

Improving Faculty Gender Equity and Climate at CU Boulder

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Here are the issues:

1. **Climate:** we know from the last survey of climate that there is a climate issue across campus-the climate survey for the campus suggests that there is gender prejudice and discrimination experienced by faculty at CUB. We don't really know other specifics but we did get a little more information this past year in CEAS. For example, 36% of female faculty think women faculty are treated fairly (71% of the male faculty think women faculty are treated fairly.)
2. **Gender Equity:** The gender makeup of faculty has stayed flat for the last 10 years.
3. **Parental Leave:** Our family leave policy is most likely gender biased.
4. **Childcare:** We do not have enough childcare for our faculty staff and students, and we are growing our campus. It is a significant retention issue - other campuses including PAC have much better daycare re will have a harder time recruiting and retaining diverse and female faculty

I think that the next step should be:

1. Start tackling these of these issues directly by implementing evidenced-based research. Budget, staff, director all needed.
2. Hire a faculty director to work with the Provost overseeing this change
3. Implement a task force to work with the faculty director and a staff person. Review specific issues identified above, and others as identified. Rank top three issues that need to be changed and identify strategies to address these issues. Write a report summarizing the data avail and evidence and proposed solutions(s).
4. Faculty director plus staff tackle the issue with Provost support. Budget must be allocated to implement change.
5. Timeline: 1 year to accomplish 2 and 3. Following year Faculty direct starts on project with proposed improvement within 3-4 years.

Here are some ideas on what really needs to change:

1. Climate must radically improve. Identify which units have the most significant climate issues. Start with these units first.
2. Improve hiring practices to increase diversity and gender, such as follow the U of WI intervention; ensure that dual-academic career hires are fair and unbiased.
3. Ensure that moving from assistant, to associate to full professor is equitable. Teaching evaluations are often biased and can impact tenure. Women often participate in collaborative, interdisciplinary research, which is also devalued in many instances. Service post-tenure is deeply gendered, negation of when to go up for full can also be gendered with female applicants and male evaluators being problematic pairings.
4. Update policy on family leave to more equitable; first look at data/conduct a study to see if the parental leave policy here at CU Boulder has made an impact, positive or negative.
5. improve CU daycare; increase available spaces, provide discount for multiple children in household, include infants; hire more teachers; emergency day care - many other campuses do offer this. Improve nursing and pumping areas for mothers, and these should adhere to Colorado State law.

Appendix

BACK UP DATA on Climate:

Results of 2014 climate survey of the CU System:

(NOTE that 13% of Boulder faculty participated; 47.2% of survey respondents at Boulder were male and 44.9% were female; This results in a +/- 2% error.)

Boulder campus reports that 80% agree (55% agree strongly) that faculty are respected regardless of their gender. 18% disagree. 2% don't know. The Denver campus was lowest, then Boulder/AM, highest was CS.

In your opinion, do you agree or disagree that students/faculty members/staff on your campus/academic unit/employment unit are respected regardless of their...?

"Race/Ethnicity"

	STUDENT	B	CS	D	AM	FACULTY	B	CS	D	AM	STAFF	B	CS	D	AM	SO
Agree	84.1	79.1	90.6	85.9	91.4	82.6	81.7	88.6	78.0	83.6	80.1	77.3	86.2	81.5	78.0	91.3
Strongly	53.5	44.8	64.2	57.5	65.0	59.7	58.9	69.7	51.6	60.7	45.0	40.0	51.9	48.2	45.9	60.1
Somewhat	30.6	34.2	26.5	28.4	26.5	22.9	22.8	19.0	26.4	22.9	35.0	37.3	34.4	33.3	32.1	31.2
Disagree	12.4	18.2	6.9	8.0	5.8	12.3	12.8	8.5	15.2	11.7	15.2	17.1	10.1	16.7	16.8	4.6
Somewhat	8.8	13.1	5.7	5.0	4.0	7.8	8.2	4.7	9.6	7.4	9.7	11.3	5.3	10.9	10.1	2.3
Strongly	3.6	5.2	1.2	3.0	1.8	4.5	4.6	3.8	5.6	4.3	5.5	5.8	4.8	5.8	6.7	2.3
Don't Know	3.5	2.7	2.5	6.1	2.7	5.1	5.5	2.8	6.8	4.7	4.8	5.6	3.7	1.8	5.2	4.1

"National origin"

