

Spotlight on peer review

Peer review lies at the heart of our journal. Recognizing our reviewers publicly will introduce transparency to the editorial process as well as acknowledge the work of our reviewers.

Ask five people about their preferred peer-review model and there will likely be five different answers.

Within Nature Research, most papers that are sent out for external review undergo single-blind peer review, where the authors' identities and affiliations are known to the reviewers but not vice versa. To maintain a balance of expertise, we aim for three referees at *Nature Astronomy*. But many researchers would like to see referees and authors on a more even footing.

To reduce any implicit bias against gender, country or institutional prestige, we do offer double-blind peer review as an option at the time of submission, though uptake is low; for example, over a two-year period [only 12% of the papers submitted to 25 Nature-branded journals went through double-blind peer review](#). Early analysis suggests these papers fare worse than those undergoing single-blind peer review but the reasons are not easy to unpick. The differences may be related to the geographical distribution of the authors who chose double-blind peer review — 32% from India, 22% from China, 7% from UK and 7% from the USA — or the 'prestige' of the research institute (based on the Times Higher Education ranking) of the authors — those at more highly ranked institutions were less inclined to choose double-blind peer review. Encouragingly, there were no measurable differences in the uptake of double-blind peer review based on the corresponding author's gender.

What is clear from author surveys is that the research community wants more transparency to ensure that referees act with integrity and without bias. But how much transparency should we aim for? Publishing the reviewers' reports is not without controversy either. Therefore, we are exploring innovations at Nature Research, but we are taking one step at a time. At *Nature*, a two-year pilot to increase transparency as well as recognize the efforts of the reviewers resulted in their new policy to thank reviewers by name when they opt in (we will always respect the wishes of reviewers who prefer to remain anonymous). For 1,767 manuscripts — that's 4,650

referees — 91% of the contacted authors were happy to include named referees on their paper, and 54% of the referees opted in (27% opted out and 19% did not respond). Overall, 80% of the *Nature* papers in question had at least one named referee.

Following the success of the pilot at *Nature*, from late November, *Nature Astronomy* initiated the process to openly recognize our peer reviewers, initially on a six-month basis. Given the high proportion of authors who opted in during the *Nature* trial, we will not be consulting authors but only reviewers. And provided that the reviewers give their consent, their names will appear alongside the paper. For instance, for a combination of referees who opt-in and opt-out, the text will read: "*Nature Astronomy* thanks XXX, YYY and the other anonymous reviewer(s) for their contribution to the peer review of this work".

Thanking our reviewers thus will hopefully go some way towards their having public recognition for an often thankless task. In order to help referees with their job, we provide a [free online course](#) consisting of four modules that cover the different kinds of peer review, a peer reviewer's responsibilities, the ethical issues involved and the actual writing of a constructive report. There's even a certificate when you complete 80% of the course.

But back to our papers, we are altering the way we handle challenges and critiques of our Letters and Articles after publication. Previously, we had published interactions between authors and commenting authors in the Correspondence section (for *Nature* it was Brief Communications Arising). From 10 December all articles making significant challenges or clarifications on Nature Research papers will be published in a dedicated section called Matters Arising in the relevant journal. In this manner, we hope that such exchanges will be more visible to our readers and easier to find using search engines.

And as with all peer-reviewed contributions, some Matters Arising cases may be complex, which then require multiple rounds of review to ensure technical accuracy and significance. To facilitate the prompt dissemination to

the community, we encourage authors of critiques to post their articles on the preprint archive. For astronomers and physicists, this practice should be standard. However, some people continue to misunderstand our embargo policy. The most common mistake is that authors believe they are not allowed to post preprints. A smaller proportion also thinks that they cannot discuss their submitted results at conferences.

In fact, our embargo policy is restricted to contact with journalists. For papers under consideration at any Nature Research journal, authors may only discuss their results with journalists starting from the week preceding publication. We send lists of upcoming papers to accredited journalists each week, giving them sufficient time to research and write their news stories under embargo. This policy ensures that all journalists have the same access to our papers. It also ensures that journalists focus on papers that have been through rigorous peer review. Of course reporters can write about whatever they want whenever they want, but we ask that our authors wait until the week before publication to answer any questions directly.

And while on the subject of our policies, what about updating preprints after publication? Our current policy is that authors should self-archive the final submitted version of their paper six months after publication. They can post the papers on a community repository of their choice, including arXiv. And as soon as a paper is published, the author receives a SharedIt link from our production team. This link is to an online PDF version of the published paper, which can be annotated and shared with anyone. For free.

We hope that this clarification of our policies will help authors disseminate their research as widely as possible, and that our innovations continue to improve the author, reviewer and reader experiences. Comments are welcome. Please write to us at natureastro@nature.com. □

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