

OPEN ARCHIVING FOR OPEN RESEARCH:

How to Free the Scholarly and Scientific Research
Literature Online Through Public Self-Archiving

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It is a foregone conclusion that all refereed journals will soon be available online; most of them already are. This means that one can access them from any networked desk-top. The literature will all be interconnected by citation, author, and keyword/subject links, allowing for unheard-of power and ease of access and navigability. Successive drafts of pre-refereeing preprints will be linked to the official refereed draft, as well as to any subsequent corrections, revisions, updates, comments, responses, and underlying empirical databases, all enhancing the self-correctiveness and interactiveness of scholarly and scientific research and communication in remarkable new ways.

But there is still one last frontier to cross before science reaches the optimal and the inevitable: Just as there is no longer any need to be constrained by the access-blocking restrictions of paper distribution, there is no longer any need to be constrained by the access-blocking financial fire-walls of Subscription/Site-License/Pay-Per-View (S/L/P) tolls for this give-away literature that its authors have always donated for free (and its referees have refereed for free), with the sole goal of maximizing their impact on research (by accessing the eyes and minds of fellow-research) and hence on society.

Authors can now self-archive their refereed papers publicly in Open Archives <<http://www.openarchives.org/>> for free. This will usher in the optimal and the inevitable: Journal publication will down-size to just implementing the service of Quality-Control and Certification (QC/C, through peer review and editing), which will be paid for up-front at the author-institution end out of only a small portion (about \$300 per paper) of the annual savings from the cancellation of all S/L/P tolls at the reader-institution end.

Journal publishers are best advised to prepare for and accommodate the optimal/inevitable solution for science in the new era of "Scholarly Skywriting," rather than to try to delay or block it via restrictive submissions and copyright policies that merely amplify the conflict of interest inherent in the revolutionary possibilities for scholarly and scientific communication opened up by the PostGutenberg Galaxy.

Here are the logic and pragmatics of this path to the optimal and inevitable in the PostGutenberg Galaxy:

(1) At the very outset, it is important to make it explicit that these considerations apply ONLY to the refereed journal literature, not to books or magazines.

<http://www.cogsci.soton.ac.uk/~harnad/THES/thes.html>

(2) Unlike all other authors, refereed-journal-authors write these papers to report their research ideas and findings, not to make money (royalties, fees) from the sale of their texts. All they want is to reach the eyes and minds of a maximum of fellow researchers, present and future, once their findings have passed peer review, so as to maximize the research impact of their work.

<http://www.cogsci.soton.ac.uk/~harnad/nature2.html>

(3) They accordingly give their papers away for free to their publishers, and, after peer review, give away free reprints to all who request them.

<http://amsci-forum.amsci.org/archives/september-forum.html>

(4) Online self-archiving now makes it possible for these highly atypical authors to give away their refereed reprints free to one and all forever on the broadest possible scale.

<http://www.arl.org/scomm/subversive/toc.html>

(5) Publishers should in no way attempt to prevent free self-archiving by authors by trying to forbid it in copyright agreements. This is the eye of the storm. See:

<http://www.cogsci.soton.ac.uk/~harnad/science.html>

<http://www.cogsci.soton.ac.uk/~harnad/Papers/Harnad/harnad00.scinejm.htm>

(6) The American Physical Society has already provided a model copyright policy: Authors may self-archive both the unrefereed preprint and the refereed reprint for free for all. The Publisher retains all rights to SELL either the paper or online version of the journal.

<http://cogprints.soton.ac.uk/help/copyright.html>

(7) The effect of online author self-archiving will be a transition of the reader/user community to the free online versions of all refereed papers.

http://xxx.lanl.gov/cgi-bin/show_monthly_submissions

http://xxx.lanl.gov/cgi-bin/show_weekly_graph

(8) Eventually this will produce cancellation pressure on Subscription/Site-License/Pay-Per-View [S/L/P] (although it has not done so yet in Physics, where it is most advanced). If/when it does, publishers will have to restructure and down-size so as to provide only a SERVICE, Quality-Control and Certification [QC/C] [peer review, editing, tagging as accepted by "Journal J"], instead of PRODUCT (the text).

<http://www.cogsci.soton.ac.uk/~harnad/nature.html>

(9) The much reduced cost of providing solely this QC/C service will be recoverable from author-institution QC/C charges, which will in turn be recoverable from the annual institutional savings from S/L/P cancellation. QC/C costs less than 1/3 of S/L/P, hence is more than covered by the saving, and, as a bonus, frees the literature for one and all.

<http://www.dlib.org/dlib/december99/12harnad.html>

(10) The critical difference is that reader-institution-end payment (S/L/P) is access-blocking, whereas author-institution-end payment is not. But as long as author self-archiving rights are guaranteed (5,6), the market can decide whether or not S/L/P can survive alongside it (and how long).

(11) The infrastructure for self-archiving, through the Open Archives Initiative:

<http://www.openarchives.org/>
<http://eprints.org/>

The self-archiving initiative in this very special subdomain of literature -- the give-away refreed research literature -- is unstoppable, because ethics, pragmatics, and logic, as well as the inherent interests of research itself and hence of all of society, are all behind it. Its progress can only be slowed temporarily by playing on confusions and uncertainties in people's minds, simply because it is all so new and they have not yet thought it through. It would be to publishers' long-term advantage to try to see ahead, and to restructure accordingly, rather than to try to hold the literature hostage to the status quo. They must come to terms with what is in the best interests of research and researchers in the new online world, and must design a new niche for themselves in the PostGutenberg Galaxy.

A tide-over consortial subsidy out of windfall S/L/P savings to smooth the transition from reader-institution-end cost-recovery via S/L/P to author-institution-end cost-recovery via quality-control/certification charges would be worth planning out with the library-institution and research-funding community in advance.

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