



UNIVERSITY *of* DELAWARE



Women to Leadership in the Professions

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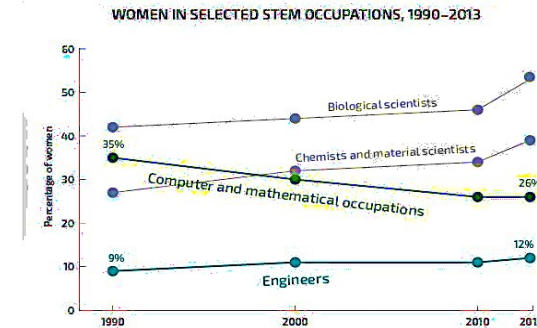
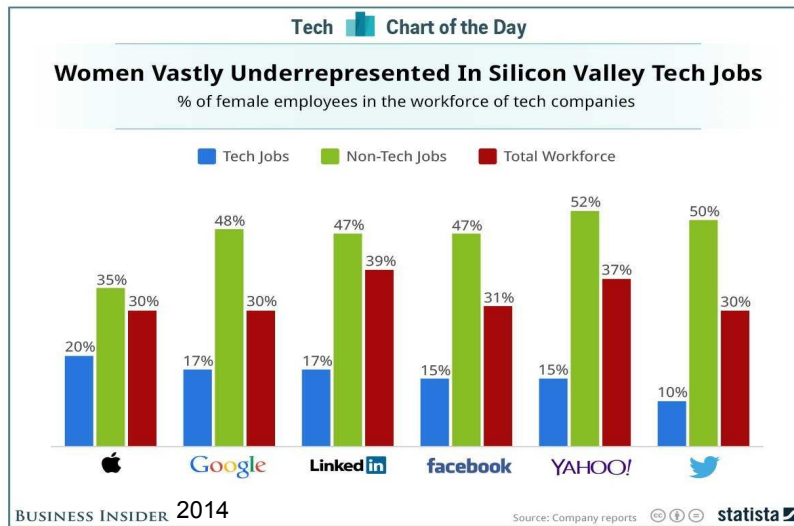
sites.udel.edu/advance

National Science Foundation ADVANCE-IT HRD 1409472



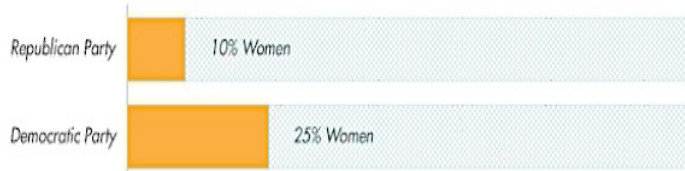
Women's Underrepresentation

Women make up 51% of the U.S. population, but are often underrepresented in high paying & high status professions.



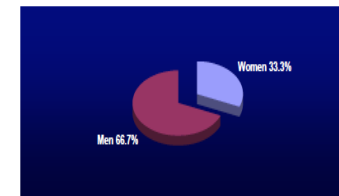
Huffingtonpost.com

Gender Composition in the House and Senate



www.politicalparity.org

Women in the Legal Profession



33% F

American Bar Association Market Research Department, April 2012
Note: 44 states, representing 58% of the lawyer population, reported gender statistics.

