Power, Privilege and Leadership in Academia

Kathryn V Johnston
Columbia University Astronomy

My Experience

Research: structure, formation and evolution of galaxies; the Milky Way

• BA in Mathematics, Cambridge University
• PhD in Astronomy, UC Santa Cruz
• Postdoc at the Institute for Advanced Study
• Tenure-track Professor, Wesleyan University
• Professor, Columbia University
  - Department Chair, 2014-2017
I. Introduction: What is Academia?

What does it mean to be faculty at an academic institution?

• Purpose?
• Role?
• Responsibilities?
What does it mean to be faculty at an academic institution?

- **Purpose:** *faculty ARE the institution*
- **Role:** *to further human knowledge*
- **Responsibilities:**
  - research and mentorship
  - education and communication
  - framework: structure, policies, goals

What does it mean to be faculty at an academic institution?

- ??? framework: structure, policies, goals ???
  = space in which research and education/communication thrive

thriving members = thriving institution
Are we all “thriving”?  
Statistics suggest not: e.g. % women at each stage from survey of “top 100” US departments by Donna Nelson released in November 2007

<table>
<thead>
<tr>
<th>Department</th>
<th>% BS (2005)</th>
<th>% PhD (96-05)</th>
<th>% assist profs</th>
<th>% all profs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>51.7</td>
<td>32.4</td>
<td>21.2</td>
<td>13.7</td>
</tr>
<tr>
<td>Math</td>
<td>44.9</td>
<td>28.7</td>
<td>26.8</td>
<td>12.9</td>
</tr>
<tr>
<td>Physics</td>
<td>21.1</td>
<td>14.3</td>
<td>16.8</td>
<td>9.1</td>
</tr>
<tr>
<td>Astronomy</td>
<td>42.4</td>
<td>22.7</td>
<td>25.3</td>
<td>15.8</td>
</tr>
</tbody>
</table>
Under-representation of (and associated effects for) other groups in STEM significantly worse

Are we all “thriving”?

**Conclusion: No!**

Yet:

- No difference in innate abilities *(Spelke 2005 review in American Psychologist).*

- Diversity in perspectives strengthens innovation *(e.g. Phillips in Scientific American, October 2014; Page, 2007).*

=> **We are not fully-utilizing our resources**
Outline

• Introduction: what is “academia”?
• Barriers to Diversity
• Net effects
• Some thoughts on next steps

** References
** Discussion

II. Barriers to Diversity
Barriers A: Biases

• Everyone has biases, e.g.:
  - Reference letters (Trix & Psenka, 2003)
  - Peer Review (Wenneras & Wold 1997, Budden et al 2008)

• Check
  - your own implicit biases: Project Implicit
  - your (and others’) letters: gender bias calculator

• Conclusion: maintain awareness in reviews, admissions, hiring, promotion

Barriers B: Comfort Zones

• Imposter syndrome: doubt of accomplishments and fear of being exposed as a “fraud”

• Stereotype threat: minority status in a group suffering from negative stereotypes leads to underperformance
  - Steele & Aaronson 1994; Shih, Pittinsky & Ambady 1999

• Current science “culture”: not a productive work environment for all

Conclusion: imposter syndrome heightened for those subject to stereotype threat
Barriers C: Culture Clash

- Diversity is hard (Phillips, 2014)
- “Change” is uncomfortable
- Easier to “just think/talk about science”

**Conclusion:** acknowledgement and teamwork essential to build effective workplaces

Barriers D: leading on diversity and developing diverse leadership

- Leadership modes evolve with diversity => lack of role models and challenges to innovation
- Authority of diverse leaders is undermined if they talk about diversity (Heckman, Johnson, Foo & Yang 2016)

**Conclusion:** active support for diverse members as they move to leadership positions
Are you aware of instances of:
- unconscious bias?
- stereotype threat?
- imposter syndrome?
- culture clash?

My Experience

Research: structure, formation and evolution of galaxies; the Milky Way

- BA in Mathematics, Cambridge University
- PhD in Astronomy, UC Santa Cruz
- Postdoc at the Institute for Advanced Study
- Tenure-track Professor, Wesleyan University
- Professor, Columbia University
  - Department Chair, 2014-2017
My Experience

Research: structure, formation and evolution of galaxies; the Milky Way

• BA in Mathematics, Cambridge University
• PhD in Astronomy, UC Santa Cruz
• Postdoc at the Institute for Advanced Study
• Tenure-track Professor, Wesleyan University
• Professor, Columbia University
  - Department Chair, 2014-2017
My Experience

Research: structure, formation and evolution of galaxies; the Milky Way

• BA in Mathematics, Cambridge University
• PhD in Astronomy, UC Santa Cruz
• Postdoc at the Institute for Advanced Study
• Tenure-track Professor, Columbia University
• Professor, Columbia - Department Chair, 2014-2017

stereotype threat
systemic problems
challenge of leading on diversity

III. Net Effects
= consequences for academia
Net Effects A: 
the Leaky Pipeline

![Bar chart showing the leaky pipeline with percentages]


Net Effects B: 
Glass Ceilings
IV. Next Steps
= directions to explore!

Next Steps A:
change the conversation -
“and” not “either/or”

• Differences as
  - additions not replacements
  - growth vs change

• Recognition of likely: difficult
discussion; conflicts; need for help
Next Steps B: Combating Threat Triggers

• e.g. In talks and group settings, be aware: imposter syndrome enhanced by stereotype threat

• Set appropriate boundaries for “intense scientific exchange”

• Unchallenged, individual “bad behavior” can have significant effects on workplace for all.

Don’t just tell me about imposter syndrome. **Stop** making me feel like an imposter!

(appeal from URM graduate student in STEM)
Next Steps C: Acknowledging Privilege

• **What “worked” for you may not work so easily for others.**

• **Be careful not to send unintended messages of exclusion in mentorship**

Next Steps D: Using Power for Advocacy

• **Making changes**
  - Silence is deafening
  - All department members set the environment
  - “bystander training” to learn to be an ally

• **Beyond “allyship”: creating teams to work on active advocacy**

• **Beyond departments – your leaders - your institution – your field**
Resources

• ADVANCE programs: e.g. at University of Michigan, University of Wisconsin, Lehigh University.

• Outside help for difficult discussions: growing number of coaches and consultants who specialize in academia.

• E.g. NSF-funded partnership in engineering fields between Purdue/Washington + Kardia Group Consultants: TECAID.

Power, Privilege and Leadership in Academia

Use them to address:

• combined negative effects of: imposter syndrome, stereotype threat, privilege, bad behavior.

• unfulfilled promise of diversity: student, faculty, leadership levels.

• challenge of necessary growth.

• shared responsibility.
Useful References

- Goldin & Katz American Economic Revie - proceedings (2008), 98, 2 p 363

Useful References (continued)

- Mason, M.A. & M. Goulden (2004), "Do Babies Matter (Part II)? Closing the Baby Gap".
- Scott Page, "The Difference", 2007
- Shih, Pittensky & Ambady, 1999, Psychological Science, Vol 10, No 1, p 80
- Steele CM, Aronson J (November 1995).