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On Maximizing Journal Article Access, Usage and Impact

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If I am to write a weekly column, I first have to get everyone up to speed. Hold onto your hats:

On our planet today there are about 24,000 peer-reviewed journals, publishing about 2.5 million articles a year, across all languages and all scholarly and scientific research disciplines. (These guesstimates are based on data from Ulrichs http://www.ulrichsweb.com/ulrichsweb/ and ARL http://fisher.lib.virginia.edu/arl/index.html). The authors (as well as their employing institutions and their research funders) keep producing all those articles for one reason and one reason only: so that they should be used by all their potential users on the planet, present and future. Researchers are employed and salaried, and their research is funded, so as to maximize the usage and impact of their research output, thereby maximizing the progress and productivity of research itself. Although they are not the only measure of research impact, *citation counts* – the number of articles whose authors have found a given article useful enough to read, build-upon in their own research, and therefore cite in their own article – are informative and widely used performance indicators in the evaluation of researchers for salaries and funding. Hence researchers are understandably very interested in making sure the usage and impact of their research is as high as possible.

The mainstay of an author's research usage and impact is, and will remain, the publication of the article in the best possible peer-reviewed journal in its field. The bulk of the usage and citations will come from those users who have an individual or institutional subscription or site-license to the journal in which it is published (and, increasingly, to the online version of that journal). But the online age has also provided a way for authors to maximize their articles' usage and impact by supplementing this paid access to the publisher's official version of their article with an open access version of the article that authors self-archive on their own institutional websites for any would-be users webwide who cannot afford the paid access to the publisher's official version. A growing number of studies is showing that articles that have been supplemented with such self-archived versions have higher (and sometimes substantially higher) citation impacts than articles that have not been self-archived: http://opcit.eprints.org/oacitation-biblio.html

All parties to the research publication and production co-benefit from this supplementary open-access self-archiving: Authors, their institutions, their funders, their publishers, and research itself. The author receives more citations (as well as more downloads: http://eprints.ecs.soton.ac.uk/10647/). The institution has greater research impact, and its research output is more visible, attracting more researchers, students, and research funding. The research funder (and the tax payer funding the funder) receives greater return on their investment in the research. The journal gains a higher citation impact factor, wider visibility and greater usage per published article.

And of course the progress and productivity of researchers and research itself are enhanced.

Yet despite the benefits of self-archiving, researchers have been rather slow to do it, partly because they are not yet aware of those benefits, and partly because they feel they already have enough to do (and are unaware that it takes only 6-10 minutes per article to self-archive it: http://eprints.ecs.soton.ac.uk/10688/). Publishers are certainly not at fault for the fact that authors have been so slow to self-archive: Ninety-two percent of the 8450 journals surveyed to date (including most of the top journals) have given their authors the green light to self-archive: http://romeo.eprints.org/

In two international surveys, researchers have indicated quite clearly exactly what needs to be done to get them to self-archive: Seventy-nine percent of authors indicated that they do not now self-archive, and will not self-archive, until and unless their employers or funders *require* them to do so; but if/when they do require it, they *will* self-archive, and self-archive *willingly*: http://www.eprints.org/berlin3/ppts/02-AlmaSwan.ppt

The remedy is on the way. At the recent international conference at the University of Southampton UK on formulating a concrete policy for institutions to adopt in order to implement the Berlin Declaration on Open Access -- http://www.eprints.org/berlin3/outcomes.html -- the delegates recommended exactly what the researchers in the two surveys had indicated was needed in order to motivate them to self-archive. And soon afterward, some of the world's biggest research institutions (including France's CNRS and the multinational CERN) led the way by adopting the policy: http://www.eprints.org/signup/fulllist.php

The recommended policy had two components. The first was to *require* institutional authors to self-archive all of their research article output. The second component was to encourage and support publication (where possible) in "open access journals." This will be the topic of my next column. Preview: http://dx.doi.org/10.1016/j.serrev.2004.09.013