Re-focusing how the scientific community assesses research

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Gender Summit | Amsterdam | 04 Oct 2019
How do we solve the problem of bias in research assessment?

Methodically...

1. Define the nature and scale of problem
2. Understand its root causes – share that understanding convincingly
3. Design and test tools and processes to fix it
   - Education, training
   - Methods for credible, time-efficient assessment of the qualities of research
   - Methods to counter the biases rooted in human psychology and society

When there are joint first authors, reflecting equal contributions, men are more likely to be listed first.

For men, merit (judged by peer review) is associated with productivity. For women, there is no such association. (Same applies to ethnic minority candidates).

Gender gaps in grant funding are attributable to less favourable assessments of women as PIs, not of the quality of their proposed research.
2. Understand the root causes of the problem

“Gender stereotypes affect the way people attend to, interpret, and remember information about themselves and others. ... They reflect general expectations about members of particular social groups.”

“he is smart” (stable attribute); “she did well on the test” (temporary achievement)

he is “outstanding”; she is “hardworking”

he is “assertive, ambitious”; she is “caring, conscientious”
3. Design and test tools and processes to fix it

Stereotyping “leads people to over-emphasize differences between groups and underestimate variations within groups”

- **Training:**
  - **Acknowledge** the pervasive nature and impacts of gender stereotyping
  - **Accept** that we are all subject to gendered expectations - and that these bias our judgements
  - **Educate** people to recognise the implicit effects that gender stereotypes have for themselves and others

- **Process:**
  - **Lift the burden** of proof from those who may be disadvantaged;
  - **Support** employees in reconciling male and female role expectations regarding work and family life
San Francisco Declaration on Research Assessment (DORA)

Campaigning for reform of research evaluation: we can do better than journal impact factors (JIFs)

- sfdora.org
- 6 years old; >14,500 individuals and >1500 organisations have signed
- International steering group; a global advisory board
- Roadmap for action:
  - Increase awareness of the need to develop alternatives to the JIF
  - Research and promote best practice in research assessment
  - Extend the global and disciplinary impact of DORA

https://www.nature.com/articles/d41586-018-01642-w
DORA: building, promoting and testing new tools and processes for evaluation

DORA session at ASCB|EMBO (Dec 2018)

Research Assessment: Reducing bias in the evaluation of researchers

A workshop run by DORA identified a number of ways to reduce bias in hiring and funding decisions.

By Anna Hatch (DORA), Veronique Kiermer (PLOS), Bernd Pulverer (EMBO), Erika Shugart (American Society for Cell Biology), and Stephen Curry (Imperial College London)

Introduction
Hiring and funding decisions influence academic research agendas. They also shape priorities of the scientific workforce, which in turn impacts the broader society.

More info & ideas at: https://sfdora.org/

DORA session at AAAS (Feb 2019)

Meeting
Driving Institutional Change for Research Assessment Reform

October 21 – 23, 2019

Summary
What is this meeting about?
- DORA and the Howard Hughes Medical Institute (HHMI) are convening a diverse group of stakeholders to consider how to improve research assessment policies and practices.
- By exploring different approaches to cultural and systems change, we will discuss practical ways to reduce the reliance on proxy measures of quality and impact in hiring, promotion, and funding decisions. To focus on practical steps forward that will improve research assessment practices, we are not going to discuss the well-documented deficiencies of the Journal Impact Factor (JIF) as a measure of...
New tools to break old habits - structured narratives

Researcher assessment at UMC Utrecht
1. Research, publications, grants
2. Managerial & academic duties
3. Mentoring & teaching
4. Clinical work (if applicable)
5. Entrepreneurship & community outreach

More examples at: https://sfdora.org/good-practices/

Case study (Chem Eng+, Imperial College)
Shift the weight of assessment to more nuanced, qualitative peer review needs built-in processes to reduce bias:
- proactive search for under-represented candidates
- careful use of language in adverts
- anonymisation of candidate info at triage
- bias training for panels
- diverse panels; designated EDI observer at interview
- interview and candidate visit within core hours
- explorative, value-driven rather than aggressive interviews
EDI and culture change at universities: do we have enough evidence?

- To ensure our **future success** as a university
- To tap into **pools of talent** that have been neglected for too long – diversity is a strength
- To increase the **quality, relevance and world-changing impact** of our research and education
- To improve the well-being and productivity of the people who work and study here by developing a culture that **values everyone**

“**We will integrate EDI into all management processes.**”

(engaged leadership; people-management skills; EDI training; mentoring)

http://www.imperial.ac.uk/equality/governance/strategy/

“**The key to understanding the positive influence of diversity is the concept of informational diversity. When people are brought together to solve problems in groups, they bring different information, opinions and perspectives. This makes obvious sense when we talk about diversity of disciplinary backgrounds...**”

https://www.leru.org/publications/equality-diversity-and-inclusion-at-universities#
How to have competition without hyper-competition?

“Leadership is the art of achieving more than the science of management says is possible.”

Myth-busting the military: What academia could learn
https://www.youtube.com/watch?v=b2sgp7kJy8

“My one aim is for everyone to understand how important leadership is within the academic setting and how we could do more to incorporate that into the academic culture.”

Nadia Soliman
March 2019

“Science is at its best when at its most collaborative, inclusive and diverse.”

Margaret Heffernan
June 2019

See also: https://www.imperial.ac.uk/news/190447/from-british-army-imperial-phd-student/
We need to assess research but how should we define success?

Reliable, rapidly communicated, accessible, high-quality research that transforms our understanding of the world and can change it for the better.

Researchers who collaborate, who feel a duty of care to group members & colleagues, and a responsibility to the societies of which they are an integral part.

A research system that values the people within it, that cares about their quality of life, and that seeks out the creative vigour of diversity.

“We yearn for frictionless, technological solutions. But people talking to people is still how the world’s standards change.”

Atul Gawande
“People talking to people is still how the world’s standards change.”

Get the evidence and the message out to those researchers who may still be doubting the value of equality.
Thank you

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