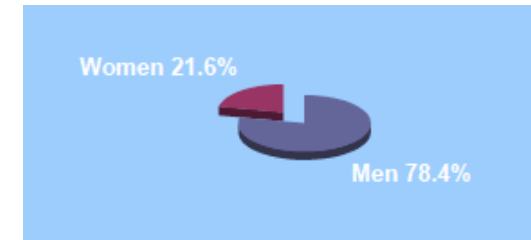


Women in Leadership

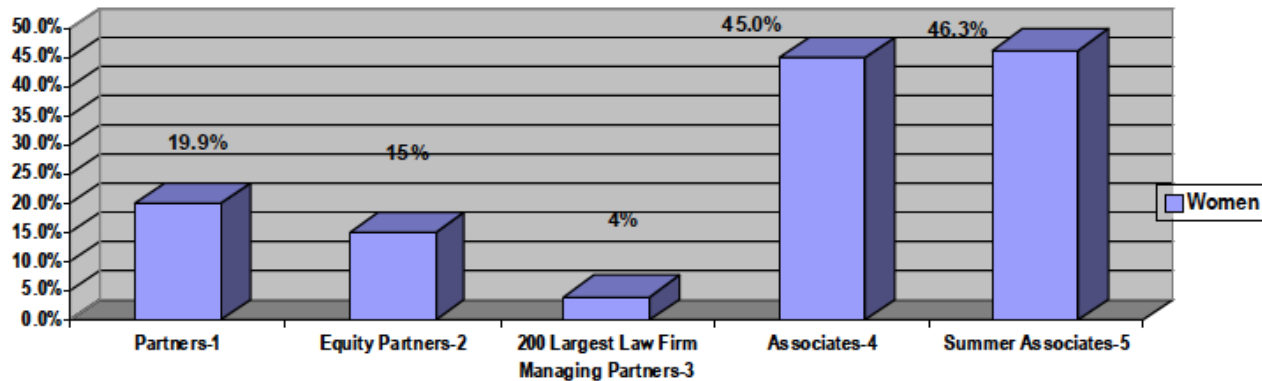
GOOGLE'S WORKFORCE PBS NEWSHOUR

GLOBAL TOTALS	OVERALL	TECH	NON-TECH	LEADERSHIP
MEN	70%	83%	52%	79%
WOMEN	30%	17%	48%	21%

Fortune 500 General Counsel, 2013



Women in Private Practice

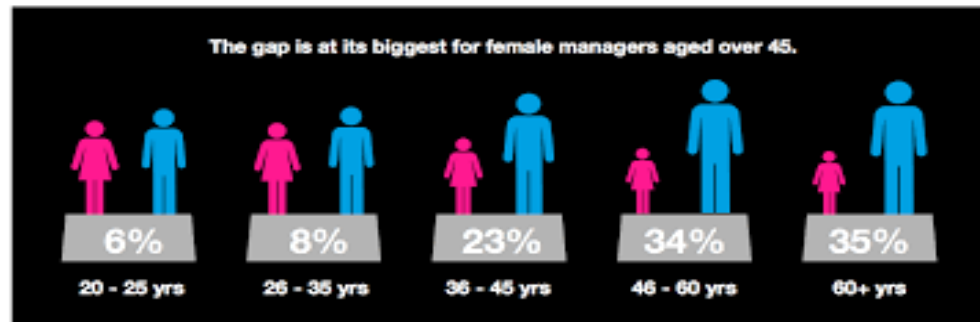




Gender Pay Gap

In 2015 in the US, female full-time workers made 79 cents for every dollar earned by men, a gender wage gap of 21 percent.

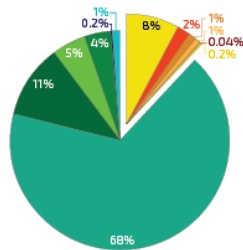
Source: <http://www.iwpr.org/initiatives/pay-equity-and-discrimination>





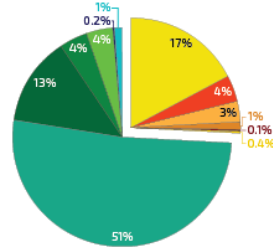
Disparities are compounded by race/ethnicity

ENGINEERING WORKFORCE, BY GENDER AND RACE/ETHNICITY, 2006-2010



- White women
- Asian and Pacific Islander women
- Hispanic women
- Black women
- American Indian and Alaska Native women
- All other women (including two or more races)

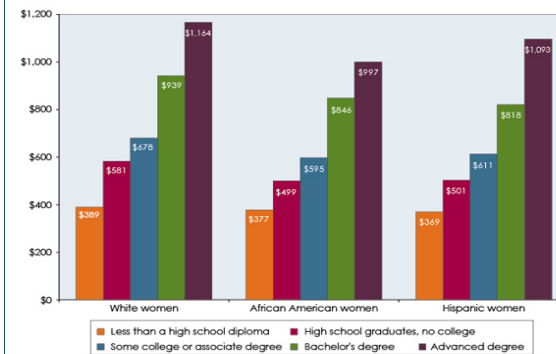
COMPUTING WORKFORCE, BY GENDER AND RACE/ETHNICITY, 2006-2010



- White men
- Asian and Pacific Islander men
- Hispanic men
- Black men
- American Indian and Alaska Native men
- All other men (including two or more races)

NSF.org

Women's median weekly earnings by race/ethnicity and education, 2012



This is why we still mark Equal Pay Day. Learn more at fightforfairpay.org. AAUW empowering women since 1881

