Peer Review & Publications: Effects of Gender & Diversity

Amber E Budden, PhD
National Center for Ecological Analysis and Synthesis
publication bias

... attributes (other than the intrinsic value of a manuscript) that influence whether the work is accepted for publication, where it is published, and how it is used by the scientific community
arbitrary bias?

Cumulative Distributions of Surname Initials in Economics by Tenure Status

Darwin a better name than Wallace?
temporal & journal bias

result of theory tenacity and difficulty publishing null results?
bias in peer-review

I know that the paper I have just sent in [to the royal society] is very original and of some importance, and I am equally sure that if it is referred to the judgement of my ‘particular friend’ it will not be published.

T. Huxley
March 5th 1852
potentials for bias in review

author-related
  nationality
  prestige (seniority, institution)
  gender

paper-related
  topic
  language
  outcome

reviewer-related
  conflicts-of-interest (personal relationships, competing research programs)
gender bias

individual familiarity

gender bias

“a female applicant had to be 2.5 times more productive than the average male applicant to receive the same competence score as he”
<table>
<thead>
<tr>
<th>category</th>
<th>positive effect</th>
<th>negative effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>meeting abstracts</td>
<td>Ross et al (2006)</td>
<td></td>
</tr>
<tr>
<td>experimental reviews</td>
<td>Goldberg (1968)</td>
<td>Paludi and Bauer (1983)</td>
</tr>
</tbody>
</table>
double blind review

advantages:
DBR allows the merits of a paper to be assessed without regard to characteristics of the author or institution

criticisms:
review is unbiased anyway
harder to recruit reviewers
can always tell who author is
author id useful to reviewers
case study: outcomes
gender bias?

Budden et al. (2008a, 2008b) TREE
inside the black box

8286 manuscripts
9 journals
2 years
gender effects

- No effect of first author gender
- Editor gender effects but no interaction with author gender
- Journal level variation
group size effects

increased acceptance of multi author papers

gender*author number interaction
summary

bias may an inherent part of peer-review process

efforts should focus on evaluation of biases and mechanisms of amelioration

community confidence in peer review would be enhanced with publication of manuscript handling data by journals
Wiley-Blackwell:
Liz Ferguson
and the collaborating ecology / evolutionary biology journals

NCEAS Publication Bias Working Group:
Lonnie Aarssen, Queens University, Canada
Tom Tregenza, Exeter University, UK
Julia Koricheva, Royal Holloway, UK
Chris Lortie, York University, Canada
Roosa Leimu, Oxford University, UK

Olyana Grod and Robyn Borsuk

NCEAS
Jim Regetz, Marc Cadotte, John Parker, Jim Reichman

aebudden@nceas.ucsb.edu