

## Selected references on (gender) bias

### Test

Implicit association test (IAT). Project implicit. Available at <https://implicit.harvard.edu/implicit/> (Choose *Social Attitudes*, where there are IATs on e.g. gender & science, gender & career, age, disability, race)

### Introductions and training materials

Royal Society (2015): Understanding unconscious bias (short video and material on biases and diversity by Uta Frith). <https://royalsociety.org/topics-policy/publications/2015/unconscious-bias/>

A Conversation with Claude Steele: Lecture at US National Academies organised by the CWSEM, and invited speakers (2015). Available at <http://sites.nationalacademies.org/pga/cwsem/index.htm> and on vimeo directly: <https://vimeo.com/133078934>

Equality Challenge Unit (2013): Unconscious bias and higher education: Literature review. Retrieved from <http://www.ecu.ac.uk/publications/unconscious-bias-in-higher-education/>

Facebook (2015): Managing unconscious bias. Video modules, slides and references. Available at <http://managingbias.fb.com/> *Training package, including webpage with video modules on introductions and first impressions, stereotypes and performance bias, performance attribution bias, competence/likeability trade-off bias, maternal bias, business case for diversity & inclusion and what you can do.*

Valian, V. (2006). Tutorials for change. Gender schemas and science careers. Hunter College of the City University of New York. Available at <http://www.hunter.cuny.edu/gendertutorial/>

STRIDE: Committee on strategies and tactics for recruiting to improve diversity and excellence. Advance program, University of Michigan. Available at <http://advance.umich.edu/stride.php> (Including the STRIDE faculty recruitment workshop presentation and an updated reading list from Fall 2014 – a 19-page document with close to 90 reference papers, latest from 2013).

U Wisconsin-Madison WISELI :

Breaking the bias habit: A workshop to promote gender equity (2015). WISELI – Women in Science & Engineering Leadership Institute, University of Wisconsin. Retrieved from <https://charge.wisc.edu/wiseli/items.aspx#item767>

*Reviewing Applicants: Research on Bias and Assumptions (2012)*. WISELI – Women in Science & Engineering Leadership Institute, University of Wisconsin. Retrieved from [http://wiseli.engr.wisc.edu/docs/BiasBrochure\\_3rdEd.pdf](http://wiseli.engr.wisc.edu/docs/BiasBrochure_3rdEd.pdf)

### Studies on peer review carried out by/on RFO/RPO:

Ahlqvist, V., Andersson, J., Söderqvist, L., Tumpane, J. (2015). A gender neutral process? A qualitative study of the evaluation of research grant applications 2014. Stockholm: Swedish Research Council. Retrieved from <https://publikationer.vr.se/en/product/a-gender-neutral-process/>

Ahlqvist, V., Andersson, J., Hahn Berg, C., Kolm, C., Söderqvist, L., Tumpane, J. (2013). Observations on gender equality in a selection of the Swedish research council's evaluation-panels. Stockholm: Swedish

Research Council. Retrieved from <https://publikationer.vr.se/en/product/observations-on-gender-equality-in-a-selection-of-the-swedish-research-councils-evaluation-panels-2012/>

Bornmann, L., Mutz, R., Daniel, H.-D. (2007). Gender differences in grant peer review. A meta-analysis. *Journal of Informetrics*, 1(3), 226-238. DOI: 10.1016/j.joi.2007.03.001

Boyle, P., Smith, L., Cooper, N., Williams, K., O'Connor, H. (2015): Gender Balance: Women are funded more fairly in social sciences. *Nature*, 525, 181-183. DOI: 10.1038/525181a. Retrieved from <http://adsabs.harvard.edu/abs/2015Natur.525..181B>

Marsh, H. W., Bornmann, L., Mutz, R., Daniel, H.-D., O'Mara, A. (2009). Gender effects in the peer reviews of grant proposals. A comprehensive meta-analysis comparing traditional and multilevel approaches. *Review of Educational Research*, 79(3), 1290-1326. DOI: 10.3102/0034654309334143.

<http://rer.sagepub.com/content/79/3/1290>

Van der Lee, R., Ellemers, N. (2015). Gender contributes to personal research funding success in The Netherlands. *PNAS*, (published ahead of print September 21, 2015). DOI:10.1073/pnas.1510159112. Retrieved from <http://www.pnas.org/content/early/2015/09/16/1510159112.abstract>

[Vinkenborg, C.J. \(2014\): Capturing career paths of ERC grantees and applicants: Promoting sustainable excellence in research careers. Retrieved from](https://eth-wpf.ch/wp-content/uploads/2015/03/c_ERC_CAREER_paths_study_by_clartje_vinkenborg_July-2014.pdf)

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[Way, S.F., Larrmore, D.B., Clauset, A. \(2016\): Gender, productivity, and prestige in computer science faculty hiring networks. Proc. 2016 World Wide Web Conference \(WWW\), 1169-1179. Retrieved from](http://arxiv.org/abs/1602.00795)

### **Further studies:**

#### **Implicit bias:**

Kaatz, A., Gutierrez, B., Carnes, M. (2014): Threats to objectivity in peer review: the case of gender. *Trends in Pharmacological Sciences* 2014, 35(8).