	STUDENT	B	CS	D	AM	FACULTY	B	CS	D	AM	STAFF	B	CS	D	AM	SO
Agree	85.2	81.5	90.4	85.7	92.2	83.8	84.5	87.2	77.6	84.2	80.7	79.4	84.7	80.1	79.3	88.1
Strongly	54.1	47.6	61.7	56.7	64.4	61.1	62.0	67.8	54.4	60.2	46.5	41.9	51.3	48.9	46.2	64.2
Somewhat	31.1	33.8	28.7	29.0	27.7	22.7	22.5	19.4	23.2	24.0	34.2	37.4	33.3	31.2	33.1	23.9
Disagree	10.6	14.8	5.9	8.3	4.7	10.2	10.0	6.2	16.4	9.5	11.8	13.3	5.8	15.2	12.6	3.2
Somewhat	8.0	11.4	4.9	5.7	3.5	6.2	5.8	2.8	11.2	6.0	8.1	9.5	3.7	11.6	7.7	0.9
Strongly	2.6	3.4	1.0	2.5	1.3	4.0	4.2	3.3	5.2	3.5	3.7	3.8	2.1	3.6	4.9	2.3
Don't Know	4.2	3.7	3.7	6.0	3.1	5.9	5.5	6.6	6.0	6.3	7.5	7.3	9.5	4.7	8.1	8.7

"Gender"

	STUDENT	B	CS	D	AM	FACULTY	B	CS	D	AM	STAFF	B	CS	D	AM	SO
Agree	87.5	85.1	90.5	87.7	92.9	80.4	80.2	84.8	76.4	80.7	78.0	76.7	79.4	79.0	77.0	84.4
Strongly	58.8	53.0	63.6	62.5	68.2	55.1	54.7	66.4	47.2	55.1	42.8	38.7	52.4	41.7	42.2	58.7
Somewhat	28.7	32.1	26.9	25.2	24.6	25.3	25.5	18.5	29.2	25.6	35.2	38.0	27.0	37.3	34.8	25.7
Disagree	9.7	12.7	7.0	7.5	5.5	16.8	17.6	13.7	20.0	15.3	18.7	19.7	15.9	19.6	19.3	13.8
Somewhat	7.3	9.8	6.0	4.8	3.8	11.3	12.1	10.0	13.2	9.8	13.7	14.6	11.6	15.6	12.1	11.5
Strongly	2.4	3.0	1.0	2.7	1.6	5.5	5.5	3.8	6.8	5.5	5.0	5.1	4.2	4.0	7.2	2.3
Don't Know	2.8	2.2	2.5	4.8	1.6	2.8	2.1	1.4	3.6	3.9	3.3	3.6	4.8	1.4	3.7	1.8

Overall the most frequently reported forms of perceived prejudice and discrimination by faculty at the CU System was gender at 48% (this was higher than students (34%) and staff (44%)).

51% of Boulder Faculty reported that they had experienced discrimination or prejudice as a result of their gender. This percentage was higher than the other three CU campuses.

Boulder campus reports that 77% of the faculty agree that CU B has diversity

among its faculty (47% strongly agree, 21% disagree.) This is the lowest of all three campuses, Denver is within margin of error.

IF "YES" FREQUENTLY, SOMETIMES OR RARELY, ASK:

Was the prejudice or discrimination you experienced in a University of Colorado educational experience related to...?

Please select all that apply.

