

Peer Review Survey 2009: Preliminary findings

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Should peer review detect fraud and misconduct? What does it do for science and what does the scientific community want it to do? Will it illuminate good ideas or shut them down? Should reviewers remain anonymous?

These questions are raised by one of the largest ever international surveys of authors and reviewers, the Peer Review Survey 2009, whose preliminary findings are released today.

Peer review is fundamental to integration of new research findings. It allows other researchers to analyse findings and society at large to weigh up research claims. It results in 1.3 million learned articles published every year, and it is growing rapidly with the expansion of the global research community. With that growth come new concerns - about getting the next generation of researchers to review in sufficient numbers, about maintaining the system's integrity and whether it can be truly globalised; and also new ideas - about alternative quality measures, technologies to prevent [plagiarism](#), rewarding reviewers and training them.

Sense About Science has promoted understanding of peer review to help people to work out whether research claims have been independently scrutinised. But with all the proposed changes and expansion in research publication, what do researchers think about peer review and its future? To find out, Sense About Science developed the Peer Review Survey 2009, in consultation with [editors](#) and [publishers](#) and administered with a

grant from Elsevier; the survey included some questions from the Peer Review Survey 20073 for comparison, and new questions about future improvements, public awareness and pressures on the system.

Tracey Brown, Managing Director: "The 2007 survey had raised some of the issues. We sought to broaden that, particularly to find out whether the demand for all this free, independent scrutiny from the research community is sustainable, and what the future of quality control is likely to be. It's a matter of public as well as scientific interest."

Preliminary findings include:

1. Playing an active role in the community is top of reasons to review: 90% say they review because they believe they are playing an active role in the community; only 16% say that increasing their chances of having future papers accepted is a reason to review.

2. Researchers want to improve, not replace peer review:

- 84% believe that without peer review there would be no control in scientific communication, but only a third (32%) think it is the best that can be achieved; 20% of researchers believe that peer review is unsustainable because of too few willing reviewers.
- 91% say that their last paper was improved through peer review; the discussion was the biggest area of improvement.
- 73% of reviewers (a sub-group) say that technological advances have made it easier to do a thorough job than 5 years ago. Whilst 86% enjoy reviewing, 56% say there is a lack of guidance on how to review; 68% think formal training would help. On average, reviewers turn down two papers a year.

- Just 15% of respondents felt that 'formal' peer review could be replaced by usage statistics.
- 61% of reviewers have rejected an invitation to review an article in the last year, citing lack of expertise as the main reason - this suggests that journals could better identify suitable reviewers.

3. High expectations:

- 79% or more of researchers think that peer review should identify the best papers, determine their originality and importance, improve those papers and, though lower scoring, also determine whether research is plagiarised or fraudulent.
- While 43% of respondents thought peer review was too slow, 65% of authors (a further sub-group) reported that they had received a decision on their most recent paper within 3 months.

4. Reviewers want anonymity:

58% would be less likely to review if their signed report was published.
76% favour the double blind system where just the editor knows who the reviewers are.

5. Understanding of peer review:

Researchers agree that peer review is well understood by the scientific community but just 30% believe the public understands the term.

6. Papers aren't recognising previous work:

81% think peer review should ensure previous research is acknowledged; 54% think it currently does. This reflects current concerns in the research community.⁴

7. Detecting plagiarism and fraud might be a noble aim but is not practical:

A majority think [peer review](#) should detect plagiarism (81%) or fraud (79%) but fewer (38% & 33%) think it is capable of this.

8. Reviewers divided over incentives:

Just over half of reviewers think receiving a payment in kind (e.g. subscription) would make them more likely to review; 41% wanted payment for reviewing, but this drops to just 2.5% if the author had to cover the cost. Acknowledgement in the journal is the most popular option.

More information: The full findings and report are due to be published in November 2009 and will be available at [www.senseaboutscience.org.uk/i ... php/site/project/29/](http://www.senseaboutscience.org.uk/i...php/site/project/29/) .

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