

The Impact of Electronic Publication and the E-Journal on Quality and the Peer Review Process

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The core function of a scientific journal has been to select papers of merit and worthiness for publication. Traditionally, the editor relies on his pool of expert reviewers to carry out this function effectively, especially in areas outside of his main expertise and interest. He weighs the opinions expressed by the reviewers and makes the decision to accept or reject the paper for publication or more often, to send the paper back to the author for revision. In this complex and sometimes time-consuming process, the editor is able to maintain quality and act as the gatekeeper of the printed word.

The transformation of research findings and information into the main body and mainstream of scientific knowledge is therefore the function and responsibility of all scientific journals. Through the act of publication, the journal accords credibility and respect to a piece of research and the published paper can then be studied, scrutinised, indexed and cited with authority. In other words, the journal has given its imprimatur to the research paper for it to be quoted extensively as something noteworthy in the scientific world.

With the advent of electronic publication and the electronic journal, how will this new medium of publication impact on quality and the traditional peer review process? The concern about the maintenance of standard and quality may be the reason why medical journals have been relatively slow in accepting this new publication paradigm. A journal like the *Annals, Academy of Medicine, Singapore*, which puts out an electronic version on the Internet of its printed journal, is different from those which have gone totally electronic, the true electronic journal, including its peer review process. The electronic journals have become the vehicles of scholarly communication and have been adopted readily in certain disciplines such as physics, mathematics, engineering and social sciences but significantly less in fields such as molecular biology, chemistry and medicine.

In order for electronic peer review to function successfully, editors, authors and reviewers must all be switched on to the Net and the World Wide Web. They can then comment and contribute to the scholarly discussion of a paper put up by the author in cyberspace. This interaction between the authors and unsolicited reviewers would be free ranging and “unrefereed”. The editor is no longer in a position to orchestrate or arbitrate the whole process of peer review. It will now take place in an interactive manner in the form of open peer commentary by anyone who is interested. Harnard,¹ who is the editor of an electronic journal, calls this process of open commentary and reply in cyberspace, “scholarly skywriting”. He distinguishes it from peer review which has to remain as a quality control mechanism. Electronic journals have announced that articles they published will have to conform to certain standards of electronic peer review, not different from that of the printed journal. In other words, the editorial selection process, after interactive discussion in cyberspace, must still remain in order that what appears in the electronic journal are not the “undiluted sweepings of a hundred minds”.² So for electronic peer review to function effectively, everyone involved in the review process must be comfortably connected to the Net so that they can participate in this open discussion forum.

I am certain that the electronic journal will evolve its own standards of peer review, which is more open and interactive, compared to the traditional peer review process. The Internet has come to stay and may be the preferred medium for the future. The system of electronic peer review should be established so that quality and standards are maintained. The future of the electronic journal will hinge on two developments—that all editors and reviewers are comfortable with the medium and that they adopt a new system of peer review which is more open and interactive.

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