	STUDENT	B	CS	D	AM	FACULTY	B	CS	D	AM	STAFF	B	CS	D	AM	SO
Gender	33.5	36.8	26.4	30.5	31.1	48.0	51.4	43.0	36.4	50.2	41.3	42.6	41.7	36.9	37.9	49.2
Religion	31.7	29.3	42.3	31.4	29.4	18.2	16.8	32.3	16.1	16.1	22.0	21.9	26.2	21.3	24.7	10.8
Race/Ethnicity	28.2	27.4	22.1	35.3	27.2	20.0	20.0	17.2	22.9	19.5	22.7	21.7	15.5	25.5	30.3	12.3
Political phil.	25.0	24.3	30.4	23.9	22.2	20.7	15.4	33.3	21.2	23.4	21.2	21.9	14.3	20.6	21.7	24.6
Political affil.	24.8	24.6	32.2	21.3	21.1	14.3	9.2	25.8	12.7	18.0	17.4	17.3	13.1	17.0	19.2	20.0
Age	24.0	20.3	32.8	28.4	21.7	33.1	31.6	43.0	40.7	28.4	44.2	46.2	46.4	41.8	40.9	38.5
Nat'l origin	11.8	11.6	6.1	18.6	7.2	11.3	13.2	5.4	12.7	10.0	6.5	7.7	1.2	8.5	4.5	4.6
Sexual orient.	10.2	11.2	8.9	10.1	5.6	6.8	7.0	5.4	9.3	5.7	7.8	8.0	9.5	7.8	5.6	10.8
Mental impair.	7.1	7.1	6.4	8.5	5.6	4.3	5.9	5.4	4.2	1.5	3.5	3.6	1.2	4.3	4.5	1.5
Gender ident.	6.4	7.3	6.1	5.0	4.4	4.8	5.9	1.1	5.1	4.2	4.4	5.3	1.2	4.3	3.5	3.1
Gender express	6.2	7.2	5.5	5.0	3.9	5.9	7.0	5.4	6.8	4.2	4.2	4.8	3.6	3.5	3.0	4.6
Veteran/military	5.0	3.9	9.8	6.2	1.1	1.5	1.1	4.3	1.7	1.1	3.3	3.6	3.6	2.1	3.5	1.5
Physical impair.	4.4	3.9	6.7	4.6	2.8	3.4	3.2	2.2	4.2	3.8	7.6	8.2	7.1	8.5	5.1	9.2

CONTINUE TO ASK ALL RESPONDENTS

Do you agree or disagree that the University of Colorado has diversity among its students/faculty/staff in each of the following social identities?

"Race/Ethnicity"

	STUDENT	B	CS	D	AM	FACULTY	B	CS	D	AM	STAFF	B	CS	D	AM	SO
Agree	66.1	48.0	83.7	86.4	71.9	58.5	54.5	60.7	61.2	62.2	69.2	67.4	67.2	73.2	73.1	67.9
Strongly	39.3	22.7	51.9	61.7	41.8	30.1	26.6	29.9	33.6	33.6	36.0	32.8	36.5	37.7	42.5	39.0
Somewhat	26.8	25.4	31.8	24.7	30.1	28.4	27.9	30.8	27.6	28.6	33.1	34.6	30.7	35.5	30.6	28.9
Disagree	30.9	49.8	13.3	9.0	25.4	38.1	42.0	36.0	34.0	34.8	27.3	29.0	29.1	23.9	24.2	26.6
Somewhat	17.0	25.6	9.9	5.9	15.9	21.8	22.8	19.4	20.0	21.8	16.5	17.6	20.1	12.3	14.3	16.5
Strongly	13.8	24.2	3.3	3.1	9.5	16.3	19.2	16.6	14.0	13.0	10.8	11.4	9.0	11.6	9.9	10.1
Don't Know	3.0	2.2	3.0	4.6	2.7	3.5	3.5	3.3	4.8	3.0	3.6	3.6	3.7	2.9	2.7	5.5

"National origin"

	STUDENT	B	CS	D	AM	FACULTY	B	CS	D	AM	STAFF	B	CS	D	AM	SO
Agree	75.5	66.2	83.8	87.7	75.4	68.2	69.0	58.3	72.0	68.9	68.4	67.9	61.9	70.3	71.9	67.9
Strongly	43.2	30.3	51.9	62.3	42.7	36.3	36.4	30.3	41.2	36.3	36.5	34.3	37.0	36.2	41.5	39.0
Somewhat	32.2	35.9	31.9	25.4	32.7	31.9	32.6	28.0	30.8	32.5	31.9	33.6	24.9	34.1	30.4	28.9
Disagree	19.0	29.2	9.6	5.6	19.9	22.6	22.8	26.5	21.2	21.6	19.8	20.7	21.7	19.6	18.8	15.1
Somewhat	13.6	20.2	7.7	3.9	15.5	13.9	13.5	17.5	10.0	14.7	13.2	14.0	15.9	12.0	12.1	10.6
Strongly	5.5	9.0	1.9	1.6	4.4	8.8	9.3	9.0	11.2	7.0	6.5	6.7	5.8	7.6	6.7	4.6
Don't Know	5.5	4.7	6.6	6.7	4.7	9.2	8.2	15.2	6.8	9.5	11.8	11.4	16.4	10.1	9.4	17.0

"Gender"

