

Unconscious Bias

Tinu Cornish CPsychol





TINU CORNISH, CPSYCHOL

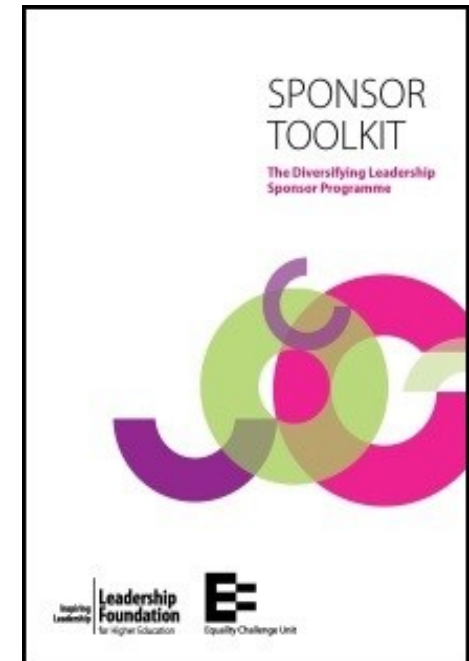
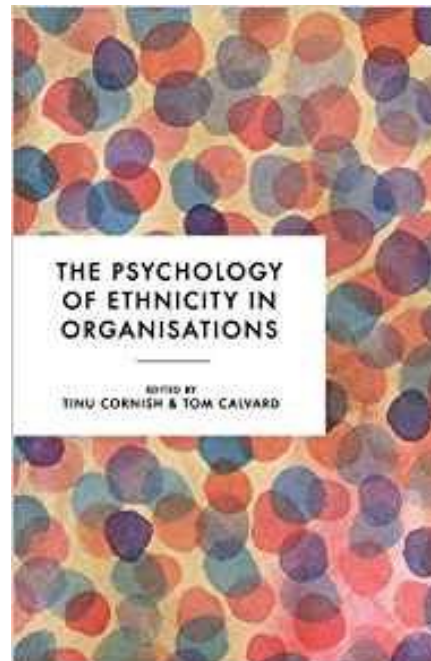
Unconscious Bias in higher education

<https://www.equalityhumanrights.com/en/publication-download/unconscious-bias-training-assessment-evidence-effectiveness>

Review of the effectiveness of unconscious bias training

<http://www.ecu.ac.uk/wp-content/uploads/2014/07/unconscious-bias-and-higher-education.pdf>

www.sea-changeconsultancy.com





Session Plan

- What is unconscious bias,
- How does it affect recruitment, selection and careers
- What does the research say we can we do about it?

**Unconscious
X 200,000
Norretranders 1998**

2 Cognitive Systems (Kahneman)

System 1 - Fast

- Intuitive
- Automatic
- No sense of control
- Little or no effort
- Unconscious
- Mental shortcut

