Access to the biomedical literature: a stand against coercion

One of the loftiest purposes of scholarly biomedical publication is the speedy dissemination of information that will help advance our understanding of the etiology and treatment of the maladies of man. Inherent in this pursuit is that their contents be accurate and be of the highest quality, and that the information be used for scholarly pursuits. A modern biomedical journal such as Blood strives to achieve all of these goals through rigorous peer-review of submitted manuscripts, rapid conventional and electronic publishing, and the addition of value to the journal contents by highlighting particularly insightful articles, soliciting expert commentary, and providing timely reviews. Very soon, an open letter to the biomedical community will appear calling for all biomedical journals to transfer their contents to a freely accessible depository such as PubMed Central; the letter calls for the boycott of noncomplying journals by authors, reviewers, and subscribers. To this editor, coercion has no place in scientific discourse.

The primary goal of the proposal is highly laudable: the elimination of accessibility barriers to published biomedical research. Championed by highly respected geneticist Dr Pat Brown, of Stanford University, the proposal insists that all electronic biomedical journals provide unfettered access a maximum of 6 months following their publication by transferring the material to PubMed Central or similar on-line public resources. Dr Brown makes several valid points: electronic access is important because many clinicians and scientific investigators are not geographically adjacent to libraries providing free paper or electronic versions of biomedical research publications; many large commercial publishers appear to make inordinate profits from scholarly publication; and professional societies have become too dependent on the revenues generated from the “nonprofit publication” of their journals. Nevertheless, as for so many other worthy goals, there are many unintended consequences of this proposal that could seriously undo a system that has served the biomedical community well.

The electronic transfer of each issue of a biomedical journal is not an easy task. Although it is little appreciated, there are quite a few challenges in transferring data from one platform to another. Problems can occur because of differing DTDs (Document Type Definitions), sets of rules that define the SGML markup for the published articles in a given document. Small data elements may get “misconverted” when Blood data are sent from High Wire Press, the organization that publishes the electronic version of Blood, to PubMed Central for re-posting under a different set of rules. This requires time, money, and constant vigilance, lest a 250 µg dose be changed to a 250 mg dose of a drug or a biochemical reagent. Apparently, the transfer of scientific content to PubMed Central has, at times, been very difficult and time-consuming, and this may serve as a painful reminder of this hurdle. The transfer of contents to PubMed Central or similar on-line public resources also produces several other unintended consequences, including surrendering protections guaranteed by author and publisher copyrights. The battle over who should own a scholarly publication has been fought before.

The US Constitution states, “The Congress shall have power to . . . promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.” In the 19th century, Charles Dickens made copyright protection a workable system in the United States, protecting authors’ capacity to make a living from their work. Although this goal is no longer critical for biomedical authors, present copyright protection as administered by society publishers guarantees the integrity of the published work from plagiarism and other infringements. Although it is argued that free and unfettered access would allow more comprehensive data searches to be performed, PubMed Central–hosted papers are also free to any commercial enterprises interested in reassembling and republishing content for their own profit (“unrestricted free distribution rights,” as the open letter reads; emphasis added). We would completely lose control over our back issues because any server could host and manipulate our content, with errors and omissions likely to occur. Here again, the risks are enormous; drug dosing and/or other patient care-related errors are inevitable. It is also not difficult to envision that unprotected access will lead to drug manufacturers attaching advertisement to reprints of selected papers, the hijacking of segments of or whole papers for credited or uncredited use, and their out-of-context manipulation to support conclusions considered inappropriate by the biomedical community.

Another issue that arises from transferring all issues of Blood or other rigorously peer-reviewed journals to PubMed Central is the gradual loss of reader and reviewer recognition and the quality assurance that comes from the exacting evaluations of experts in the field. Our current concept of peer review began in the 16th and 17th centuries with the publication of books such as Isaac Newton’s Principia, which was “perused” by committees of the Royal Society of London. In a recent editorial, Dr Adrian Johns (Nature 2001;409:287) argued that peer review grew out of an alarming growth in the number of books available after the invention of the printing press. With the advent of the Internet and the seemingly endless proliferation of new journals and information of all levels of quality, one can easily argue the same phenomenon is occurring today, making the need even greater for peer review to help us sort the wheat from the chaff. Of the many lessons learned during my tenure as Editor-in-Chief of Blood, none is so clear as the challenge of recruiting an outstanding cadre of clinicians and scientists to serve as reviewers to ensure the highest quality for papers published in Blood. It is abundantly clear that our community of reviewers share personal identification with the journal and its mission. It is unlikely that such community allegiance will be garnered for papers that originate or end up in PubMed Central next to nonreviewed or minimally reviewed work, and the peer-review process is almost certain to suffer.

Nevertheless, all of these consequences might be worth enduring if they were the only way to provide ready access of the results of biomedical research to all. Fortunately, PubMed Central is not our only option; the solution is already at hand. At present, the journal Blood provides free access to all issues after a 12-month embargo period. We encourage all other journals to take this opportunity to provide short embargo periods for their scholarly publications. Access is readily available through multiple, searchable platforms. Blood is hosted by HighWire; similar electronic
publication platforms such as Science Direct, LINK, and InterScience also provide immediate links to search engines such as PubMed. The call for a submission, subscription, and reviewing boycott of all biomedical journals that do not conform to Dr Brown’s vision appears far too draconian to warrant consideration, especially when one appreciates that numerous journals are already readily accessible through fully integrated electronic platforms. Does Dr Brown really want to set neighbor against neighbor for the sake of an untested model of research dissemination? He proposes to force others to participate, without any idea about the viability of the plan. The editors and publishers of Blood are proud of the contents of the journal and its availability to the biomedical community, and they firmly believe that the health of biomedical research and its dissemination has never been better.

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