Conflicts of interest for medical publishers and editors: Protecting the integrity of scientific scholarship

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Competition of interest may exist at all levels in the medical publication process. Ensuring the integrity of scientific scholarship involves protecting editorial independence, promoting the use of scientific arbitration boards, promoting transparency throughout all stages of publication, and protecting the relationship between the publisher and its editors through an effective legal framework. It is incumbent upon the publisher, editors, authors, and readers to ensure that the highest standards of scientific scholarship are upheld. Doing so will help reduce fraud and misrepresentation in medical research and increase the trustworthiness of landmark findings in science. (J Vasc Surg 2011;54:59S-63S.)

Competition of interest issues have received much attention from the government, media, and scientific communities recently. Of particular interest has been scientific inquiry in which financial conflicts, sometimes combined with incomplete or improper disclosure, lead to the perception (or reality) that the study results may be biased or inaccurate. 1-4 Additionally, past abuse of federal health care funds has led to fines and incarceration for the most egregious offenders. 5

Competition of interest and errors in their disclosure range from the innocent to the criminal. In some cases, the conflicting interest may interfere with the impartiality and integrity of the scientific endeavor. For authors, this may mean failure to disclose a financial conflict in the hopes that the publication of a particular study will bring fortune. 6,7 In other instances, grant support by industry partners has been associated with the publication of proindustry results. 8

Such conflicts of interest between an author and the published study are discussed elsewhere in this Journal and the medical literature.

A topic that has received far less attention is the potential for serious conflicts of interest between editors, contributing authors, the publisher, and advertisers (Fig 1). 9-11 While authors are primarily interested in their manuscript, editors of major journals routinely interface with a much broader group and, therefore, may be more susceptible to bias and potential influence. For example, advertisers who wish to have a particular ad incorporated into a journal issue may approach one of the editors of a journal. Hypothetically, that editor may be more inclined to accept a study that deals with a product being sold by the advertiser, or reject an article that discusses negative findings about the product. Editors may then potentially coerce the publisher to place the ad next to the favorable study. These paid placements may lead to greater profits for the journal and some reward for the editor. The peer-review process thereby breaks down and the standards of scientific scholarship are sacrificed for material gain.

This article discusses these potential conflicts of interest from the perspective of medical scholarship: editors and publishers must be as responsible as authors to promote and protect the integrity of the scientific process. As the final gateway in the publishing process, editors in particular must be vigilant against these trespasses and ensure that the content of medical publications is entirely independent of all personal, institutional, and corporate influence. This responsibility can be achieved by protecting editorial independence, promoting the use of a scientific arbitration board for serious disputes, promoting transparency throughout all stages of publication, and taking advantage of an effective legal framework via contracts and agreements to protect scientific scholarship.

ROLE OF EDITORS

By overseeing the process of peer-review, editors influence the selection of reviewers and adjudicate feedback given to the authors. Bias within this process may make a manuscript more or less likely to be accepted. In other cases, editors who have a research interest closely aligned to a particular manuscript will have advanced access to unpublished data and findings that may influence their work. This may lead to an unfair advantage in concurrent grant applications, or even outright rejection of the manuscript to preserve their scientific advantage.

The currency of academicians is the number and quality of peer-reviewed publications: they promote their rise in academic channels, help obtain grant funding, and gain influence. As the key decision makers on articles, editors influence the careers of their authors by determining the
POTENTIAL CONFLICTS OF INTEREST

These complex relationships between authors, editors, publishers, advertisers, and readers create the opportunity for conflicts of interest that threaten the integrity of scientific scholarship. These conflicts extend well beyond the scientific and ethical issues that exist between authors and their manuscripts. Potential abuse of these relationships introduces a variable for which there has not yet been a significant conversation in the medical literature.

