Sunlight not shadows: Double-anonymized peer review is not the progressive answer to status bias

Serge P.J.M. Horbach*, Aarhus University, Bartholins Allé 7, 8000 Aarhus C, Denmark. s.horbach@ps.au.dk, https://orcid.org/0000-0003-0406-6261

Tony Ross-Hellauer, Know-Center GmbH and TU Graz, Austria. tross@know-center.at, https://orcid.org/0000-0003-4470-7027

Ludo Waltman, Centre for Science and Technology Studies, Leiden University, the Netherlands. waltmanlr@cwts.leidenuniv.nl, https://orcid.org/0000-0001-8249-1752

*Corresponding author

In a recent paper in PNAS, Huber et al. (1) study the impact of 'status bias' in journal peer review practices. Using a paper coauthored by a Nobel laureate in Economics and a relatively unknown early-career researcher, they show that disclosing the identity of the Nobel laureate to potential reviewers makes them significantly more likely to accept the review invitation and to provide a favorable review. The authors attribute this to status bias and conclude that their results speak in favor of double-anonymized peer review. While we admire the study's rationale, scale, and rigorous execution, we are concerned about the authors' conclusions.

First, as discussed on social media, due to the names of the authors in the study ('Vernon L. Smith' and 'Sabiou Inoua') race is a potentially confounding factor, i.e. the effects might be (partly) due to racial rather than status bias. In either case, we obviously agree that these biases are undesirable and problematic. However, we do not see double-anonymized peer review as the progressive answer to these biases.

Opting for double-anonymized peer review has far-reaching implications. It hinders the adoption of important open science practices, including fast dissemination through preprint servers, early sharing of protocols and data sets, and transparency about competing interests. As such, double-anonymized peer review impedes innovation in scholarly publishing. Crucial innovative developments such as preprinting, preprint peer review (2), the publish-review-curate model (3,4), and micro-publications (5) are all incompatible with double-anonymized peer review.

We see these new models as a broader answer to concerns over biases in publication decisions. Reviewers at journals such as PNAS are currently tasked with assessing both methodological soundness and novelty or significance of submitted articles. Using double-anonymized peer review does not seem to affect the ability of reviewers to identify methodological shortcomings (6), but does influence articles' acceptance likelihood (7). This suggests that peer review suffers mainly from biases in the assessment of novelty or significance, rather than methodological soundness. Biases in peer review seem to lie primarily in journals' preference to publish the most impactful

articles. New models such as publish-review-curate aim to reduce focus on the ‘glamour’ of findings, and hence publication biases.

The ability of double-anonymized review to address biases in peer review remains questionable, as was noted in other responses to Huber et al. (8). But worse, essentially double-anonymized peer review tries to minimize the consequences of these biases without addressing their causes.

We argue for sunlight instead of shadows: open peer review (9), with published review reports and optional open reviewer identities, is a better solution. It helps to expose human biases, to discuss them publicly, and to establish the new publication models outlined above. This is essential to tackle biases at the root, instead of just trying to minimize their consequences.

We fully agree that equity, diversity and inclusion in science need to be promoted. However, double-anonymized peer review is not a solution. We instead argue for more collaborative and open research cultures as roads towards more equitable and inclusive science.

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