

## Announcement: double-blind peer review

***Nature* and its sister journals start offering anonymity to authors during the peer-review process.**

Starting in March, *Nature Immunology*, along with *Nature* and the other monthly *Nature* research journals, will experiment with an alternative to their time-tested method of peer review. Instead of the traditional single-blind method, in which reviewers are anonymous but know the authors' identity, authors will be able to choose double-blind peer review, in which both authors and reviewers are unknown to each other.

Alternatives to the traditional single-blind peer review process are often proposed. Chief among these are double-blind peer review and open peer review, two apparent opposites, as in the latter both the authors and reviewers are known to each other. However, the reasons cited in favor of each of these two alternatives are different. On one hand, proponents of open peer review see its transparency as a way to encourage more civil and thoughtful reviewer comments; others are concerned that it promotes a less critical attitude. On the other hand, advocates of double-blind peer review suggest it eliminates *ad hominem* biases, such as those based on gender, seniority, reputation and affiliation. How effectively either method can meet these aspirations, while maintaining the necessary level of criticism, remains a matter of debate.

*Nature* experimented with open peer review in 2006, but at the time, despite the interest expressed, the 'uptake' from both authors and reviewers was low and the open reviews were not technically substantive. Views about open peer review are probably still evolving, as several journals continue to experiment with variations of this practice. The opinions about double blind peer review, however, are remarkably consistent.

In one of the largest studies on peer review—an international and cross-disciplinary survey of more than 4,000 researchers in 2009—76% of respondents indicated that double-blind review was an effective peer-review system. (By comparison, open review and single-blind review were considered effective by 20% and 45% of respondents, respectively.) More recently, our own reader survey confirmed the desire to have double-blind peer review as an option. Notably, this sentiment is widely echoed in conversations with young scientists worldwide. These

conversations illustrate a widespread perception that biases based on authorship affect the traditional single-blind peer review, and they have contributed greatly to making us reconsider the proposition.

Editors of *Nature* journals have traditionally not embraced double-blind peer review out of skepticism of its efficacy and because they see it as their responsibility to mitigate the biases that this method tackles. They have taken and will continue to take this responsibility seriously by maintaining awareness of any potential predispositions while selecting reviewers and considering their comments. However, arguably, unconscious biases may be difficult to identify and to control. Several studies have detected involuntary biases, notably based on gender, in other areas of the scientific enterprise, such as the hiring of laboratory staff, citation habits and speaker line-ups at conferences. It is therefore difficult to guarantee a bias-free process.

Since June 2013, *Nature Geoscience* and *Nature Climate Change* have allowed authors to choose between double-blind peer review and single-blind peer review at submission. The 'uptake' has been much lower than the enthusiasm expressed in surveys—no more than a fifth of monthly submissions are going the double-blind route—but no substantial effects on the quality of reviews have been detected. The reactions to the trial among authors surveyed have been sufficiently positive that *Nature* and its monthly journals have decided to join in the experiment. (*Nature Communications* will not take part at this time, for logistical reasons.)

The responsibility to render the manuscript anonymous falls to the authors. Clearly, in some situations, keeping their identity secret will be impossible because of awareness of their work in the specialist community. We will also continue to promote policies that support researchers who wish to release data early and to discuss their work with their peers before publication, via conferences or pre-print servers. Therefore, the double-blind process is optional on all titles.

We will keep this initiative under review, and we welcome comments from authors and reviewers.

