

Dear Colleagues,

Nov, 2016

Please find attached a study analyzing Junior Faculty Gender Demographic Data from Science and Engineering departments at Harvard over the past 15 years.

What is this study? We collected data on the hiring, promotion, and retention of tenure track faculty for each department for the period **Jan 2000 - Sept 2015** and then analyzed the data to consider promotion and retention as a percentage of the total faculty initially hired.

Why did we conduct this study? We are seeking to provide detailed and department-specific data that can serve as a catalyst for identifying and addressing problems that lead to gender inequity in tenure outcomes. As was highlighted in the Crimson in October 2015, the FAS annual report showed a retention problem for women junior faculty; however, in the sciences and engineering, many of us felt that the problem was difficult to address without department-specific data. This kind of directly comparable data will help departments to evaluate their performance and identify problem areas.

What does the study reveal? The most dramatic disparity revealed by the study is a *15-point difference between the percentage of men (84%) and women (69%) who stay on to be reviewed for tenure*. Combined with a difference in the success at tenure (79% for men, 73% for women), this leads to an almost 20% difference in the overall likelihood that faculty of different genders will eventually be tenured. In addition, there is significant unevenness across departments, in both hiring and retention by gender.

What can we do? *This kind of pattern has no simple, easy solution and will require substantial commitment by University administration and collective action by faculty of all genders.* There are three major components that should be highlighted: (1) **Implicit bias**, which can result in unbalanced teaching/service loads and evaluation bias in promotion cases, compounded by a lack of investment in data collection and accountability (e.g. many department chairs reported having no means of tracking teaching/service loads, and little knowledge of University Hall's hiring best practices, despite their wide dissemination) (2) **Institutional and structural barriers**, such as problematic maternity/parental leave policies, inadequate infant/early childcare on campus, and poor support for dual academic career couples that is substantially behind our peer institutions. For example, MIT has established multiple high-quality daycares in their new science-eng buildings with strong junior faculty priority in the past ten years. In contrast, Harvard's daycare options have remained static, and there are no concrete plans for childcare in Allston. (3) **Mentoring and culture problems**. We also received disturbing reports of persistent culture problems in certain departments, including explicit bias in mentoring and resource distribution, as well in some cases overt sexism going unchallenged. This was also brought up in the FAS annual report, the faculty climate survey, and exit interviews.

Without meaningful investments in all three areas, we are substantially disadvantaging the junior women we hire, to our own detriment. We would encourage you to use these data as the basis for formal and informal brainstorming within your department as to how issues can be tackled, and share the results of your discussions with other departmental chairs, as well as your Deans. Given our intellectual assets, we know that we can find creative and effective solutions to these challenges. But this needs to become a priority.

Sincerely,

Radhika Nagpal, Elena Kramer, [and others]

Table 1: Overall Analysis of Harvard Science/Eng Junior Hires Jan 2000- Sept 2015

Basic retention measures how many people stayed long enough to go up for tenure. **Final retention** measures how many people stayed overall (i.e. did not leave before tenure, did not leave due to denied tenure, or did not leave soon after getting tenure). We are analyzing data on all faculty **hired between January 2000 and Sept 2015**; for the purposes of these retention statistics, we omit any of those hired who have not yet come up for tenure and we call the number of such people **total-decided** as specified below. Comparison of **%Women-hired** and **%Women-in-retained-set** is an indicator of pipeline shrinkage. See Table 2 for raw numbers on which this analysis is based.

Formulas

- %Women-hired** = (women-hired/total-hired)
- Total-decided** = (total-hired – untenured)
- %Basic-retention** = (total-decided – left-before-tenure) / total-decided
- %Tenured-at-review** = total-tenured / (total-decided – left-before-tenure)
- Total-retained** = tenured-and-stayed
- %Final-retention** = total-retained / total-decided
- %Women-in-retained-set** = (tenure-and-stayed-women / total-retained)