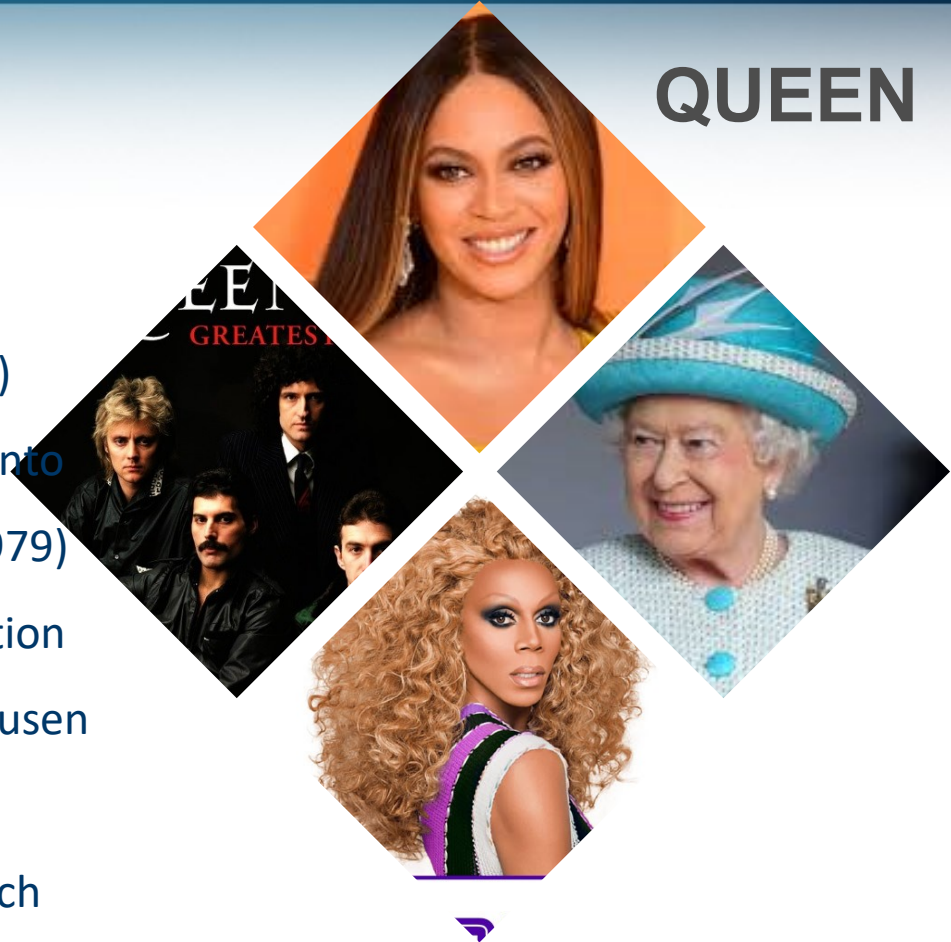
System 2 - Slow

- Requires attention
- Needs effort
- Analytic
- More controllable
- Conscious

Psychological Explanation

QUEEN

- Our brains use two 'thinking' systems that operate simultaneously*. (Kahneman, 2011)
- We evolved to instantly categorize people into in-group and out-group (Tajfel & Turner, 1979)
- Categories are also formed through association
- Biases are wired within the brain. (Bodenhausen and McCrae, 1998)
- Positive people preferences account for much discrimination



Everyday Associations Exercise

Question: What is the ratio of Asian women in senior roles to the ratio of White males in senior roles that you have seen in the past month? This is approximate you do not need to give an exact number.

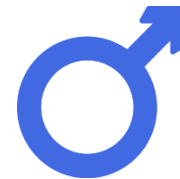
- Asian women are senior leaders
- White men are senior leaders



Gender Science Poll – Implicit Association Test

Did you more closely associate women with:

1. liberal Arts?
2. Science
3. Neither one with the other
4. I DIDN'T DO THE ACTIVITY



What are the implications of people being biased against their own group?

(Banaji & Greenwald, 1995)

What other 'patterns' are there within your team, clients or within your organisation more widely?

Enter into chat





Impacts: Recruiting

1. The Sheffield and GEMM Studies

Wood, M., Hales, J., Purdon, S., Sejersen, T. and Hayllar, O. (2009). *A test for racial discrimination in recruitment practice in British cities. Department for Work and Pensions Research Report, 607.*