<http://dx.doi.org/10.1016/j.tips.2014.06.005>

Nosek, B. A., Smyth, F. L., Sriram, N., Lindner, N., M., Devos, T., Ayala, A. et al. (2009). National differences in gender-science stereotypes predict national sex differences in science and math achievement. *PNAS*, 106(26), 10593-10597. DOI: 10.1073/pnas.0809921106

#### **Stereotype threat:**

[Eagly, A.H., Mladinici, A. \(1994\): Are people prejudiced against women? Some answers from research on attitudes, gender stereotypes, and judgements of competence. European Review of Social Psychology 1994, 5 \(1\). DOI: http://dx.doi.org/10.1080/14792779543000002](http://dx.doi.org/10.1080/14792779543000002)

Heilman, M. E. (2012). Gender stereotypes and workplace bias. *Research in Organizational Behavior*, 32, 113-135. DOI:10.1016/j.riob.2012.11.003

Huguet, P., Régner, I. (2007). Stereotype threat among schoolgirls in quasi-ordinary classroom circumstances. *Journal of Educational Psychology*, 99(3), 545-560. DOI: 10.1037/0022-0663.99.3.545.

Retrieved from

<http://psycnet.apa.org/journals/edu/99/3/545/>

Miller, D. I., Eagly, A. H., Linn, M. C. (2015). Women's representation in science predicts national gender-science stereotypes: Evidence from 66 nations. *Journal of Educational Psychology*, 107(3), 631-644. DOI: 10.1037/edu0000005

Shapiro, J. R., Williams, A. M. (2012). The role of stereotype threats in undermining girls' and women's performance and interest in STEM fields. *Sex Roles*, 66, 175-183. DOI:10.1007/s11199-011-0051-0

#### Bias in CV assessment:

Moss-Racusin, C. A., Dovidio, J. F., Brescoll, V. L., Graham, M. J., Handelsman, J. (2012). Science faculty's subtle gender biases favour male students. *PNAS*, 109(41), 16474-16479. DOI: 10.1073/pnas.1211286109. Retrieved from <http://www.pnas.org/content/109/41/16474>

#### Letters of recommendations:

Trix, F., Psenka, C. (2003). Exploring the color of glass: Letters of recommendation for female and male medical faculty. *Discourse and Society*, 14(2), 191-220. DOI: 10.1177/0957926503014002277

Madera, J.M., Hebl, M.R., Martin, R.C. (2009); Gender and letters of recommendation for academia: Agentic and communal differences. *Journal of Applied Psychology*, vol. 94, no. 6, 1591-1599. DOI: 10.1037/a0016539.

#### The motherhood penalty & maternal wall:

Correll, S. J., Benard, S., Paik, I. (2007). Getting a job: Is there a motherhood penalty? *American Journal of Sociology*, 112(5), 1297-1338. DOI: 10.1086/511799

#### Science productivity:

Larivière, V., Ni, C., Gingras, Y., Cronin, B., Sugimoto, C. R. (2013). Global gender disparities in science. *Nature*, 504(7479), 211-213. DOI: 10.1038/504211a

#### Other:

Clauset A., Arbesman S., Larremore D.B. (2015): Systematic inequality and hierarchy in faculty hiring networks. *Scienc. Advances* 2015;1:e1400005. DOI: 10.1126/sciadv.1400005. Retrieved from <http://advances.sciencemag.org/content/1/1/e1400005.full.pdf+html>

Devine, P.G.: Stereotypes and prejudice: their automatic and controlled components. *Journal of Personal and Social Psychology* 1989, 56(1), 5-18. doi.org/10.1037/0022-3514.56.1.5. Retrieved from: <http://psycnet.apa.org/journals/psp/56/1/5/>

Dovidio, J.F., Gaertner, S.L. (1994): *Advances in Experimental Social Psychology* (Zanna ed.), Elsevier, New York, 1994, pp 1-51.

Kalinoski, Z.T., Steele-Johnson, D., Peyton, E.J., Bowling, N. (2012): A meta-analytic evaluation of diversity training outcomes. *Journal of Organizational Behavior* 34(8). DOI: 10.1002/job.1839.

Retrieved from:

<https://articles.extension.org/sites/default/files/A%20meta-analytic%20evaluation%20of%20diversity%20training%20outcomes.pdf>

Lamont, M. (2010): How professors think. Inside the curious world of academic judgment. Harvard University Press. See: <http://www.hup.harvard.edu/catalog.php?isbn=9780674057333>

LERU (2012): Women, research and universities: excellence without gender bias.

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[http://www.leru.org/files/general/LERU%20Paper\\_Women%20universities%20and%20research.pdf](http://www.leru.org/files/general/LERU%20Paper_Women%20universities%20and%20research.pdf)

Leslie, S.-J., Cimpian, A., Meyer, M., Freeland, E. (2015). Expectations of brilliance underlie gender distributions across academic disciplines. *Science*, 347(6219), 262-265. DOI: 10.1126/science.1261375.

<http://www.sciencemag.org/content/347/6219/262>

Moss-Racusin, C.A., Molenda A.K., Cramer, C.R. (2015) Can evidence impact attitudes? Public reactions to evidence of gender bias in STEM fields. *Psychology of Women Quarterly* 39 (2), 194-209.

DOI: 10.1177/0361684314565777. Retrieved from:

<http://pwq.sagepub.com/content/39/2/194>

Reuben, E., Sapienza, P., Zingales, L. (2014). How stereotypes impair women's careers in science. *PNAS*, 111(12), 4403–4408. DOI: 10.1073/pnas.1314788111. Retrieved from

[www.pnas.org/content/111/12/4403](http://www.pnas.org/content/111/12/4403)

Young et al.: The Influence of Female Role Models on Women's Implicit Science Cognitions.

*Psychology of Women Quarterly* 37(3), 283-292. DOI: 10.1177/0361684313482109

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