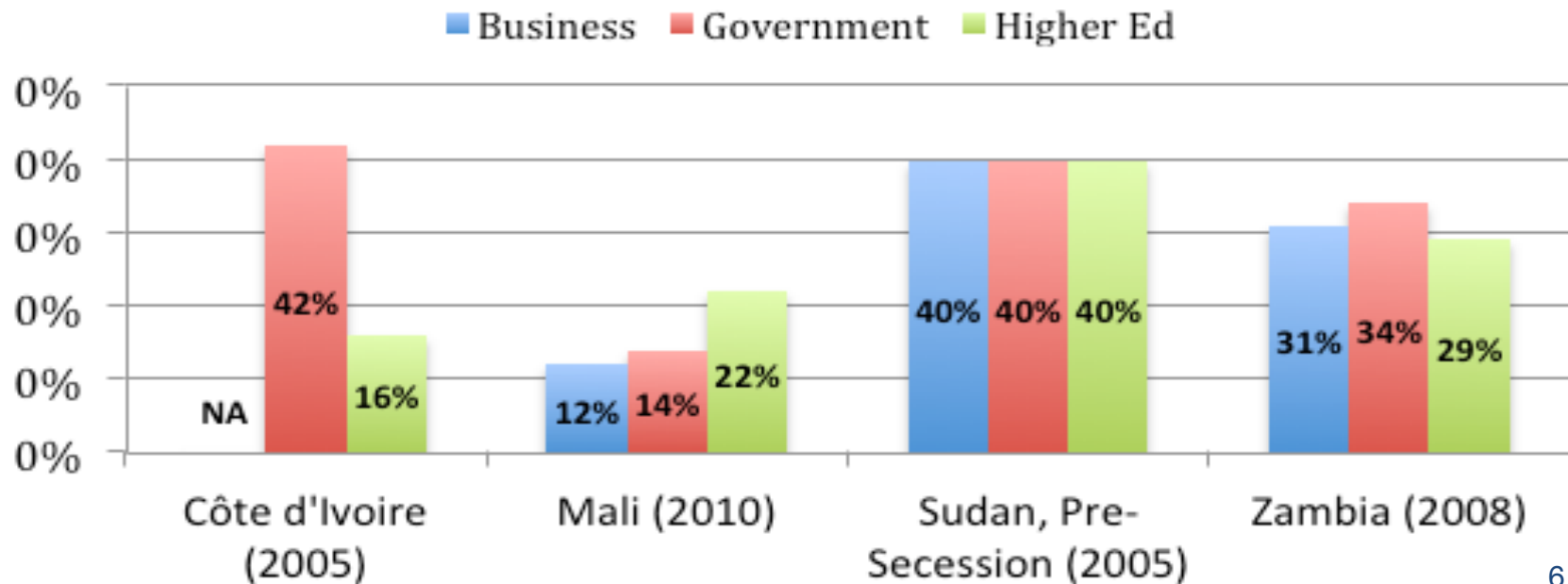
See also: [Diversity in Tech Leadership, The Verge](#)



Women in Science and Technology In Some African Countries

Female Researchers as Percentage of Total Researchers

Source: UNESCO Institute of Statistics (2015)





Why does diversity matter?

What are the benefits of increasing diversity in the professions?

- What might you say to encourage institutional leaders to encourage them to improve institutional diversity?

Some types of diversity

- Gender
- Age
- Race
- Religion
- Ethnicity
- Political orientation
- Sexual orientation
- Marital status
- Physical ability



Diversity improves financial performance

In the US....

- Female representation in top management leads to increase of \$42 million in firm value (S&P 500 composite index), on average
- Companies that prioritized innovation saw even greater financial gains when women were part of top leadership ranks

Deszo & Ross. 2012. Strategic Management Journal 33, 1072-1089

Internationally...

- Companies in the top quartile for racial and ethnic diversity are 35 percent more likely to have financial returns above their respective national industry medians.
- Companies in the top quartile for gender diversity are 15 percent more likely to have financial returns above their respective national industry medians.

