Is Acknowledged Self-Archiving Prior Publication?

presented by

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Abstract

“Prior" distribution increases critical refereeing by peers which improves the quality of what gets published. With rare exceptions, none of the new methods for providing "prior" exposure are all that efficient. They reach a fraction of the audience. I believe "original" or formal publication has significance only in the context of mass-distribution journals. If a journal publishes an article, and readers were not previously aware of the information it reported, and the author states openly that the ideas have been exposed on the Web, does this affect the value of that information to the reader? I've often encountered articles and books in which the author mentions earlier work with which I was not familiar. If the ideas are new to me, does it matter that it is not the place in which the idea was first expressed? Some degree of redundancy is essential to the dissemination of new ideas because there are so many new ideas competing for our attention.

Here's what I advised journal editors. If a paper meets your criteria for excellence, and if your readers will benefit from reading those ideas, do not be put off by the fact that the author has discussed those ideas in an open forum--whether on the Web or at a meeting, or even in the lay press. Make authors acknowledge, by suitable references where the work has been reported before. This will "protect" the small number of readers who may have heard the paper at a meeting from double exposure. The ethical issue is not whether the ideas are completely new, but whether the author has acknowledged the earlier exposure. Appropriate references preserve the historical record.

Traditional publishers who generate income from print journals will rationalize their need to continue the status quo but even the most conservative will eventually incorporate electronic publication. Unfortunately, librarians will have to deal with the added complexity of the infinite variety of combinations of publishing practices. New tools will tell us where to find an electronic alternative to print. Electronic publications are so pervasive that it is difficult to enforce Ingelfinger rules. So if ACS or other publishers will not permit me to publish a paper I’ve self-archived, they will lose submissions to competitors who do. Posting and sharing one’s preliminary publications are an important part of the peer refereeing review process and does not justify an embargo by publisher’s on the grounds of “prior publication.” It was not the case with preprints before the Internet, and except for unusual clinical situations, has not changed because we have the Internet.

I was asked to participate in this panel discussion primarily because of an editorial in the June 7, 1999, issue of *The Scientist* on the topic "Acknowledged Web Posting is Not Prior Publication."[1] Since most of you are not familiar with this bi-weekly news journal, let me briefly state its mission. *The Scientist* provides research scientists with relevant and timely information and analysis to assist them in making decisions that affect their working lives – the human side of science. It provides an open forum for examination and discussion of issues in research, technology, employment, funding, policy, and other professional subjects important to the working life scientist.

Since publication is the lifeblood of research, it is a topic we often visit. *The* Scientist is particularly relevant to this audience because, to the best of my knowledge, it is the first print publication to have been continuously available gratis online for over 10 years. The on-line version began as an experiment with NSF sponsorship when AT&T and the Gopher sites were still around. In the meantime, we have evolved from the ASCII stage through the HTML and PDF stage. We continue to be hosted at the University of Pennsylvania library server. A search engine to the full archive is maintained there. However, since January we have added another commercial website since *The Scientist* now contains advertising on its web page.

Let me stress that it is not a journal of primary research. Therefore my comments about prior publication have no bearing on our agenda, although I could visualize a time in the future when someone might wish to post a preliminary communication on our website and

not want to be frustrated by the policies of traditional publishers as well as universities. In that connection, I speak not only as a scientist who has published numerous papers, but also one who experienced the sometimes arbitrary nature of publishing rules in academia. When I was a doctoral candidate you were forbidden to publish the results of your doctoral research prior to the official acceptance of your thesis. That dictum affected one's ability to establish an early priority date.

The date of my dissertation discovery could easily have been three years earlier were it not for the university's dictum. On the other hand, had I wanted to patent my algorithm for translating chemical nomenclature, the priority date could have been quite critical.[2]

So let me paraphrase the editorial that brought us together.

> Most scientific journals begin their instructions to authors with a strong statement against prior publication. The *New England Journal of Medicine* (*NEJM*) states, "Manuscripts containing original material are accepted for consideration if neither the article nor any part of its essential substance, tables, or figures has been or will be published or submitted elsewhere before appearing in the *Journal.*"[3] Most journals then list exceptions to the blanket rule; for example, presentation of the results at a poster session or meeting, with concurrent publication of the results in a meeting abstract.

However, a number of publications are interdicting their authors from any prior publication of a paper on a personal or institutional Web site. For example, from the *NEJM* again: "Posting a manuscript, including its figures and tables, on a host computer to which anyone on the Internet can gain access will constitute prior publication."[4] I believe their position is counterproductive to science progress and does not serve the best interests of readers.

