Biases and Career Paths in Academia

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Topics of today

I. Definition of bias?
II. How do we detect or measure bias?
III. Systemic bias.
IV. Bias in career paths – where, when and how?
V. Bias and academic values.
VI. Actions against bias.
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What is bias?

Bias is a cognitive process, where the cultural and social context affects a person's decisions, judgement and actions.

It could be a negative effect if it is based on stereotypes, beliefs, prejudices and preconceived notions. It is therefore a threat to meritocracy!

It can lead to micro-aggressions (and worse) and non-events.

It is not only psychology, but also organizational.
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VI. Actions against bias.
II. How do we “measure” bias?


2. “Experiments”

3. Evaluation of processes and organisations.

4. Experiences from observers.
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Evidence of bias: pipeline

Career paths in a typical Science faculty.

Many different curves – but the same outcome

Weak dependence on input!

% women in Science in Lund

Bias!
Mens compared to Womens chance to become a Professor.

Hidden quota for men!
Flexible cascade model
- Science Faculty in Lund

% women

Bias!
II. How can we “measure” bias?


2. “Experiments”

3. Evaluation of processes and organisations.

4. Experiences from observers.
Bias Experiment.

From Moss-Racusin et al. 2012, *Science faculty’s subtle gender biases favor male students*, PNAS 109 41

Watch it in the movie *Picture a Scientist* at 47.30 min

Fig. 1. Competence, hireability, and mentoring by student gender condition (collapsed across faculty gender). All student gender differences are significant ($P < 0.001$). Scales range from 1 to 7, with higher numbers reflecting a greater extent of each variable. Error bars represent SEs. $n_{\text{male student condition}} = 63$, $n_{\text{female student condition}} = 64$. 
Bias experiment: The IAT-test

Test of your own bias.
Banaji et al, Project implicit, https://implicit.harvard.edu

Watch it in the movie Picture a Scientist at 50:30 minutes
Bias – other observations

- Receive smaller grant allocations
  *(Ex: Swedish Research Council 2020)*

- Worse evaluations of abstracts for conferences

- Worse student evaluations

- Men 8 times more likely to win awards (?)

- Fewer leadership positions

- Worse letters of recommendations

.................
II. How can we “measure” bias?


2. “Experiments”

3. Evaluation of processes and organisations. – we return to this.

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II.4 Observers: Swedish Research Council (VR)

One possible source of information is to introduce observers. Independent persons, observing the processes, meetings, decision-making..

This was done by the Swedish Research Council (VR) and has been developed and practiced for over two decades.

What did they find?
II.4 first steps towards observers.
Ex: Swedish Research Council

Work against bias in evaluation panels.

Wennerås & Vold 1998 *Nepotism and sexism in peer review*:
- Women had to publish 2.6 times as much as men to receive grants.
  - “Matilda effect”
- Men supported men, women supported men.
- Cognitive bias: Scientific proximity was rewarding.
- Personal/Institutional bias: someone you know, from your institution
  - “Mathew effect”
II.4 Continued observations.

Ageism combined (intersected with) sex:

- Myth of youth – “made all major discoveries before 30” – which fits male life-cycle

- Age is also an advantage for men (experience, invaluable, world leading), but not for women (too old).
II.4 Continued observations.

Later reports (2012, 2016, 2020)

• Different wordings:
  • Male applicants: excellent, respected, a rising star, front figure
  • Female applicants: good, strong, good merits, high novelty

• Questioning women independence from co-authors
  • Supervisors, husbands, relatives, ...

• Leadership: Men trusted, women questioned.
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Not only psychology ...

Systemic recruitment hijacking

- **Decoupling** – say one thing, do another
- **Standardisation** – what is merits?
- **Symbolic boundary work** – referring to stereotypes.

Inspired by:
Nielsen 2015, *Make academic job advertisements fair to all*, Nature 525 427
Systemic bias
1. Decoupling

Saying one thing, doing another e.g.

