMs are paid about 2-3% less than men/whites+ Asians in the last couple of years. Things have gotten slightly worse for women and better for URMs in the most recent years, but the gaps remain.

Table 6: Pay discrimination based on Oaxaca decomposition analysis

Female

	Male mean	Female mean	Gap	Qualifications	***Bias***
2008	11.39	11.16	0.230	0.218	**0.012**
2009	11.42	11.19	0.230	0.213	**0.017**
2010	11.45	11.23	0.220	0.205	**0.015**
2011	11.46	11.23	0.230	0.20	**0.030**
2012	11.45	11.23	0.210	0.19	**0.020**

Underrepresented Minorities

	Non-URM Mean	URM Mean	Gap	Qualifications	***Bias***
2008	11.35	11.22	0.130	0.08	**0.050**
2009	11.33	11.22	0.11	0.08	**0.030**
2010	11.37	11.25	0.120	0.073	**0.047**
2011	11.37	11.27	0.100	0.06	**0.040**
2012	11.37	11.29	0.080	0.069	**0.011**

Means are condition mean of ln(9 month salary), bias can be read as .05= 5%

B. Analysis of Merit Awards.

The second indicator for evaluating salary equity is merit pay awards. Recent AAUP collective bargaining contracts make a portion of annual salary increases—typically around 2/5's of the

total-- merit-based.[25] The specific rules vary by school and department, and are required to be approved by the departments. [26]

1.Average merit award by year and group. Table 7 reports differences in average merit awards by gender and URM status. The non-zero average in the "freeze" years-- 2009, 2011 and 2012—reflects some "off-cycle" merit awards, granted outside of the regular merit process.[27] The basis for these awards may be market pressures or some types of equity adjustment, since such awards were permitted under the recent changes to the collective bargaining agreement. Table 7 suggests that in normal raise years, women and URMs on the faculty receive merit awards that are a fraction (80-90%) of white males and Asians on average. There is little difference between white males and Asians in normal years. Since these differences are in absolute dollar terms, a lot of the differences (as we see below) are a function of things that result in different average salaries. If men earn 10% more than women and raises are only allotted as percentages, their *absolute* raises would be 10% higher

2.Regression Analysis. The multiple regression model developed for merit awards is similar to the one we developed in the last section. We control for department, years since degree, highest degree, years since hire, special title, and rank. We also add controls for promotion in rank and promotion/demotion to a special title-- like department head or center director-- because we think these events might increase a merit award in the year that the promotion is granted. As with salaries, merit increases were converted to a nine-month salary equivalent and logged. This means that any effect of a title or promotion is not due to a longer appointment term but to a change in the base salary. Furthermore because ln(0) is undefined, we consider only positive merit awards. [28]

Table 7: Average Merit Award among Women and Minority Racial/Ethnic Groups

		Difference in mean salary for:		
Year	Average 9-month merit	Women/ men	URM / non-URM	Asian/ non-Asian
		Faculty*		
2004	2583	0.92	0.78	0.98
…				
2009	254	0.32	0.28	0.37
2010	3013	0.91	0.84	1.00
2011	209	0.53	0.89	0.63

[25] The non-merit raise structure is mostly percentage based. A smaller part is a flat amount.

[26] These merit procedures were not reviewed in preparing this report. While it is conceivable that merit procedures could be biased against women or URM, we have no knowledge of that being (or alleged to be) the case.

[27] Departments were required by the Provost's office to go through some sort of *notional* merit procedure in the freeze years as a basis for computing actual merit awards effective 2013-14.

[28] In a normal raise year, most people receive some merit. Women and URM are just as likely as others to get a positive merit award. (We estimated this with our control variables in a logistic regression model where 0= no merit, and 1=some merit.) Thus, there is no indication of unequal selection into the positive merit pool based on gender or ethnicity.