	STUDENT	B	CS	D	AM	FACULTY	B	CS	D	AM	STAFF	B	CS	D	AM	SO
Agree	90.9	90.4	92.4	91.1	90.5	78.6	76.5	82.5	77.2	80.7	78.3	78.2	76.2	76.8	76.0	87.2
Strongly	63.8	59.7	67.9	68.7	64.6	49.1	47.1	54.0	48.4	50.7	43.7	43.3	43.9	38.0	42.0	55.5
Somewhat	27.1	30.7	24.6	22.5	25.9	29.4	29.4	28.4	28.8	30.0	34.7	34.9	32.3	38.8	34.1	31.7
Disagree	5.5	6.7	4.1	4.2	5.3	18.4	20.6	14.7	20.0	16.1	18.2	18.8	20.6	19.2	19.0	10.1
Somewhat	4.0	4.8	3.2	2.8	4.2	13.1	14.9	11.4	12.8	11.2	13.4	13.4	17.5	14.5	13.8	7.3
Strongly	1.5	1.8	0.9	1.4	1.1	5.3	5.6	3.3	7.2	4.9	4.9	5.4	3.2	4.7	5.2	2.8
Don't Know	3.6	3.0	3.5	4.7	4.2	3.0	2.9	2.8	2.8	3.2	3.5	3.0	3.2	4.0	4.9	2.8

Appendix

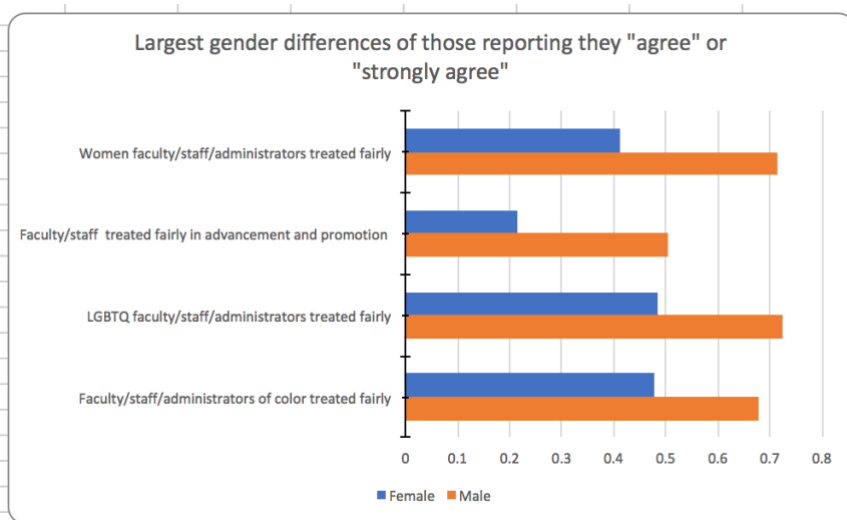
Results of the 2017 CEAS Climate Survey

- 36% of female faculty think women faculty are treated fairly (71% of the male faculty think women faculty are treated fairly.)
- 32% of female faculty think faculty are treated fairly in advancement and promotion (compared to 55% of male faculty)
- 44% of female faculty think faculty of color are treated fairly (69% of male)
- 44% of female faculty think CEAS is committed to improving faculty diversity (67% of male)

Table 3. CEAS climate survey responses ranked by largest differences between male and female respondents
Percent who "agree" or "strongly agree"

	Overall		Faculty		Staff		
	Female	Male	Female	Male	Female	Male	female/male ratio
Women faculty/staff/administrators treated fairly	41%	71%	36%	71%	44%	70%	51%
Faculty/staff treated fairly in advancement and promotion	22%	50%	32%	55%	15%	26%	58%
LGBTQ faculty/staff/administrators treated fairly	48%	72%	50%	72%	47%	72%	69%
Faculty/staff/administrators of color treated fairly	48%	68%	44%	69%	52%	60%	64%
Faculty make efforts to build trust	46%	66%	66%	69%	34%	52%	96%
CEAS committed to improving faculty/staff diversity	49%	66%	40%	67%	52%	65%	60%
A spirit of cooperation exists in CEAS	48%	62%	56%	65%	43%	47%	86%
Faculty/staff/administrators respect each other	52%	66%	63%	71%	46%	42%	89%
Administrators consider faculty/staff when making policy	36%	50%	33%	51%	35%	44%	65%
Staff involved in decision making	24%	37%	38%	40%	46%	57%	95%
Criteria for advancement/promotion decisions clear	30%	43%	43%	48%	22%	15%	90%
Faculty involved in decision making	42%	53%	36%	52%	46%	57%	69%
CEAS has a collegial work environment	64%	74%	61%	77%	66%	58%	79%
Administrators make efforts to build trust	49%	58%	46%	59%	49%	51%	78%
Adequate support for professional development	39%	48%	40%	51%	41%	36%	78%
Faculty/staff/administrators share sense of responsibility	58%	66%	63%	67%	55%	64%	94%
CEAS communicates decisions and their rationale	40%	48%	45%	49%	37%	44%	92%
My work is valued in CEAS	68%	75%	69%	76%	67%	72%	91%
CEAS values work-life balance	44%	50%	37%	48%	50%	57%	77%
Important decisions made after seeking broad input	25%	30%	26%	29%	25%	32%	90%
Staff make efforts to build trust	66%	68%	67%	66%	66%	72%	102%