One says: “We only look at qualifications and merits – it is all about the best candidate”

... but one does, e.g.

• Tailor-made advertisements
• Hand-picked experts
• Lack of openness
Pretending there are objective measures e.g.
- What are excellent journals and publishers?
- Point-system with weak justification.
- h-index.
- Quantitative or qualitative criteria.
- Productivity vs production.

See DORA association (sfdora.org)
Justifying through stereotypes, e.g.

➢ Sexism
   ▪ Old sexism: “Women are not fit to or it is dangerous for them to ...”
   ▪ New sexism: “Women do not want to ...”

➢ Stereotypes e.g.
   ▪ “risk-taking”
   ▪ “caring vs competition”
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Recruitment processes – a minefield of bias

Before

- What position? How wide? Criteria?
- Contact with applicants? Answering questions etc
- Advertising: Posting, Notifying, Encouraging?
- Assessment: How? Criteria?
- Interview etc: How? By whom?
- Shortlisting: How “detailed”? By whom? Criteria?
- Selection: by whom? Information? To whom?
- External experts: Selection? Informed?

During

- Recruitment process
- Interviews etc: How? By whom?
- Assessment: How? By whom?
- Onboarding: How is it assured?
- Notifying: How? By whom?
- Appeal: How is it ensured?
- Information?

After

- Retention: How is it ensured?

Inspired by M. Dockweiler, South Danish University
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Academic values

- Academic freedom
- Meritocracy
- Excellence

Are they threatened? By what?
Sometimes perceived threat from equality and diversity – but it is the opposite!
Bias is an important threat!
Equality and diversity promotes them!
• Academic freedom
  • If you face bias, you are not free in research and teaching.

• Meritocracy
  • Merits are questioned (standardisation bias).
  • Cracy from “kratos” = power, is not distributed fairly (see leaky pipeline)

• Excellence
  • Diversity gives excellence, if correctly managed (needs good leadership!)
A number of recent research:

- Nielsen et al. 2017, *Opinion: Gender diversity leads to better science*, PNRAS *114* 1740
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LERU advice paper on bias – full process

1. **Monitor** career development and assign responsibilities. **Accountability**.
2. **Measures** for countering gender bias
3. Offer gender **bias training**
4. **Recruitment and funding** processes should be monitored. Use **bias observers**!
5. Evaluate the **language** in recommendations etc
6. Eliminate gender **pay gap**
7. Evaluate **quality**; Compensate for **care leave**.
8. Monitor **precarious contracts** and part-time positions.
9. Use **positive actions** against vertical segregation
Position paper

From LERU PG EDI

On WHY we need to change!

Equality, diversity and inclusion at universities: the power of a systemic approach

LERU position paper
September 2019

Actions for meetings

*From Swedish Research Council 2020.*

- Observers were essential – followed process and pointed to bias.
- Clear and transparent processes – stick to the criteria and agenda.
- Formalised meetings, down to speaking time and seating.
- No informal discussion in breaks, dinners etc.
- Trained panel-members and chairs, with assistants from the council.
Cognitive bias – five strategies

Devine (2012)

1. Stereotype replacement.
   • Recognise stereotypes and try to replace them.

2. Counter-stereotypic imagining.
   • Imagine in detail a person who counteracts the stereotype.

3. Individuation.
   • Make it personal, instead of group-based, by obtaining information about individuals.

4. Perspective taking.
   • Step into someones shoes.

5. Increasing intergroup contact.
   • Engage in positive interaction with your “outgroup”.
Actions for meetings
CERCA

https://www.youtube.com/watch?v=g978T58gELo
LERU – training of UBO

LERU, Lund and Trinity have initiated a training for Bias Observers (UBO).

Four workshops:
1. what is bias,
2. bias in careers,
3. experience of bias in evaluation and language,
4. experiences of UBOs and “what is merits?”.

Creating a network and a tool-kit/good practices list.
Once a year ...

It is proof of bias!
Thank you for the attention!
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