PEER-REVIEW PROCESS

There remains some debate as to whether the peer-review process should be double-blind, single-blind, or if it should be blinded at all. Several major journals have opted to forgo blinding and instead keep all authors, affiliations, and manuscript reviewers out in the open. By publishing this information, any potential conflicts of interest are made available for external review. The rationale is that any disclosures or conflicts between editors and the manuscripts they review will be avoided. While the results thus far have been satisfactory, open review does not solve the issue of editors potentially gaining benefit in the future via a quid pro quo transaction with the authors in future academic endeavors. Further, there may be some pressure to accept manuscripts from influential and powerful authors, as rejection of a manuscript or negative feedback may sever relationships, lead to animosity, or repercussions.
Double-blinding the peer-review process reduces the likelihood of such quid pro quo transactions and also promotes more complete positive and negative feedback to authors. To maintain the fidelity of this process, this double-blind peer-review should be supervised by the Editor-in-Chief. The primary role of the Editor-in-Chief should be to ensure that the appropriate editors and reviewers will receive the manuscript for review, and that these reviewers will not be in a position to unduly benefit or influence the work at hand. The reviewers will serve as a system of checks and balances, as they will ultimately become aware of the identities of the authors whose work they reviewed should it reach the publication stage. This arrangement avoids self-policing, preserves the integrity of peer-review, and reduces bias by editors and authors. By assigning manuscripts through the Editor-in-Chief, reviewers with a closely aligned research interest or other corruptible conflict of interest are excluded immediately. Limitations of this process must be recognized: in many cases authors and institutions can be recognized by the manuscript content, the blinding process is not watertight, and new findings can still be poached even if the authors’ identities are not known.

EDITORIAL INDEPENDENCE

Editors are in a unique position to be influenced by a variety of competing interests. Editors have a responsibility to preserve the integrity of scientific scholarship through maintenance of the peer-review process and uphold high ethical standards. These interests may occasionally compete with desires manifest by the publisher, societal sponsors, advertisers, authors, and readers.

To ensure that editors are able to make their decisions without significant coercion, they should be protected by a legal framework that preserves their independence within the physical limitations of the journal (Fig 2).27-29 Further, their duty to the high standards of scientific scholarship should be protected by limiting their role in dealing with entities that may influence the peer-review process. Editors should not have any role in recruiting, selecting, or placing advertising within a journal. This entire process should be controlled by the publisher (who in turn has no influence over scientific content of the journal). Removing editors from this role entirely mitigates the potential for biasing the selection of manuscripts and potentially inappropriate benefits from working with industry partners in the capacity of an editor.30 In addition, the publication’s advertising staff should not have advance knowledge of the content of a journal issue to eliminate the opportunity of influencing advertising content.

A legal contract should be in place between the publisher and the editors that guarantees their independence unless there are exceptional circumstances. Editors should be appointed for a fixed term and should be permitted to make independent decisions regarding the selection, inclusion, and arrangement of articles within the design limitations of the journal. While the publisher is inherently responsible for the stylistic and formatting conditions, the final layout of an article should be done in conjunction with the editors and authors.

Such a legal framework also protects editors from being influenced by societal sponsors and demands that the publisher may have from time to time. The inclusion of certain articles should be left entirely up to the editors in conjunction with the peer-review process. Publishers provide a valuable instrument to communicate important scientific findings; as part of the separation of powers, editors should be the ones who determine what those findings will be.

SCIENTIFIC ARBITRATION BOARD

Occasionally, there will be serious challenges to the guiding principles of a journal. Despite the precautions that
major journals take today against fraud and corruption, no one is immune from a perversion of the scientific process. Major conflicts of interest, ethical dilemmas, and other major issues should be resolved by a scientific arbitration board composed of editors and publishers (Fig 2). If pertinent, authors and readers should be invited to participate in the proceedings. Such a board serves as a final method of checks and balances against the publisher and editors; the decisions of this board should be binding upon all parties.

Such a board provides a unique opportunity to confront authors involved with plagiarism, data fabrication, and other major violations of scientific trust. It provides a forum to challenge editors who may have been involved in questionable decision-making or who may have trespassed upon the ethical and scientific standards of the journal. It also serves to notify the publisher, advertisers, and readers of any potential breaches in scientific scholarship. By incorporating all of the parties with a vested interest in such a board, it becomes capable of dealing with even the most challenging issues that face a journal.

CONFLICTS INVOLVING THE EDITOR-IN-CHIEF

The Editor-in-Chief serves as the public face of the journal and the final authority on all its scientific matters. Yet, even they may be placed in positions where a conflict of interest exists, either between them and a paper under review, with other editors, or even with the publisher. Objectivity is the key to maintaining high standards of scientific scholarship; if such objectivity of an Editor-in-Chief is compromised, he must recuse himself from the decision-making process and assign the task to a managing editor.