Note: Table includes percent who responded "strongly agree" or "agree", after removing those who responded "did not know/does not apply".
Rank ordered by greatest differences between females and males



Appendix

Article out in the top sociology journal that suggests dual career hires are an important mechanism for gender discrimination.

See <http://journals.sagepub.com/doi/full/10.1177/0003122417739294>

Some literature shows that moving from associate to full is a particularly hard career step for women, because service post-tenure is so deeply gendered and because people are often expected to ask to go up for full (negotiation is often gendered, with female applicants and male evaluators being the problematic pairing). A recent review is

at: <https://www.apa.org/pubs/journals/releases/bul-a0038184.pdf>

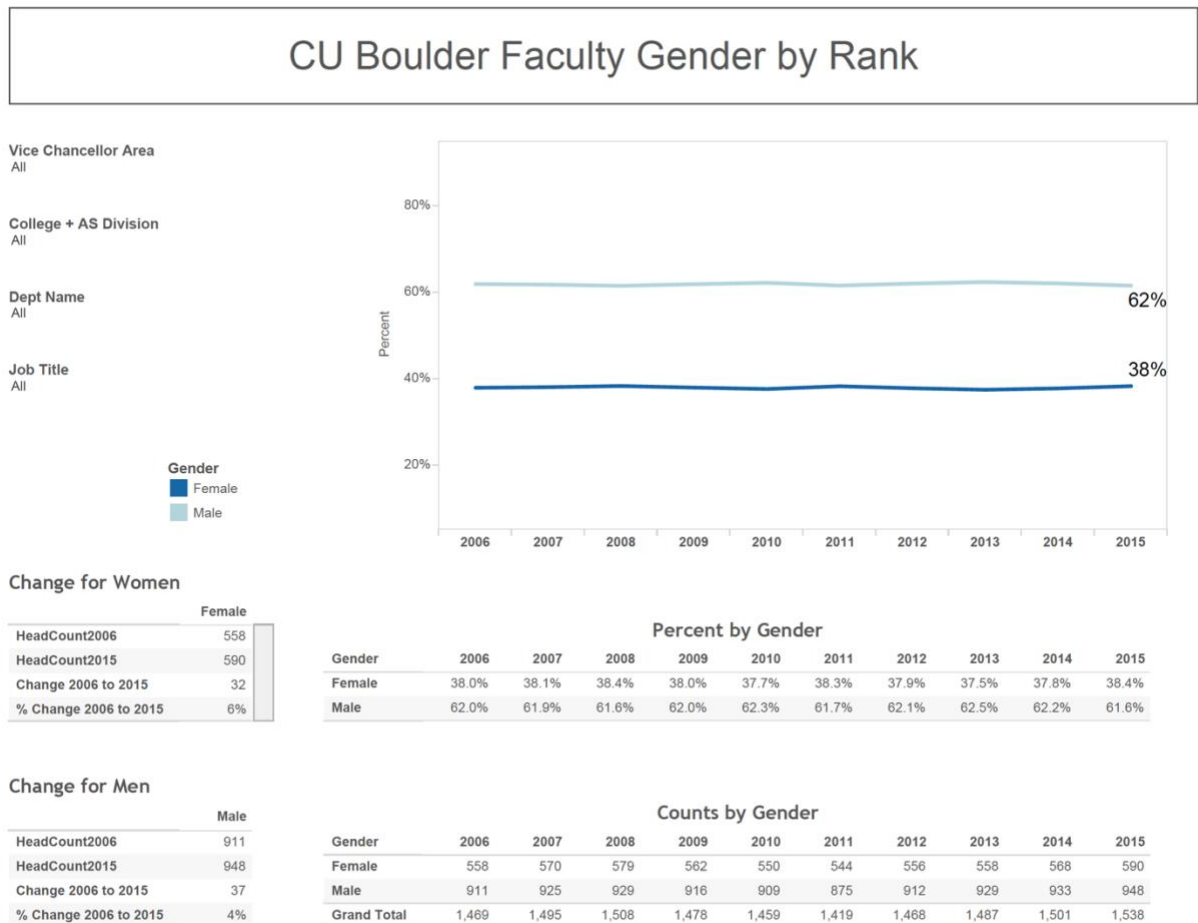
Generally, this is a very helpful link marshalling a lot of the literature that is available and laying out various dimensions of bias:

