Gender Equity in Academia
Making it Happen

Jenny Martin
Twitter: @JennyMartin_UQ
Blog:
cubistcrystal.wordpress.com

Institute for Molecular Bioscience
University of Queensland
Science is “male”

350,000 self-selecting participants from 66 countries. Volunteers provided demographic information. 60% were women, average age 27, 79% had college experience. Responses reflected strong associations of science with men rather than women.

Science 22 May 2015

http://news.sciencemag.org/social-sciences/2015/05/science-still-seen-male-profession-according-international-study-gender-bias
The biggest problem in the world today is abuse of women
1. Women are relegated to a secondary position cf men
2. Men, in general, don’t give a damn

https://www.ted.com/talks/jimmy_carter_why_i_believe_the_mistreatment_of_women_is_the_number_one_human_rights_abuse?language=en
UN WOMEN: Challenging societal norms

PROGRESS OF THE WORLD'S WOMEN 2015 - 2016
TRANSFORMING ECONOMIES, REALIZING RIGHTS

27th April 2015
http://progress.unwomen.org/en/2015/
“Where there are no public services, the deficit is borne by women and girls”

“women (are punished) for stepping in when the State does not provide resources - it affects billions of women the world over.”

“We need policies that make it possible for women and men to care for their loved ones without having to forego their own economic security and independence”
“The UN Report sets out a vision of a global economy fit for women.

- Work that women do would be respected and valued.
- Stereotypes about what women and men can and should do would be eliminated.
- Women would work and live their lives free from violence and sexual harassment.

- The reality, however, is very different.”

In the European Union, 75% of women in management and higher professional positions have experienced some sort of sexual harassment in the workplace in their lifetimes.
In the U.S., the total value of unpaid care for children in 2012 was an estimated **$3.2 trillion**, approximately **20%** of total GDP.
The penalty of unpaid work

- UN report: women spend 2.5 x more hours on unpaid care & domestic work than men (Australia 1.8 x)
- UN report: average global gender pay gap 24% (Australia 18.8%; super gap 47%)
- 2014 Oz Household, Income and Labour Dynamics survey: “Women do more paid employment, housework, childcare combined than men, regardless of whether the man is the main earner, the men and women earn equal amounts or the woman earns more.”
“(Diversity/Gender Equity) isn't just the right thing to do, it's the smart thing to do... Inclusivity in the 21st century is a recipe for success. It brings fresh ideas and higher revenues... building a more diverse talent pool isn't a nice-to-do, it's a must-do.”
The business case for gender equity (not exhaustive)

- Better for everyone Athena SWAN UK
- Higher investor returns Credit Suisse
- Higher quality science PLOS One 2013
- Increase collective intelligence Science 2010
- Diversity improves performance Mike Fraser VP and Head HR, BHP Billiton 2014
S&P 500 companies with female CEOs outperformed those with male CEOs over the past year (19.5% vs 14.9%)
Bespoke Invest Feb 2015

Women led companies generated 3 times the profit of those led by men (12 year period)
Quantopian March 2015

I can’t do that comparison in Australia because the sample size (of women CEOs) is too small here
Alan Kohler ABC News Feb 2015

(In the USA) there are more men named John running large companies than there are large companies run by women
Ernst and Young March 2015
The “stupid curve” (coined by Mike Cook, DeLoitte) describes the over-representation of men in management.
Men and women graduates enter the workforce in about equal numbers, men have a nine times greater chance of reaching executive level than women (CEW, 2009, 2).

Bell S & Yates L
“Women in the Scientific Research Workforce: Identifying and sustaining the diversity advantage”
ARC Linkage project 2011-2014 (LP110200480)
University of Melbourne

Source: DIISRTE Higher Education Statistics Collection, customised data, 2011
This loss of talent and investment is a bad thing - but not unique to Australia

The overall sustained pattern of gender inequality in the academy in Australia is consistent with international evidence (NSF 2009; National Academies of Science 2007; OECD 2006)

Attrition of women from the scientific professions impacts negatively on productivity and, through the consequent failure to achieve diversity, limits innovation

(Bell et al 2009; Hewlett et al 2008; NAS 2007)

Why do women leave?