Editors offer many arguments for refusing to publish articles that report information that has been "published" earlier--either in the lay press or other media, including the Internet. Allegedly, if you have posted your creations on a personal Web site, you have somehow compromised publication in primary journals by undercutting the peer review process. On the contrary, I believe "prior" distribution increases critical refereeing by peers which is so important to improving the quality of what gets published.

Contrary to the myth, publication on a personal Web site ordinarily does not produce the quantity of exposure one experiences in NEJM or *JAMA*, or other large-circulation journals. With rare exceptions, none of the new methods for providing "prior" exposure are all that efficient. I believe "original" or formal publication has significance only in the context of mass-distribution journals. Even if I have shown

my work to 50 people in my invisible college, that is a small fraction of the journal's readers.

If journal X publishes an article, and readers are not aware of the information reported in it, and the author states openly that the ideas have been exposed on the Web, does this affect the value of that information to the reader? I've often encountered articles and books in which the author mentions earlier work with which I was not familiar. If the ideas are new to me, does it matter that the citing work is not the place in which the idea was first expressed?

Scientific communication involves a long-term "educational" process. As was the case of many Nobel Prizes, delayed recognition of important ideas is not unusual. Their acceptance involves not only publication over a continuous period, but also proselytizing by their creators to colleagues in various fora. Belver Griffith, among other scholars studied informal communication in science.[5] Some degree of redundancy is absolutely essential to the dissemination of new ideas partly because there are so many new ideas competing for our attention. Redundancy in advertising is taken as a given. Is it really any different in science and scholarship? Since it is impossible to be aware of everything that is published today, redundancy serves a useful function.

> Here's what I advised journal editors. If a paper meets your criteria for excellence, and if your readers will benefit from reading those ideas, do not be put off by the fact that the author has discussed those ideas in an open forum--whether on the Web or at a meeting, or even in the lay press. Make your authors acknowledge, by suitable references, if and where the work has been reported before. This will "protect" the small number of readers who may have heard the paper at a meeting from double exposure. However, if the ideas were significant the first time around, even those readers will be glad to receive a second dose. And your journal will be serving its appropriate function as a disseminator as well as archive for the scientific record. The ethical issue is not whether the ideas are completely new, but whether the author has acknowledged the earlier exposure. Appropriate references preserve the historical record for the first-time reader.

A great deal has changed in the year since I began to write my editorial. The overwhelming acceptance of the Internet and the increasingly taken-for-granted role of electronic publication have put great pressures on traditional journal publishers. Hybrid electronic/print journals are now the norm and not the exception. Of course, traditional society publishers who generate a lot of profit from print journals will rationalize their need to continue the status quo but even the most conservative will eventually incorporate electronic publication. Unfortunately, librarians will have to deal with the added complexity of the infinite variety of combinations of publishing practices. What one publisher will do, another will not. So we will have to work with tools that tell us how and where to find an electronic alternative to print. There will come a time when electronic publications are so

pervasive that it will be difficult to enforce Ingelfinger rules. So if ACS or other publishers will not permit me to publish a paper I've self-archived on the web, they will begin to lose submissions that go to their competitors who do allow it. And they will certainly have to include references to the URLs for electronic papers cited by their own authors. The increase in the number of cited URL's will eventually reach some threshold of critical mass and thereby change the way readers and publishers perceive virtual publication.

In conclusion, I believe that posting and sharing one's preliminary publications are an important part of the peer refereeing review process and does not justify an embargo by publisher's on the grounds of "prior publication." It was not the case before the Internet, and except for unusual clinical situations, has not changed because of the convenience of the Internet.

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[1] Garfield, E. "Chemico-Linguistics: Computer Translation of Chemical Nomenclature." *Nature*, 192(4798):192 (October 1961). Reprinted in *Essays of an Information Scientist*, Volume 6, pages 489-491. Philadelphia: ISI Press (1984)
http://www.garfield.library.upenn.edu/essays/v6p489y1983.pdf

[2] Garfield, E. "Chemico-Linguistics: Computer Translation of Chemical Nomenclature." *Nature*, 192(4798):192 (October 1961). Reprinted in *Essays of an Information Scientist*, Volume 6, pages 489-491. Philadelphia: ISI Press (1984)
http://www.garfield.library.upenn.edu/essays/v6p489y1983.pdf

[3] "Instructions for Submission," *New England Journal of Medicine*,, http://www.nejm.org/hfa/subinstr.asp

[4] Kassirer JP and Angell M. "The Internet and the *Journal*, *New England Journal of Medicine,* 332(25): 1709-1710 (June 22, 1995)
http://www.nejm.org/hfa/internetandjournal.asp

[5] Garvey WD, Griffith BC. "Scientific Communication – the Dissemination System in Psychology and a Theoretical Framework for Planning Innovations," *American Psychologist* 20(2):157-165 (1965)