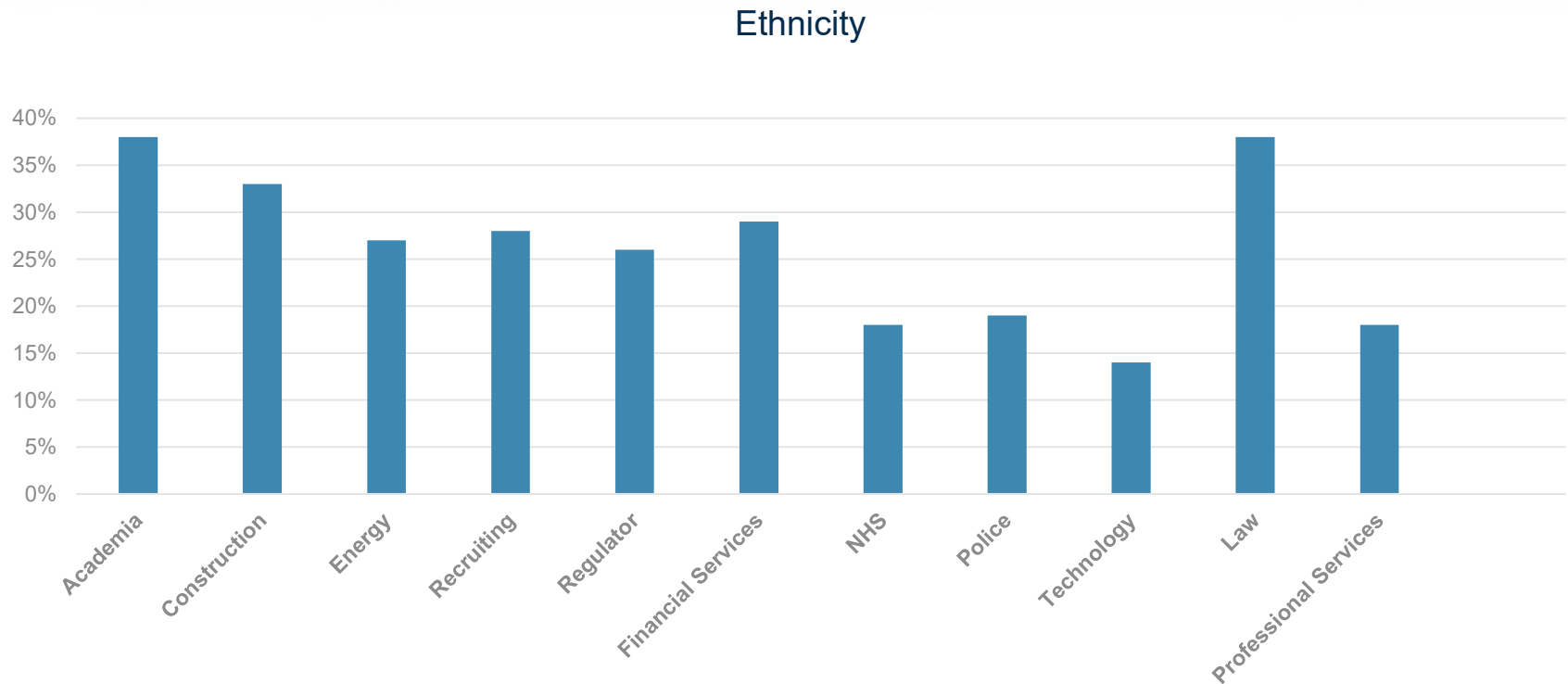
The GEMM Briefing paper Jan 2019. r. Valentina Di Stasio, European Research Centre on Migration and Ethnic Relations (ERCOMER) Utrecht University, Padualaan 14, 3584 CH, Utrecht

2. **The Swedish study** Agerström, J., & Rooth, D. O. (2009). Implicit prejudice and ethnic minorities: Arab-Muslims in Sweden. *International Journal of Manpower*.

