Peer-review: either open it fully or blind it wholly

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The peer review process is a pivotal evaluation system by which specialized peers assess manuscripts and research proposals. The system was introduced in the scholarly publishing some centuries ago and progressively it has become a central process in the validation and improvement of the scientific information. However, growing criticisms point out many flaws and deficiencies in the process (slowness, highly expensive, replete of conflicts of interest and biases, etc.). Although scientific journals are forums for sharing knowledge and exchanging thoughts, peer-reviewers could reject manuscripts easily, whatever the time and work spent to prepare them. Bold innovative challenges to either theoretical concepts or practical goals are frequently rejected as being contrary to dominant paradigms ¹. Despite such critiques, however, the peer review is still essential ². Peer review is currently performed under different types: 1) single blinded in which the identities of reviewers are unknown to authors but the identities of authors are known to reviewers, 2) double-blinded peer review in which the identities of both reviewers and authors are unknown each to other, and, 3) open peer review in which the identities of all parties are known to all. Each of these types has advantages and disadvantages.

The single blinded peer review is the most common type of the peer review so far. However, an important question could be raised on why, in this type, the identities of authors are known for reviewers but the identities of reviewers are unknown for authors while it is the content that should be evaluated but not the authors' identities. This is an asymmetrical pattern that should be changed in my view because it is a source of direct or indirect biases. The single blinded peer review would be advantageous only for editors and reviewers who might be unsure about their ability to make fair decisions so that they need to know who is the author, where he is coming from, where his/her previous work is published, etc. Having such information, manuscripts' evaluators would accept fame or known authors more easily than unknown authors. Unscrupulous reviewers could also take advantage of a single blinded system as a proxy for personal agenda (e.g., intentional delay of publication to allow competitors including the reviewers themselves to publish first, to make harsh or unfounded criticisms, to steal authors' ideas, etc.). To prevent this, the peer review should in my view be either fully open so that all the parties (authors and reviewers) are known each to other or, alternatively, wholly blinded so that the identities of all the parties are undisclosed to each other. In other

words, the peer review should be symmetrical for all peers; otherwise the term 'peer' in 'peer-review' would not make much sense because 'peer' means 'equal' involving 'equal' treatments.

A single blinded peer review option is a source of multiple biases. Entirely blinded peer review, on the other hand, would be more ethical and fairer, devoid of any bias-generating factors related to name, country, gender, celebrity, etc. If the traditional prepublication peer review should be maintained at all, it should be either open to all or blinded to all, but not open for the powerful parts in the process (editors and reviewers) and blinded for the weakest parts (authors).

References

- 1 Spier, R. E. Peer review and innovation. *Sci Eng Ethics* **8**, 99-108; discussion 109-112 (2002).
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