	SEAS	OEB	MCB	PHY	CHEM	ASTR	STAT	SCRB	EPS	HEB	Math	Totals
Overview												
Total Hired	49	24	15	16	10	11	11	13	8	6	0	163
%Women-hired (women:men)	18% (9:40)	54% (13:11)	33% (5:10)	13% (2:14)	40% (4:6)	27% (3:8)	18% (2:9)	23%(3:10)	37% (3:5)	67% (4:2)	0	29% (48:115)
%Basic-retention	84% (21/25)	81% (13/16)	83% (10/12)	83% (10/12)	88% (7/8)	71% (5/7)	14% (1/7)	88%(7/8)	100% (6/6)	75% (3/4)	0	79% (83/105)
Women	40% (2/5)	78% (7/9)	75% (3/4)	100% (1/1)	50% (1/2)	100% (1/1)	0% (0/2)	100%(2/2)	100% (3/3)	67% (2/3)	0	69% (22/32)
Men	95% (19/20)	86% (6/7)	88% (7/8)	82% (9/11)	100% (6/6)	67% (4/6)	20% (1/5)	83%(5/6)	100% (3/3)	100% (1/1)	0	84% (61/73)
%Tenured-at-rev	90% (19/21)	69% (9/13)	60% (6/10)	80% (8/10)	71% (5/7)	80% (4/5)	100%(1/1)	100%(7/7)	83% (5/6)	0% (0/3)	0	77% (64/83)
Women	100% (2/2)	71% (5/7)	67% (2/3)	100% (1/1)	100% (1/1)	0% (0/1)	0% (0/0)	100% (2/2)	100% (3/3)	0% (0/2)	0	73% (16/22)
Men	89% (17/19)	67% (4/6)	57% (4/7)	78% (7/9)	67% (4/6)	100% (4/4)	100%(1/1)	100%(5/5)	67% (2/3)	0% (0/1)	0	79% (48/61)
%Final-retention	72% (18/25)	56% (9/16)	50% (6/12)	58% (7/12)	50% (4/8)	43% (3/7)	14% (1/7)	88%(7/8)	67% (4/6)	0% 0/4	0	56% (59/105)
Women	40% (2/5)	56% (5/9)	50% (2/4)	0% (0/1)	50% (1/2)	0% (0/1)	0% (0/2)	100%(2/2)	67% (2/3)	0% 0/3	0	44% (14/32)
Men	80% (16/20)	57% (4/7)	50% (4/8)	64% (7/11)	50% (3/6)	50% (3/6)	20% (1/5)	83%(5/6)	67% (2/3)	0% 0/1	0	62% (45/73)
%Women-in retained-set (women:men)	11% (2:16)	55% (5:4)	33% (2:4)	0% (0:7)	25% (1:3)	0% (0:3)	0% (0:1)	29%(2:5)	50% (2:2)	0% (0:0)	0	24% (14:45)

Departments: SEAS, OEB, MCB, PHY, CHEM, ASTR, STAT, SCRIB, EPS, HEB, MATH

Table 2: Raw Data Numbers

Raw Numbers	SEAS	OEB	MCB	PHY	CHEM	ASTR	STAT	SCRB	EPS	HEB	MATH	Totals
Total Hired	49	24	15	16	10	11	11	13	8	6	0	163
Women	9	13	5	2	4	3	2	3	3	4	0	48
Men	40	11	10	14	6	8	9	10	5	2	0	115
Untenured	24	8	3	4	2	4	4	5	2	2	0	58
Women	4	4	1	1	2	2	0	1	0	1	0	16
Men	20	4	2	3	0	2	4	4	2	1	0	42
Left Before Tenure	4	3	2	2	1	2	6	1	0	1	0	22
Women	3	2	1	0	1	0	2	0	0	1	0	10
Men	1	1	1	2	0	2	4	1	0	0	0	12
Denied Tenure	2	4	4	2	2	1	0	0	1	3	0	19
Women	0	2	1	0	0	1	0	0	0	2	0	6
Men	2	2	3	2	2	0	0	0	1	1	0	13
Tenured and left	1	0	0	1	1	1	0	0	1	0	0	5
Women	0	0	0	1	0	0	0	0	1	0	0	2
Men	1	0	0	0	1	1	0	0	0	0	0	3
Tenured and stayed	18	9	6	7	4	3	1	7	4	0	0	58
Women	2	5	2	0	1	0	0	2	2	0	0	14
Men	16	4	4	7	3	3	1	5	2	0	0	45
Kids During Tenure (kids:nokids:unknown)												
Women	7:2:0	5:8:0	3:2:0	1:1:0	1:3:0	1:2:0	1:0:1	1:2:0	2:1:0	0:4:0	0	22 kids (no 25, un 1)
Men	14:14:12	8:3:0	6:4:0	7:4:3	4:2:0	6:2:0	3:4:2	6:4:0	2:3:0	1:1:0	0	57 kids (no 41, un 18)

Related Articles

Recent Crimson Article on Harvard Retention Problem, 2015

<http://www.thecrimson.com/article/2015/10/7/faculty-meeting-female-attribution/>

Parental Leave Article and Study, New York Times, June 2016

http://www.nytimes.com/2016/06/26/business/tenure-extension-policies-that-put-women-at-a-disadvantage.html?_r=1

<http://chronicle.com/article/Is-it-Time-to-Stop-Stopping/237391>

Gender Gap in Startup Funds in Boston Area, Boston Globe, Sept 2015

<https://www.bostonglobe.com/business/2015/09/15/study-finds-gender-gap-research-funding/UImGLyrxJLVvZDQo0jRYXK/story.html>

2005 Harvard Report of the Task Force on Women Faculty

<http://news.harvard.edu/gazette/2005/05.19/01-taskforce.html>

<http://news.harvard.edu/gazette/2005/05.19/outline.pdf> (summary of recommendations from that task force)

Signatures

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[other names removed]