3. **The Meta-analysis** of 738 correspondence tests in 43 separate studies conducted in OECD countries between 1990 and 2015. Zschirnt, E. and Ruedin, D. (2016): Ethnic discrimination in hiring decisions: a meta-analysis of correspondence tests 1990–2015. *Journal of Ethnic and Migration Studies* 42(7): 1115-34. **Journal of Ethnic and Migration Studies** Volume 42, 2016 - **Issue 7**

Commonness leads to **Comfort** which affords implicit **Trust** and a perception of **Competence**

Comparative results Ethnicity

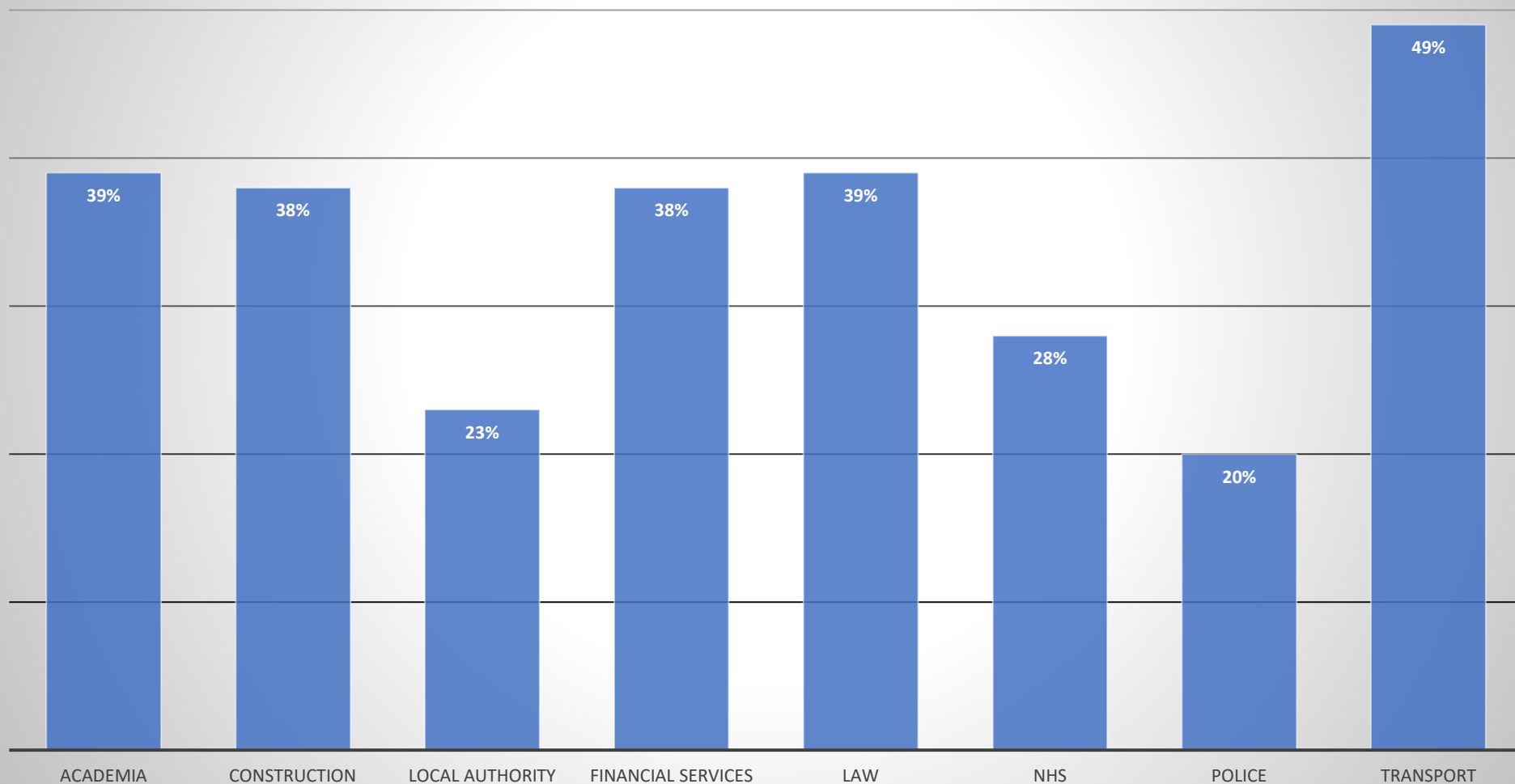


Sector Ethnicity Bias; % Staff With Bias Affecting Behaviour



Comparative Bias Test Results; Disability

% staff tested with bias at a level affecting behaviour



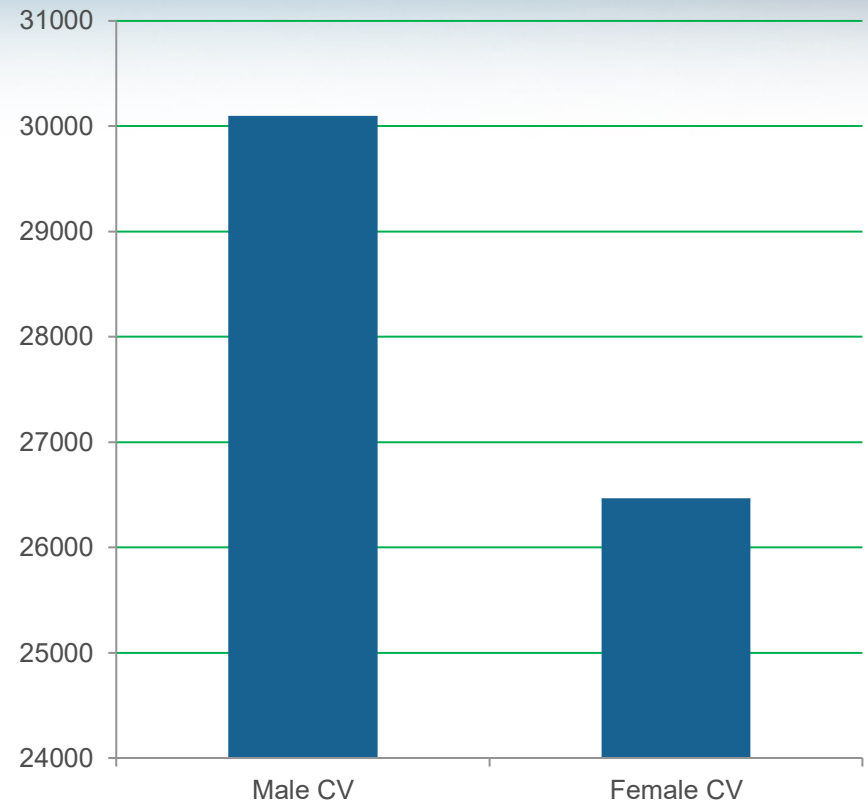
Bias in people decision making

Academics in STEM departments

- ❑ Moss-Racusin *et al* (2012) had staff in science faculties in US colleges rate the application of a Post Doc applicant for a position as a laboratory manager. The same application was used 127 times and randomly assigned either a female (64 times) or male (63 times) name.
 - Both male and female hirers rated the 'male' applicant more highly than the 'female' applicant

6500 Professors

- ❑ 6,548 professors at 259 U.S. colleges and universities. The researchers pretended to be prospective doctoral students searching for research opportunities to boost their career outlook. All the messages were identical — except for their names



- Moss-Racusin, CA, Dovidio, JF, Brescoll, VL, Graham, M & Handelsman, J (2012) 'Science faculty's subtle gender biases- favour male students'. Proceedings of the National Academy of Sciences for the United States of America 109(41): 16474-16479
- Milkman, K. L., Akinola, M., & Chugh, D. (2015). What happens before? A field experiment exploring how pay and representation differentially shape bias on the pathway into organizations. Journal of Applied Psychology, 100(6), 1678.



Intersectionality

- Physics faculty exhibited a gender bias favouring the male candidates as more competent and more hireable than the otherwise identical female candidates.
- Physics faculty rated Asian and White candidates as more competent and hireable than Black and Latinx candidates,
- **An interaction between candidate gender and race emerged for those in physics, whereby Black women, Latinx women and men candidates were rated the lowest in hireability compared to all others.**
- Women were rated more 'likeable' than men candidates across departments.