Sharon Bell “Women in the Science Research Workforce” 2015
The 5 biases pushing women out of STEM

Williams, Phillips, Hall, HBR 2015 – study of women’s experiences (60 interviews, 557 surveys)

1. Prove it again
2. The tightrope
3. The maternal wall
4. Tug-of-war
5. Isolation
Other reasons women leave (not exhaustive)

- **Sexism; harassment; stereotype threat; gendered stereotypes**
  - Having to prove themselves over and over again
- **Intimidation, bullying, “hostile/adversarial/toxic” work environment**
  - Supervisors that become competitors and block progress
- **Conscious and unconscious bias; “death by 1000 cuts”**
  - Normalised discriminatory behaviours, the male gaze
- **Feeling of “not belonging”, “being isolated”, “not fitting in”, having to challenge “male-centric leadership models”**
- **Lack of confidence; impostor syndrome – women don’t apply for jobs, promotions, fellowships when same qualified men do etc……**
- **Primary carer responsibilities; societal pressures; unpaid work**
- **Lack of senior female role models; conferences with no women**
- **Lack of mentoring, sponsorship, encouragement and support**
  - Committee burden for those who do succeed
- **Increasingly casualised workforce**
Gendered stereotypes

In a patriarchal society:
- Men are leaders
- Men valued for what they do
- Women adorn/have children
- Women valued for what they look like and their relationship to men
Rate My Professor – analysis of online reviews (Ben Schmidt)
Male Profs are more brilliant, awesome, funny and knowledgeable.

Unconscious bias by u/g students?
Gendered language in Teacher reviews 2015

Unconscious bias by u/g students?

Rate My Professor – analysis of online reviews (Ben Schmidt)
Female Profs are more strict/bossy, annoying, beautiful/ugly
Impact of a 1% Bias


FACEBOOK: Managing unconscious bias

FACEBOOK: Managing unconscious bias
Harvard study showed that the same CV for a student intending to go on to postgraduate research was:

Rated lower for competence
Rated lower for hireability
Rated lower for starting salary ($4K or 15% less)
Rated lower for amount of mentoring offered

By men and women faculty

……..if the applicant’s name was Jennifer not John

Moss-Racusin et al PNAS (2012)
Bad hiring decisions by employers favour men

- When employers have to choose between a man and a woman with *equal qualifications* for a maths task, we would expect them to select women 50% of the time and men 50% of the time.

- Employers chose the woman about 35% of the time and the man about 65% of the time.

- In the same study, where qualifications differed, selection of the wrong candidate (the one with poorer credentials) was associated strongly with sex bias.

- Reuben et al PNAS 2014; Curt Rice 2014
NHMRC: Women led grants and Fellowships have ~15% lower success rate

<table>
<thead>
<tr>
<th></th>
<th>Funded</th>
<th>Not funded</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1831</td>
<td>7589</td>
<td>9420</td>
</tr>
<tr>
<td>Male</td>
<td>3189</td>
<td>10807</td>
<td>13996</td>
</tr>
<tr>
<td>Total</td>
<td>5020</td>
<td>18396</td>
<td>23416</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>% funded</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>19.44%</td>
<td>female</td>
</tr>
<tr>
<td>Male</td>
<td>22.79%</td>
<td>male</td>
</tr>
</tbody>
</table>

ratio of female to male funding rates 0.8531

NHMRC data
Analysis by Barbara Fazekas
Sydney Uni

Chi-square with Yates' correction

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square, df</td>
<td>37.27, 1</td>
</tr>
<tr>
<td>z</td>
<td>6.105</td>
</tr>
<tr>
<td>P value</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>P value summary</td>
<td>****</td>
</tr>
<tr>
<td>One- or two-tailed</td>
<td>Two-tailed</td>
</tr>
<tr>
<td>Statistically significant? (alpha&lt;0.05)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Strength of association

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative Risk</td>
<td>0.8531</td>
</tr>
<tr>
<td>95% confidence interval</td>
<td>0.8105 to 0.8979</td>
</tr>
</tbody>
</table>
Funding by Year

NHMRC data
Analysis by Barbara Fazekas
Sydney Uni

Relative rate of funding for females

2014 all schemes
2013 all schemes
2012 all schemes
2011 all schemes
2010 all schemes

To address gender inequity, **always** consider these Qs:

1. Is this appropriate?
2. Is this inclusive?
3. Does this reinforce gender stereotypes?
Two quotes that might change the world:

- “If we don't actively and intentionally set out to include women, we will unintentionally exclude them” Elizabeth Broderick, Australia’s Sex Discrimination Commissioner

- “Let's not pretend that there aren't already established norms that advantage men. Men invented the system. Men largely run the system. Men need to change the system.” Gordon Cairns (champion of change)

So what can we do?
Champions of change

- Targets with teeth
- Panel pledge
- All roles flex
- Take action on VAW

Measure, Report, Actions
SAGE
Science in Australia Gender Equity Committee (Academy of Science)

- Brian Schmidt ANU, Nobel & ARC Laureate FAA
- Nalini Joshi U Sydney ARC Laureate FAA
- Jenny Martin UQ ARC Laureate, WiHS
- Maggie Galea MCRI E/MCR
- Sharon Bell DVC Darwin
- Roslyn Prinsley Office Chief Scientist
- Caroline McMillen VC Newcastle
- Doug Hilton Director WEHI
- Susan Pond ATSE President
SAGE Forum Workshop Nov 2014

- Consulted sector
- Agreed cultural change needed
- Agreed to establish SAGE as a catalyst for change.
- Recommended adopting UK Athena SWAN-like Charter
- Needs adaptation to the Australian context.

**Australian Pilot launched in June**

*(applications closed on Monday)*
Athena SWAN

- Established in 2005
- Founder members “the right thing to do”, “did not want to waste female talent/investment”
- Established a recognition scheme of excellence in women’s employment in STEMM in UK.
- 2005 = 10 founder members
- 2015 = 129 members
Athena SWAN – Founder members 2005

- University of Cambridge
- University of Oxford
- University College London
- Imperial College London
- University of Bristol
- Heriot-Watt University
- Loughborough University
- Queen’s University Belfast
- University of Southampton
- Plymouth University
Athena SWAN awards

- recognise Unis/Depts that best support women
- typically 2-3 years to become eligible
- not a “box-ticking” exercise for policies in place
- requires member organisations to:
  1. Sign up to the charter
  2. Collect data on women’s progression
  3. Critically analyse the data
  4. Identify reasons for under-representation
  5. Develop an action plan (individual to dept)
  6. Show progress over time
University or departments can apply
(but University must hold bronze before dept can apply)
Valid for 4 years;
Need progress to retain award

**Requires staff consultation/engagement**

University awards in 2014
61 Bronze universities
4 Silver universities

Department awards in 2014
162 Bronze departments
85 Silver departments
7 Gold departments
Impact of Athena SWAN

- Increases awareness of career progression issues, which affect both men and women
- Awards show job applicants that the department/institution is serious about gender equity
- Silver award now mandatory for major medical research funding
- Institutions now compete to be the best at supporting women’s progression
- Silver now a requirement or expectation of quality
Now gaining momentum outside the UK

- Considerable interest from China, Malaysia, Sweden, Finland, Italy and the Netherlands
- Republic of Ireland currently in 3-year pilot study
- Australian pilot study started
- Silver award in UK is commitment to gender equality
- Leads to real and substantial changes
- International rankings?
The Pleiades Awards
(inspired by the UK’s Athena SWAN program)

- Women In Astronomy Chapter of the Astronomical Society of Australia
- Recognise Commitment to Advancing Women In Astronomy
- Focused Programs; improving opportunities for women to achieve seniority, influence and recognition
- ANU-RSAA an inaugural bronze award winner

http://asawomeninastronomy.org/
What are Research Councils doing?

NHMRC 2015 revised Admin Inst policy

- Policies by Dec 2015 or risk being ineligible for grants ($800M funding)
  1. Ensure pay equity
  2. Develop action plan for boosting senior women
  3. Commit to facilitate childcare, flexible work arrangements, & provide assistance for women on maternity leave
- ARC CEO Aidan Byrne “fully backed the principle and was planning a similar announcement”
What can Institutions do?

- Make gender equity a priority – lobby Intnl rankings to include gender
- Publish workforce gender stats – highlight issues that need to be addressed, set diversity goals, update annually, measure progress
- Publish rates of pay for men/women; address any gender pay gap
- Include Eq/Diversity agenda item on all decision-making committees
- Train all decision makers in unconscious bias management
- Ensure sufficient, affordable, high quality childcare places
- Develop central webpage highlighting support for women
- PANEL PLEDGE: conf/panels with gender and anti-harassment policy
- Lactation Room; Dept Gender Equity comm (men/women)
- Appoint junior GLs (2-4 years out of PhD)
- Tech support for postdocs on maternity leave; conf support for carers
- Establish new metrics that reward service, support, good mentoring
- Evaluate staff recruitment statistics and processes & modify them
- Institute “women only” promotion round to address historic imbalances
- Advertise all jobs/positions as flexible; define core working day (school)
- Participate in SAGE Forum/Athena SWAN; aim for gold – be a beacon

What can individuals do?