2012	389	0.77	1.11	0.44
		Non-Faculty (non-Athletics)**		
2004	1664	0.94	3.13	0.91
…				
2009	0			
2010	2086	1.35	0.88	0.78
2011	121	0.98	0.00	0.00
2012	147	4.80	12.40	0.00

*- differences statistically significant at p<.01 except all for Asian/non-Asian
** large ratios are due to small number of merit raises in "freeze" years
Note: because the ratio of treatment to control group varies, the means for treatment and control groups salaries cannot be computed from the table entries

Since we are estimating changes in (a part of) salaries that are reviewed annually, and can be considered more or less independent of each other, it is reasonable to pool data across years. Doing so, however, raises some technical estimation complications. It requires that we allow for the possibility that unobserved individual-level factors affect the variation in merit awards from year to year. To account for this, we estimate models allowing for clustering of errors at the individual level. We also add a control (dummy variable) for each year, because the average size of merit awards varies year to year with the size of the total payroll.[29]

Table 8 reports the estimates of the effect of being female or a URM on the size of the merit award by rank. There is some evidence of gender differences in merit awards among the tenure track faculty, but they go in opposite directions. Among full professors, merit awards for women are 6% lower than for men when controlling for department, experience, special titles, and promotion; but among associates they are about 6% higher. For assistants, female merit awards are around 1.5% lower than men's awards. We also see that women holding in-residence positions can expect 10-20% higher merit awards than similarly situated men, and 40% higher awards than men at the level of Professor in Residence.

There is more consistent evidence of discrepancy in merit awards for URMs. Merit awards among the tenure track faculty are around 15-18% less for URM than Whites + Asians. There is also evidence of even larger differences at other ranks, sometimes much larger.

It is important to keep in mind that the percentage differences in merit awards seem small in absolute terms, but they can be cumulative. If the average merit award is, say $3000, a 15% discrepancy is $450. But that estimated discrepancy is for *each year*. So, over a 5 year career, the cumulative effect on salary could much greater. Moreover, the effect of having a lower base suppresses the amount of mandatory raises.[30] Among the non-tenure track faculty, it is plausible that large differences we observe are not really cumulative, because individuals in

[29] The normal raise process uses total payroll as a basis for determining the merit pools. The payroll changes annually with payroll turnover and previous increases.

[30] The larger differences in nine-month salary suggested in the previous section support the idea of a cumulative effect of merit discrepancies on salary.

these ranks used in the estimates are typically not at UConn for many years. But this makes them no less problematic from a standpoint of equity in that rank.

3.Decomposition Method. We used the Oaxaca method to estimate the gap in merit awards that is not explained by differences in qualifications. We use the same controls as in the conventional regression model, and pool the data. These results indicate that on average inequity in merit awards is quite small on average for women, but large for URMs. The residual gap between men and women that is not explained by basic qualifications is approximately 1%. For URM, on the other hand, the residual gap in merit awards is approximately 15%. Of course, this fact does not make them any less potentially problematic: that there are systematic discrepancies in pay for short-term employees based on race or gender is not less discriminatory than doing it for long-term employees.

Table 8: Regression estimates of differences in merit awards by Rank for Women and URM faculty

Full		*Associate*		*Assistant*		*Lecturer*		*Instructor*		*Non-faculty (non athletics)*		*Professor in Res/Visiting*		*Associate in Res/Visiting*		*Assistant in Res/Visiting*		*Extension faculty*	
Women																			
-.067	ns	.059	ns	-.014	ns	-.11	!	.11	ns	.072	!	.42	+	.25	ns	.12	+	.17	*
Underrepresented Minorities																			
-.144	ns	-.180	*	-.146	+			-.22	ns	-.10	!			-1.23	!	-.055	ns	-.18	!

Estimates are coefficients on ln(salary), so are percentages, e.g., -.10 is 10% less, .02 is 2% more
Blank cells had insufficient data to estimate

! p<.20, + p<.10, * p<.05, ** p<.01 ns p>.20