Hunt, Layton, and Prince (2015). Diversity Matters, McKinsey & Company, mckinsey.com



Diversity improves professional performance

One study, for example, showed that papers written by diverse ethnic groups receive more citations and are more likely to be in higher impact journals

Freeman, R., and Huang, W. 2014. *Nature*, 513, p. 305





Diversity improves problem solving and decision making

- Brings different perspectives to the table
- Makes each person think/behave differently because they...
 - Expect greater challenge to ideas
 - Less likely to assume everyone agrees/understands each other
 - Small group dynamics altered

Carrell, Page, & West (2009). *National Bureau of Economic Research*.(14050), 1-42.

Ely & Thomas (2001). *Administrative Science Quarterly*, 46(2), 229-273.

Page (2007). *The Difference*. Princeton University Press, 6-20.

Sommers (2006). *Journal of Personality and Social Psychology*, 90(4), 597-612.

Temm (2008). In Schiebinger (Ed.), *Gendered Innovation In Science and Engineering* (pp 131-140). Stanford, CA: Stanford University Press.

Ellison & Mullin (2014). *Journal of Economics & Management Strategy* 23(2). 465-481.

Phillips, K. 2014. How diversity makes us smarter. *Scientific American* 311(4)



Diversity in the Professions: Why it Matters

1. Improves financial performance
2. Improves professional performance
3. Improves problem solving and decision making.
4. Increases the talent pool
5. Enhances company image
6. Promotes equity





What Accounts for Career Inequalities (by Gender or Race/Ethnicity)?

- **Internal factors:**
 - Interest, choice, performance
- **External factors:**
 - Features of environments that promote STEM stereotypes and implicit bias





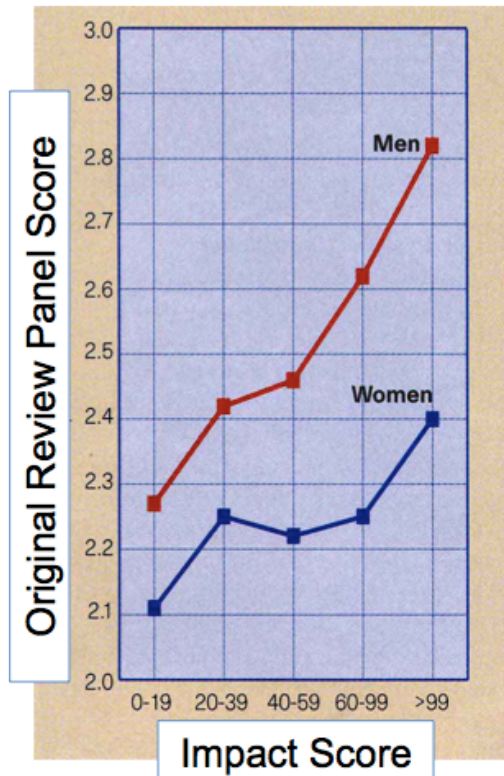
What Accounts for Professional Inequalities?

1. Socialization & Gender Stereotypes
2. Lack of Role Models
3. Isolation
4. Work/Life (Im)Balance
5. Implicit (or explicit) Bias





Evaluation Bias



One study of postdoctoral applicants found that women had to publish 3 more papers in prestigious journals, or 20 more in less-known publications, to be judged as productive as male applicants.