Eaton, A.A., Saunders, J.F., Jacobson, R.K. et al. Sex Roles (2019). <https://doi.org/10.1007/s11199-019-01052-w> *How Gender and Race Stereotypes Impact the Advancement of Scholars in STEM: Professors' Biased Evaluations of Physics and Biology Post-Doctoral Candidates.* Sex Roles June 2019 Pp1-15



Gender and Race bias in citations

Male authors tend to cite other men over women but similar patterns are also found in journals with majority female authors

Example LSE International Relations

1. **80-20 split between male and female authors across the IR curriculum at LSE**
2. **80-20 the gender gap of articles in top IR journals vs 50-50 split in terms IR/Political Science staff and PhD graduates**
3. **Content, lack of diversity content overall, and especially with regards to gender and race.**

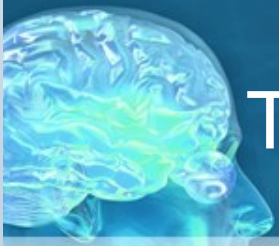
= Example Astro physics

1. 50,000 articles that were published in 5 major astronomy journals between 1950 and 2015.
2. % of papers with a female first author rose from less than 5% in the 1960s to about 25% in 2015.
3. But since 1985, astronomy publications with a male first author have received about 6% more citations than those led by a woman — a figure that Caplar and his co-authors suspected could reflect a hidden gender bias.

http://eprints.lse.ac.uk/90165/1/Meibauer_gender-and-bias--edited.pdf; <https://doi.org/10.1038/s41550-017-0141>; <https://doi.org/10.1063/1.5110069>

Dion, M. L., Sumner, J. L., & Mitchell, S. M. (2018). Gendered citation patterns across political science and social science methodology fields. *Political Analysis*, 26(3), 312-327.

Chakravartty, P., Kuo, R., Grubbs, V., & McIlwain, C. (2018). # CommunicationSoWhite. *Journal of Communication*, 68(2), 254-266.



The Matthew Effect in Science Funding

- Scientists who have previously been successful are more likely to succeed again
- All review scores and funding decisions of grant proposals submitted by recent PhDs in a €2 billion granting program.
- Analyses of review scores reveal that early funding success introduces a growing rift, with winners just above the funding threshold accumulating more than twice as much research funding during the following eight years as nonwinners just below it.
- Found no evidence that winners' improved funding chances in subsequent competitions are due to achievements enabled by the preceding grant,
- Early funding itself is an asset for acquiring later funding.
- Funding gap is partly created by applicants, who, after failing to win one grant, apply for another grant less often.

Viner, N., Powell, P., & Green, R. (2004). Institutionalized biases in the award of research grants: a preliminary analysis revisiting the principle of accumulative advantage. *Research Policy*, 33(3), 443-454.

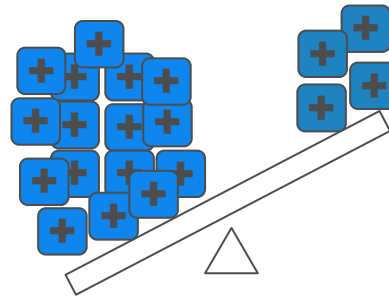
Thijs Bol, Mathijs de Vaan, and Arnout van de Rijt

PNAS May 8, 2018 115 (19) 4887-4890; <https://doi.org/10.1073/pnas.1719557115>

Structural Bias - Privilege and advantage in careers

Majority group advantages

1. Grammar or private school
2. Elite Universities
3. Quality work experience and internships
4. Resources; financial, accommodation; IT
5. Sponsor/mentor
6. Influential network
7. Insider knowledge
8. Privileged access to grant funding
9. PhD students
10. Ex officio roles/committees
11. Positive stereotypes about group
12. Less likely to experience bullying and harassment
13. Think leader/ think male bias
14. Skills
15. Knowledge