Managing editors should be appointed such that their potential conflicts of interests are not similar to that of the Editor-in-Chief so that they can help resolve situations from which the Editor-in-Chief must be recused. In situations where the conflict of interest cannot be resolved by the managing editor, important decisions should then be undertaken by the scientific arbitration board. The key to protecting the publication process is to make all major decisions transparent. Hasty decisions made when conflicts of interest are present can present serious legal issues due to the financial and societal repercussions that can occur.

LEGAL ISSUES

In 2006, a prominent South Korean scientist was indicted for embezzlement and scientific fraud and sentenced to a short prison term.31 Dr. Hwang made headlines when he published two papers in *Science* that described his research on patient-specific stem-cells derived from embryos that could be used for stem cell transplants.32,33 This past year, a prominent researcher at Harvard was found guilty of eight counts of scientific misconduct. A paper in a prominent psychology journal was retracted, and there is an ongoing investigation by the US Attorney’s Office for the District of Massachusetts.34 In November 2010, a prominent cancer researcher at Duke University resigned from his post following the retraction of an important paper and cessation of clinical trials that were based on questionable data.35,36 Questions regarding his credentials have also led to an investigation from the American Cancer Society as to whether grants obtained by that society were under false pretenses.36

Major conflicts of interest may be manifest in extreme ways that violate local, state, or federal statutes that may be punishable by fines and/or incarceration. In USA vs Poehlman (2006), Dr Poehlman made a plea bargain with prosecutors to serve 1 year and a day in jail for fabricating data in 10 different papers and falsifying grant applications to the National Institutes of Health (NIH) related to hormone replacement therapy for menopause.37 While making simple mistakes is unlikely to lead to an allegation of scientific misconduct (cf NIH Office of Research Integrity misconduct statement), intentional data fabrication, fraud, and embezzlement are likely to get the attention of authorities.

As these issues take on more importance, it is incumbent upon editors and publishers to identify instances of scientific misconduct prior to publication, and to more aggressively handle cases as they come to light. For instance, communicating with all authors of a manuscript instead of just the submitting author can help ensure that all authors are aware of the nature and content of the publication. Having access to the original data, particularly for landmark publications, can help foster scientific oversight; this is particularly noteworthy in our time given our ready access to rich media over the Internet. Simultaneously publishing such original data online in conjunction with the paper can help eliminate doubt while furthering scientific scholarship. Finally, to avoid ambiguity when these issues arise, a concerted effort between the publisher and its editors should be made to publish disclosures of conflicts of interest, conflict of interest policies, a statement on the standards of scientific scholarship, and so forth.

There are also legal issues that can exist between the publisher and its editors. Relationships between these two entities should be protected in the form of a contract. Such a written statement also helps to clarify the responsibilities of the two entities, and promotes transparency in this important relationship. Such a legal framework protects both publishers and editors; an effective policy will not hinder the free and open exchange of ideas nor impede scientific scholarship.

MAINTENANCE OF SCIENTIFIC INTEGRITY

Potential conflicts of interest exist at all stages in publishing. The highest standards of scientific scholarship should be upheld, but readers, authors, editors, and publishers are all equal partners in this endeavor. By instituting transparency with regard to peer-review, decision-making, and internal journal processes, the entire process of scientific publication becomes more trustworthy and less susceptible to outside influence. Scientific arbitration boards can help adjudicate major conflicts while protecting the integrity of the publisher and journal editors.
Editorial independence within the physical constraints of the journal promotes a free and open exchange of ideas unhampered by the economics of running a medical publication. Combined with transparency and a legal framework to protect publishers and editors, undue influence by advertisers and competing interests can be minimized.

There have been a number of challenges to scientific integrity in recent years. Without aggressive intervention by editors and publishers, the public’s confidence in scientific scholarship will falter. This may lead to a shift in priorities in funding for medical research, impede research endeavors, and delay timely care that we provide to our patients. Further, if there is not a thoughtful and effective framework in place for publishers to deal with these issues, we may find ourselves policed by external entities that do not appreciate all of the finer points of medical research.

REFERENCES


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