Wenneras and Wold, 1997, *Nature*, 387, pp. 341-343



Evaluation Bias. Hiring a Lab Manager

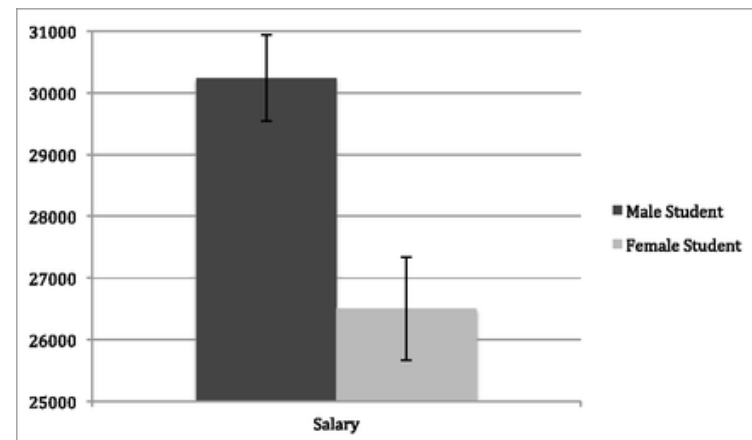
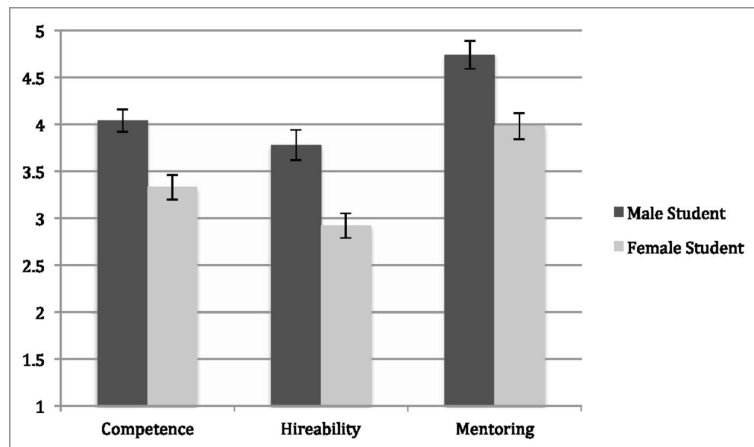
- 127 science professors evaluate an application packet for lab manager on competence, hireability, suitability for mentoring, and starting salary (if hired).
- Identical application sometimes carried a male name and sometimes carried a female name

Moss-Racusin, et al. PNAS 2012;109:16474-16479



Results. Hiring a Lab Manager Study

When the application carried a male name, the individual scored higher on all factors, esp. salary.



Moss-Racusin, et al. PNAS 2012;109:16474-16479



What can be done to address gender differences in career outcomes?

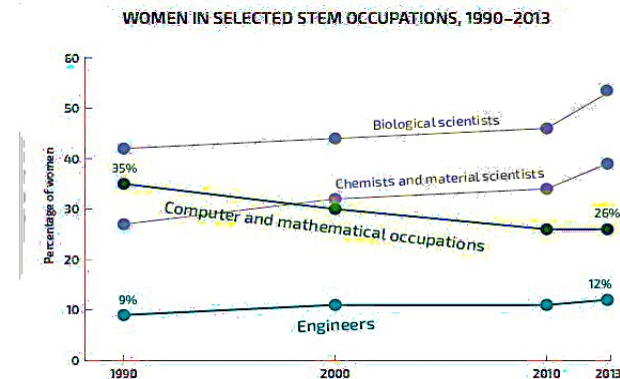
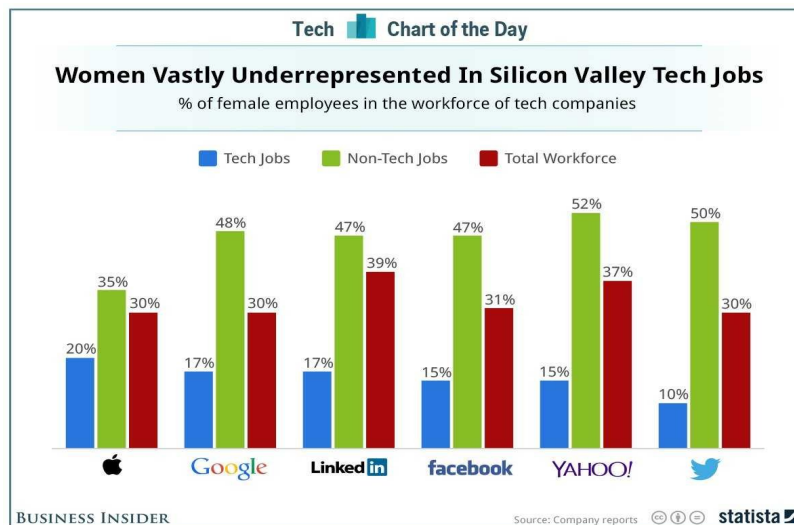


What are some solutions?

Measure career disparities

- Underrepresentation
- Unequal pay
- Unequal distribution of other resources

And disseminate results clearly and explicitly





What are some solutions?

Educate institutional leaders, workers in the profession, and the community on ...

- The existence of disparities
- The causes of disparities
- The value of diversity



What are some solutions?

Change Policies and Practices

Examples

- Family friendly policies and practices such as paid maternity leave or flex-time.
- Provide formalized means of communicating expectations for merit raises and for promotion.
- Active recruitment
- Active mentoring
- Provide networking opportunities

Accountability is important!