Minority group advantages

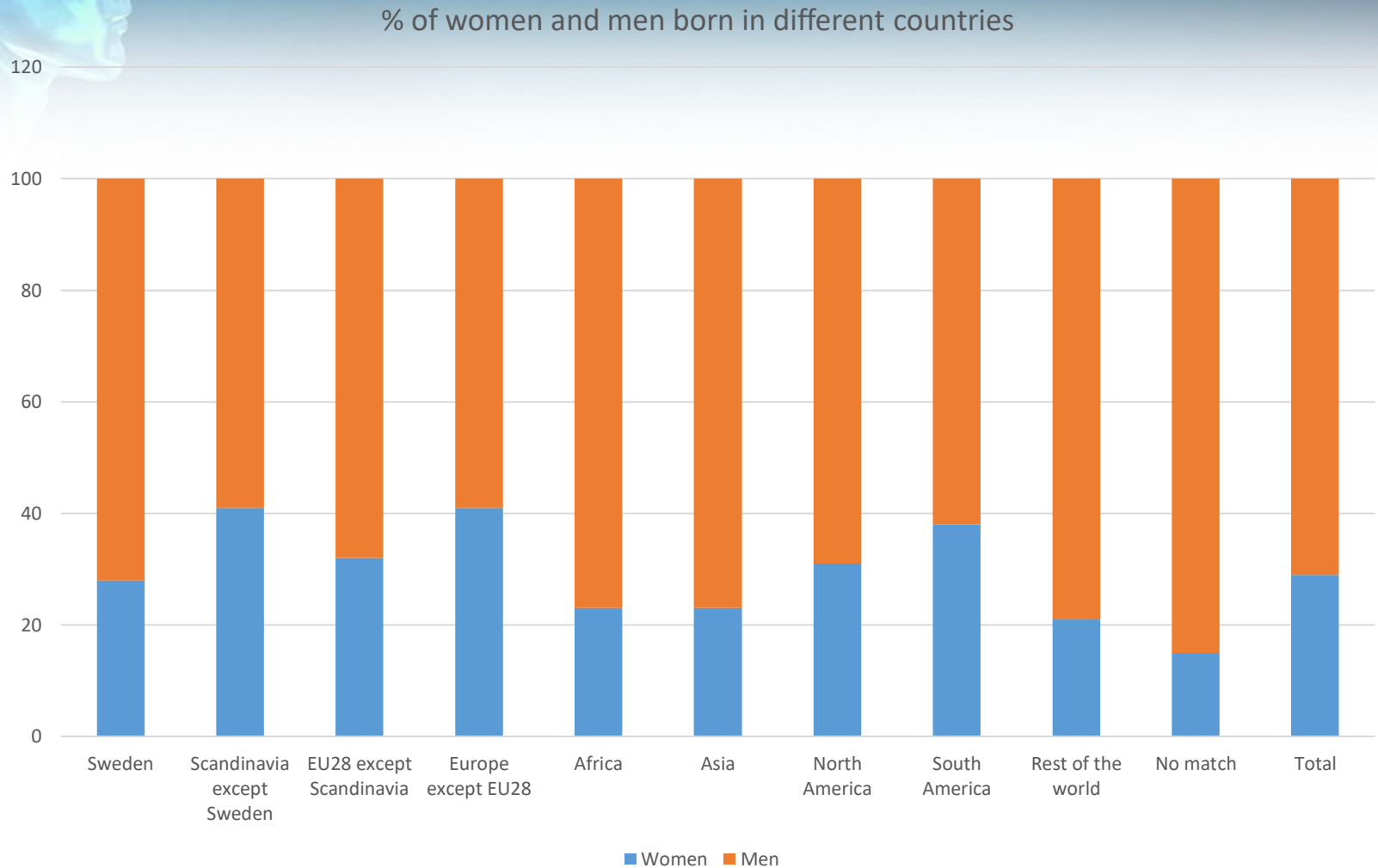
1. Skills
2. Knowledge
3. Cultural capital
4. Resilience