<https://genderedinnovations.stanford.edu/institutions/bias.html#anchortwo>

Appendix

FACULTY GENDER BALANCE:

It is essentially flat for all categories for the entire data set of 10 years. I looked closely at Physics, engineering and E-bio and found that TTF are flat and quite a bit lower for women in engineering and Physics, but E-bio is going up and reaching parity. When I asked a faculty member in that department to explain why she said they have been working attentively to hire diverse candidates, with attention from search committee and chair requiring the slate of candidates to be diverse.



Appendix

CU Boulder Faculty Gender by Rank

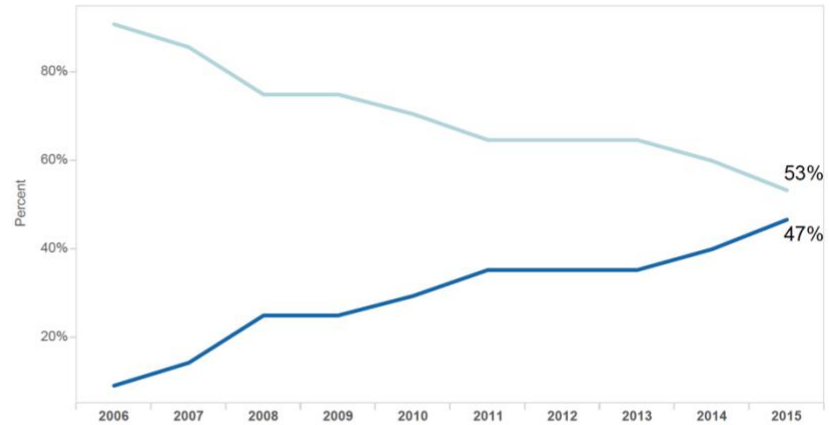
Vice Chancellor Area
All

College + AS Division
All

Dept Name
All

Job Title
DISTINGUISHED PROFESSOR

Gender
■ Female
■ Male



Change for Women

	Female
HeadCount2006	1
HeadCount2015	7
Change 2006 to 2015	6
% Change 2006 to 2015	600%

Percent by Gender

Gender	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Female	9.1%	14.3%	25.0%	25.0%	29.4%	35.3%	35.3%	35.3%	40.0%	46.7%
Male	90.9%	85.7%	75.0%	75.0%	70.6%	64.7%	64.7%	64.7%	60.0%	53.3%

Change for Men

	Male
HeadCount2006	10
HeadCount2015	8
Change 2006 to 2015	-2
% Change 2006 to 2015	-20%

Counts by Gender

Gender	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Female	1	2	4	4	5	6	6	6	6	7
Male	10	12	12	12	12	11	11	11	9	8
Grand Total	11	14	16	16	17	17	17	17	15	15

