

Can we improve the peer review system?

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I guess many authors have experience of receiving careless, erroneous, or unfair reviews for their papers. A careless review does not contain anything useful or relevant to the paper. Occasionally one finds the reviewer is clearly not an expert in the topic under discussion, but still makes a faulty argument to reject the paper. Maintaining the high quality of peer reviews is an all-important task for scholarly journals. In recent years, however, there have been many warnings that the current peer review system may not be sustainable [1]. Both the number of scholarly journals and that of published research papers have been increasing rapidly. In addition, many journals are under great pressure to shorten review times. All these factors contribute to making it more difficult to secure appropriate reviewers and maintain a fair and thorough review process, especially when the journal is not a prestigious one.

Could there be a solution to this problem? There have been many attempts to fix the peer review system. In the conventional system, there is almost no reward for anonymous reviewers. Careful review of a research paper requires a lot of effort and time. One primary motivation for reviewing a paper is a sense of responsibility for the academic community to which the reviewer is belonged. A good reviewer is usually a good researcher and a good author. Many researchers value carrying out their own research higher than anything else and do not like to spend too much time reviewing someone else's work, unless it is directly relevant to their research. In the current environment, there is a great difficulty in motivating researchers to review papers. In some journals, they have attempted to provide additional incentives, such as giving continuing medical education credits [2,3]. Though I have doubts about the real effect of giving out this kind of credits, I think it is one of the right directions to fix the peer review system. I do not think it is appropriate to appeal just to the sense of responsibility of reviewers to spend such a large amount of time and effort with almost no reward. Reviewing a paper has much similarity with reviewing a research proposal. In Korea, reviewers of research proposals receive their fees in cash from funding agencies, and I have never heard anyone complaining about it. In a similar spirit, I think it is not a bad idea to pay a suitable amount of money to the reviewers of journal papers. The usual responses to this kind of idea are that it will actually deteriorate the quality of peer review and peer review should not be done for material gain [4]. I agree with the latter point and think the monetary compensation should not be large, because otherwise it would attract bad reviewers who do the review mainly for money. I think, however, that this problem can be minimized by a careful management and an appropriate amount of compensation for reviewers will enhance their sense of responsibility for performing a good review and facilitate the peer review process.

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Another direction for improving the peer review system is to modify the conventional review process by adopting some new ideas. There have been discussions for open peer review, a form of which involves many reviewers participating in the review process openly. This has some similarity with online discussions of news articles in websites. I think this method will have similar problems as those online discussions, namely the more vocal people can influence the review process more strongly. In a recent essay, Goldstein [5] strongly advocated the method of the open access journal *eLife*, where a small number of reviewers and the editor make an online discussion to arrive at a single consensus report. I think this is a good idea, even though the reviewer workload can be larger than in the conventional procedure. In the conventional system, there is not much discussion or interaction among the participants, namely, the authors, the editor, and the reviewers. Providing an avenue for more interaction will be better. I think combining this method with the payment of reviewer fees might be a useful option to consider.

The peer review system is one of the corner stones of modern scholarly journals. In the United States and in Europe, intense discussions about fixing the problems of the current peer review system have been going on. In Korea, however, there has not been much discussion on it. I think it is time to start thinking about it.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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