

## Ethical and Quasiethical Problems in Publication

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According to Mary Scheetz, the Public Health Service Office of Research Integrity has identified 111 instances of scientific misconduct that took place in 1992-2001. Its investigations have resulted in 63 retractions, the most serious type of literature correction, in addition to errata, letters to the editor, and corrections.

A journal's instructions to authors are the key to protecting and maintaining the journal's integrity when issues of misconduct arise. The instructions tell authors how allegations of scientific misconduct are addressed. In addition to the journals that have developed their own policies for handling misconduct, over 500 journals have adopted the standards of the International Committee of Medical Journal Editors. Those standards, cited in participating journals' instructions to authors, define authorship and address

issues of scientific misconduct.

Many journals still do not outline in their instructions a procedure for the management of scientific misconduct. It is important for journals to discuss this procedure before misconduct arises, because it is editors' responsibility to ensure that issues of misconduct are pursued. They are not responsible, however, for conducting investigations themselves—they should refer such matters to the institutions at which the research was done. Once issues of misconduct arise, the Office of Research Integrity can become involved only if the research was conducted with funds from the US Public Health Service. However, it can provide advice to institutions if the research was funded by other organizations.

Because investigations of misconduct are sometimes contentious, alterations to the literature are not always identified as retractions. Journals publish corrections under many headings, including "corrigendum", "retraction", and "rectification". Those headings make it difficult to discern the level of infraction that warrants a given category. An explanation can accompany a correction so that the justification is fully understandable. To make sure that they are noted by readers, corrections should be published in a prominent position in journals, rather than buried at the back.

Once a definite case of misconduct is identified and a retraction is published, MEDLINE provides a link between the retraction and the original article. Printing a correction or retraction on a numbered page in a journal ensures that it will be included in MEDLINE. Unless a comment specifically mentions that the article has been retracted, said Sheldon Kotzin, it will not be listed that way in MEDLINE. MEDLINE also links comments to the original article, and these can be important if questionable papers are not formally

retracted. Articles and letters to the editor that question the results included in articles can be linked to them through the MEDLINE comments feature.

In addition to basic falsification of data, "little murders" are committed, according to Drummond Rennie: grievous behaviors that are not defined by law as scientific misconduct. Publication bias and double publication of the same data without cross-references occur regularly. They pose a particular problem in clinical trials because doctors often keep "score" with respect to the number of trials with positive and negative results. Publishing the same set of positive results repeatedly and neglecting to publish negative data can lead physicians and the Food and Drug Administration to believe that treatments or procedures have more experimental support than they do. An important job of journal editors is to reduce this bias by preventing double publication and by publishing negative results.

One little murder, according to Rennie, is that clinical researchers often refuse to provide after-care for their publications; they refuse to answer queries concerning their papers. To discourage that, some journals require all authors to submit a signed statement that they take responsibility for the manuscript and will provide all relevant data on request.

Those little murders are common in research, but we don't know how common. A few, such as multiple publication of the same studies, are being identified through systematic review. Journal editors play an important role in preventing this behavior and in handling the issues when they arise. One of the most aggressive efforts editors can make to limit ethical problems is to publish instructions to authors that address the issues before they arise.