Appendix

CU Boulder Faculty Gender by Rank

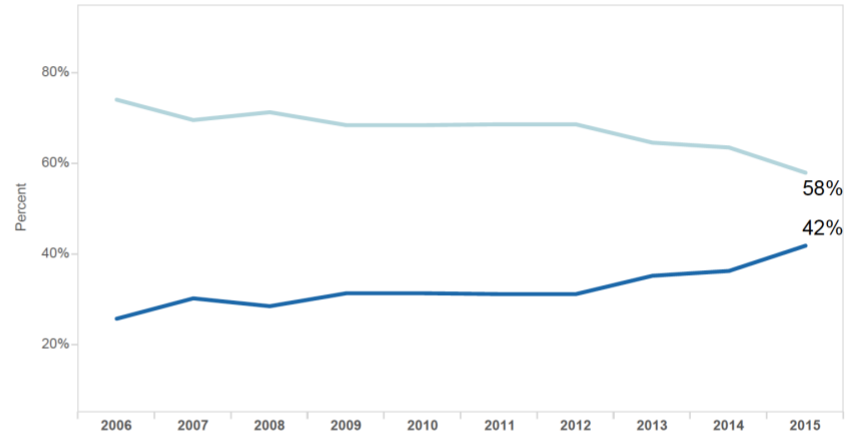
Vice Chancellor Area
All

College + AS Division
Arts & Sciences - Natural Sciences

Dept Name
ECOLOGY & EVOLUTIONARY BIOLO..

Job Title
All

Gender
Female
Male



Change for Women

	Female
HeadCount2006	8
HeadCount2015	13
Change 2006 to 2015	5
% Change 2006 to 2015	63%

Percent by Gender

Gender	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Female	25.8%	30.3%	28.6%	31.4%	31.4%	31.3%	31.3%	35.3%	36.4%	41.9%
Male	74.2%	69.7%	71.4%	68.6%	68.6%	68.8%	68.8%	64.7%	63.6%	58.1%

Change for Men

	Male
HeadCount2006	23
HeadCount2015	18
Change 2006 to 2015	-5
% Change 2006 to 2015	-22%

Counts by Gender

Gender	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Female	8	10	10	11	11	10	10	12	12	13
Male	23	23	25	24	24	22	22	22	21	18
Grand Total	31	33	35	35	35	32	32	34	33	31

Appendix

CU Boulder Faculty Gender by Rank

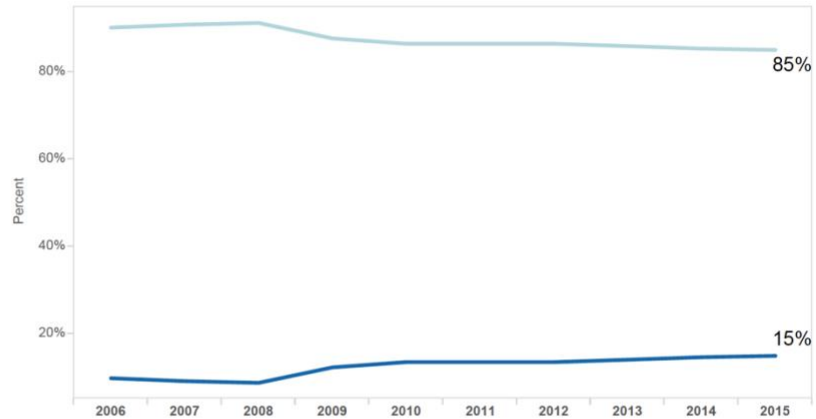
Vice Chancellor Area
All

College + AS Division
All

Dept Name
PHYSICS

Job Title
Multiple values

Gender
Female
Male



Change for Women

	Female
HeadCount2006	4
HeadCount2015	7
Change 2006 to 2015	3
% Change 2006 to 2015	75%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Female	9.8%	9.1%	8.7%	12.2%	13.5%	13.5%	13.5%	14.0%	14.6%	14.9%
Male	90.2%	90.9%	91.3%	87.8%	86.5%	86.5%	86.5%	86.0%	85.4%	85.1%

Change for Men

	Male
HeadCount2006	37
HeadCount2015	40
Change 2006 to 2015	3
% Change 2006 to 2015	8%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Female	4	4	4	6	7	7	7	7	7	7
Male	37	40	42	43	45	45	45	43	41	40
Grand Total	41	44	46	49	52	52	52	50	48	47

Engineering:

%female in 2015 21% (TOTAL: 32 F, 155 M; FULL: 14 F, 75 M (19%); ASSOC: 10 F, 37 M (27%); ASSIST: 8 F, 43 M (17%))

2016 makeup:

165 females, 210 males (faculty and staff and admin), 375 total

gender distribution of faculty: 67 female (28%), 172 male (72%), 239 total

FACULTY HIRING:

Gender bias habit breaking intervention:

<https://osf.io/preprints/psyarxiv/tdvy7/>

Devine et al, 2017

University of WI Madison

Application of this intervention lead to an estimated 18% increase hiring of women in intervention departments, compared to the control departments, which stayed stable over time.