Possible Minority group disadvantages (UK)

1. Less access to prestigious schools
2. Less access to Russell group universities
3. Less access to resources
4. Negative stereotypes
5. Confirmation Bias
6. Mistakes seen as defining of abilities
7. Out grouped
8. Microaggressions
9. Less likely to be sponsored and mentored
10. More likely to experience bullying and harassment
11. Less role models


<https://www.timeshighereducation.com/news/russell-group-dominates-uk-graduate-employment-charts>

% of women and men born in different countries



Source: Diversity report for the Faculty of Science and Technology 2019

Declaration on the Research Assessment



Let's change
what we value
in research.



Avoiding the use of journal-based metrics as individual or surrogate measures of the quality of research in decision-making for funding, appointing and promoting staff, and instead judging outputs based on their intrinsic merit.

Recognising the value of all relevant research outputs (for example publications, datasets, software and arts practice outputs), as well as other types of contributions, such as for example training early-career researchers, influencing policy and practice, and research impacts;



MANAGING AND MITIGATING BIAS



Understanding moderates Bias

Committees with implicit biases promote fewer women when they do not believe gender bias exists

- Committees with strong implicit gender biases promoted fewer women at year 2 (when committees were not reminded of the study) relative to year 1 (when the study was announced) if those committees did not explicitly believe that external barriers hold women back.
- When committees believed that women face structural barriers, implicit biases did not predict selecting more men over women. This finding highlights the importance of educating evaluative committees about gender biases.

Equity Change Methodology



<https://www.advance-he.ac.uk/charters/rec-athena-swan-initiatives>



Data collection

Quantitative and qualitative data



Data analysis

Identifying issues and challenges



Identify reasons for issues

Stakeholder feedback; literature review



Intervention identification

Literature review; best practice; stakeholder consultation



Action planning

Strategic plan for implementing SMART actions



Evaluation

Outcome, impact and process evaluation

What can you do to manage and mitigate unconscious bias?



ACCEPT – The need to use objective evidence



AWARENESS – Become curious and mindful



ASSOCIATE – Create and use counter stereotypical examples, and perspectives



ACT – Opposite to bias – micro positives, connect with warmth and individuate



APPLY – Structure, Repetition and practice



ACCOUNTABILITY – What gets measured gets done



Mindful approach to mitigating implicit associations in- situ

Tune into associations especially when first encountering the candidate -do not judge yourself

Ask yourself will this association take me in direction I am comfortable with?

Critically challenge your thinking

Call to mind previously prepared examples of counter stereotypes

Ask a question that will enable the candidate to provide objective evidence to prove or disprove the association

Questions?

Q



affect our perception leading to confirmation Bias

- **Tom Meyer (White)**
 - “generally good writer but needs to work on it”
 - “Has potential”
 - “Good analytical skills
 - **2.9/7 spelling and grammar errors found**
 - 4.1/6 technical writing errors found
- **Tom Meyer (Black)**
 - “needs lots of work”
 - “Can’t believe he went to NYU”
 - “average at best”
 - **5.8/7 spelling and grammar errors found**
 - **4.9/6 technical writing errors found**

<https://nextions.com/portfolio-posts/written-in-black-and-white-yellow-paper-series/>



What Neuroimaging Can Tell Us about Our Unconscious Biases

It reveals that they involve the amygdala, the prefrontal cortex, the posterior cingulate and the anterior temporal cortex

<https://blogs.scientificamerican.com/observations/what-neuroimaging-can-tell-us-about-our-unconscious-biases/>



tinu@sea-changeconsultancy.com