Recognise that we all have biases
Learn about your own (Harvard implicit association test)
Do something about discrimination
Speak up - call out inappropriate behaviour, unconscious bias, gender stereotyping
When there are few women, ask why

“The standard you walk past, is the standard you accept”
   David Morrison, Chief of Army, Male Champion of Change
Assess “Relative to Opportunity”

Be informed: find out and implement institutional anti-harassment policy
What can men do?

- A powerful, decent man is one who cares about sharing power and sharing leadership:
- Take the panel/conference pledge
- Become informed about women’s issues & equality
- Treat women with courtesy, dignity, respect, trust
- Call out sexism, harassment, discrimination and bias
- Listen to women and believe them; Give women a voice
- Ask for flexible work arrangements, shorter working days, parental leave, spend more time with your family
- Lean in at home – share unpaid work - clean the toilet, do shopping/laundry, plan family events, share childcare, pack lunches, cook the meals, organise the plumber, pay the bills, do the tax forms……
- Take notes/pour coffee/serve drinks at meetings

See cubistcrystal “but what can I do”; and www.xojane.com/issues/feminism-men-practical-steps
What can women do?

- Minimise domestic duties
- If you choose to have a partner, choose a supportive partner
- Allow your partner to help
- Kathleen Lonsdale (first woman FRS & Prof ICL)

"To become a first class scientist (a woman) must choose the right (partner). (The partner) must recognise her problems and be willing to share them....

(p 381-2 of Dorothy Hodgkin; A Life by Georgina Ferry)
If you are in a position of power

- Support female colleagues – listen, sponsor, support shadow, coach
- Evaluate workforce patterns
- Call out unconscious bias
- Ensure job ads don’t alienate
- Look at appointment/promotion process
- Disrupt stereotypes
- eg include diversity development in award/promotion criteria
- eg Publish rates of pay
- eg Level F
- eg Gender Equality Champion
- eg Demerit
- eg Stanford Medical School model
Weekly Hours Associate Professors Spend on Service and Mentoring by Race and Gender

Source: UMass Work-Life Study

- **White Women**
  - Service to University: 12
  - Service to Profession: 5
  - Mentoring: 11

- **Women of Color**
  - Service to University: 12
  - Service to Profession: 6
  - Mentoring: 14

- **White Men**
  - Service to University: 5
  - Service to Profession: 6
  - Mentoring: 8

- **Men of Color**
  - Service to University: 9
  - Service to Profession: 8
  - Mentoring: 9

Women benefit from working in woman-dominated teams, study shows

"The important thing we found in this experiment is that even in learning environments where women are a tiny minority, if we can create work teams or learning teams, basically small groups with a high percentage of women, those promote women's success by reducing worry and anxiety, increasing women willingness to speak up and 'lean in,' to use Facebook CEO Cheryl Sandberg's phrase. This allows women to speak up and not worry what others think, increases confidence about their ability and ultimately lets them aspire to a career in these fields."

Summary

- Diversity is good for business and science
- Men and women suffer from stereotypes
- Old stereotypes die hard
- Be aware of your own biases
- Put gender equity first not last
- Challenge the status quo
- Don’t tolerate sexism and harassment
- When there are few women, ask why
- Identify obstacles to progress
- Change the way we do things now
- Participate in the SAGE/Athena SWAN Initiative
- Make the world a better place; where everyone has an equal chance to excel
More Info and Ideas (not exhaustive)

- Male champion of change website
- “Lean In” – Sheryl Sandberg (COO Facebook)
- Diversity Council of Australia website
- UN Women website
- “Thinking, Fast and Slow” Daniel Kahneman
- AAS Early & Mid Career researcher forum “Gender Equity” Michelle Dunstone, Bob Williamson
- Women’s Agenda website
- NHMRC women in health sciences committee website
- Annabel Crabb “The wife drought”
- Twitter
- Women in Science Australia