2.5-hour workshop to individual departments. Very similar to the NCWIT training I experienced in the CEAS last semester. 92 clusters of departments, 46 randomly assigned to control, 46 to intervention.

Appendix

FAMILY LEAVE POLICY:

<https://mobile.nytimes.com/2016/06/26/business/tenure-extension-policies-that-put-women-at-a-disadvantage.html?referer=>

The underrepresentation of women among the senior ranks of scholars has led dozens of universities to adopt family-friendly employment policies. But a [recent study](#) of economists in the United States finds that some of these gender-neutral policies have had an unintended consequence: They have advanced the careers of male economists, often at women's expense.

UC Santa Barbara, economics (inherently male dominated field)

The policies led to a 19 percentage-point rise in the probability that a male economist would earn tenure at his first job. In contrast, women's chances of gaining tenure fell by 22 percentage points. Before the arrival of tenure extension, a little less than 30 percent of both women and men at these institutions gained tenure at their first jobs. The decline for women is therefore very large. It suggests that the new policies made it extraordinarily rare for female economists to clear the tenure hurdle.

The University of Michigan, where I work, recently adopted a tenure extension policy that [explicitly recognizes](#) the effects of pregnancy, childbirth and related medical conditions. Ms. Davis-Blake said that at the business school, "men don't get extensions unless they have clear and compelling circumstances."

CHILDCARE:

Childcare services needs were assessed by a consultant in 2015 for Iowa State University (ISU Office of Child Care and Family Resources). ISU had 3 centers, 1 run by college of human sciences and 2 run by the CCFR, but they have been at capacity for years, with long waiting lists. Increased student enrollment and increased faculty and staff hiring brought about the need to examine the potential for enhancing child care service capacity.

<http://childcare.hr.iastate.edu/sites/default/files/uploads/Reports/ISU%20Child%20Care%20Feasibility%20Study%202015.pdf>

Iowa state university study: Cost estimated at \$4 million, survey showed clear demand and need from faculty, staff, researchers, students.

Currently [ISU](#) provides child care at Vet medicine, University Village, Child development lab school, emergency and back-up child care services, sitters list and lactation locations.

Goff, Stephen J., Michael K. Mount, and Rosemary L. Jamison. "Employer supported child care, work/family conflict, and absenteeism: A field study." *Personnel psychology* 43.4 (1990): 793-809. This study examined the relations among employer supported child care, work/family conflict and absenteeism. No support was found for the hypothesis that use of a child care center at work would reduce the amount of work/family conflict and absenteeism of employed parents. Consistent with our hypotheses, the results indicated that **supportive supervision and satisfaction with child care arrangements (regardless of location) were related to less work/family conflict. Further, it was found that less work/family conflict was related to lower levels of absenteeism.** The results have implications for the role of employers in addressing child care concerns of employees.

Appendix

CU Childcare

Serve 80 children 15 months through 5 years

5-day rate is \$1515 toddlers, \$1348 preschoolers monthly

<http://users.nber.org/~sewp/events/2005.01.14/Bios+Links/Rosser+Lane-rec2-Key-Barriers-02.pdf>

Institutional barriers preventing women from having a level playing field in science and engineering the most significant challenge is balancing a career and a family.

25 female scientists from Caltech, MIT, Michigan, Princeton, Stanford, Yale, Berkeley, Harvard and Penn state attending NSF advance meeting 2001. Final statement is this:

research universities (the California Institute of Technology; MIT; the University of Michigan; Princeton University; Stanford University; Yale University; the University of California, Berkeley; Harvard University; and the Pennsylvania State University) held a special meeting at MIT. At the close of the meeting, they issued the following statement:

“Institutions of higher education have an obligation, both for themselves and for the nation, to fully develop and utilize all the creative talent available,” the leaders said in a unanimous statement. “We recognize that barriers still exist” for women faculty . . . They agreed:

- To analyze the salaries and proportion of other university resources provided to women faculty**
- To work toward a faculty that reflects the diversity of the student body**
- To reconvene in about a year “to share the specific initiatives we have undertaken to achieve these objectives”**
- To “recognize that this challenge will require significant review of, and potentially significant change in, the procedures within each university, and within the scientific and engineering establishments as a whole.” (Campbell, 2001, p. 1)**

For the first time, in public and in print, the leaders of the nation’s most prestigious research universities suggested that institutional barriers have prevented female scientists and engineers from having a level playing field and that science and engineering might need to change to accommodate women.