

Do Peer-Reviewed Scientific Journals Really Do Their Job?

Over recent years, internationally, there has been an increase in the number of commentators questioning the sanctity of the Peer Review Process and the quality of some published science.

Whenever academic or non-academic forest scientists challenge the findings of forest related research, those being criticised typically stand behind the veil of peer review. In recent times, some have also taken a numbers approach to fending off criticism of their published opinions, by getting peers to sign letters of defence, which are typically promoted in the wider media.

In recent years, the sanctity of peer review, among other elements of scientific research publishing have come under question. The massive increase in scientific publishing outlets and a move to online publishing has led to concerns of more flawed research being published. In 2019, journalist Alex Gillis wrote:

"The new online model created an opportunity for profits: the more papers publishers accepted, the more money they generated from authors who paid to be included—\$150 to \$2,000 per paper, if not more, and often with the support of government grants. Researchers also saw substantial benefits: the more studies they posted, the more positions, promotions, job security, and grant money they received from universities and agencies. Junk publishers—companies that masquerade as real publishers but accept almost every submission and skip quality editing—elbowed their way in."

In 2017, two engineers in the US, Marc A. Edwards and Siddhartha Roy, published a paper (in a reputable journal) about how researchers are implicated in junk-publishing scams.

If a critical mass of scientists become untrustworthy," Edwards and Roy concluded, "a tipping point is possible in which the scientific enterprise itself becomes inherently corrupt and public trust is lost, risking a new dark age with devastating consequences to humanity."

"That dark age may already be here. Increasingly, journalists, politicians, and the general public are—sometimes inadvertently, sometimes not—relying on fraudulent and flawed research to guide major decisions.

<https://thewalrus.ca/the-rise-of-junk-science/>

The withdrawal of a bushfire research paper by academics at the University of Tasmania in 2020, due to the use of flawed data, and the more recent referral of a cancer research scientist to the Queensland Crime and Corruption Commission shows that Australian research is not all above reproach.



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A Melbourne University Psychology Professor has provided some insights as to how less ethical or agenda driven researchers seek to defend their reputations, when the validity of their research is brought into question.

Desk rejection is when a paper is declined by the editor before being sent out to reviewers – about 30 per cent of papers at this journal were typically desk rejected.

Professor Vazire was rejecting the papers because she believed they had serious flaws. But the committee that appointed her was worried that in upsetting famous researchers, the journal's reputation could be put at risk.

"I pointed out to them that they couldn't exert this influence behind the scenes without announcing a new policy or having some scientific basis for it," says Professor Vazire. "But the fact that they were so surprised by my resistance made me realise just how much this was the way things typically worked."

"As an editor, I've had discussions with authors where I've told them I will only accept their paper if it is framed more cautiously and, on a couple of occasions, authors have simply refused and gone and published elsewhere," says Professor Vazire.

In the hyper-competitive world of research there is always the temptation to over promote results.

Recent retractions by highly reputable medical journals [The Lancet](#) and the [New England Journal of Medicine](#) concerning research on potential COVID-19 medicines that relied on flawed data, has only highlighted the urgency of the problem.

Together, Professor Fidler and Professor Vazire have established a new research group at the University, [MetaMelb](#). It is the largest metascience research group in Australia.

The group will study a range of metascience questions, across several disciplines including psychology, ecology and medicine, using a wide range of quantitative and qualitative approaches.

<https://www.wired.com/story/peer-reviewed-scientific-journals-dont-really-do-their-job/>

<https://pursuit.unimelb.edu.au/articles/science-needs-to-look-inward-to-move-forward>

SETA looks forward to the metascience research group bringing more transparency, accountability and scientific methodology to fire and ecological research in Australia.

