

Skywritings: Scholarly and Leisurely

An occasional column by archivist
Stevan Harnad
Canada Research Chair in Cognitive Sciences
Université du Québec à Montréal
<http://www.haworthpress.com/library/>

The Green and Gold Roads to Maximizing Journal Article Access, Usage and Impact

In my first column, I described how researchers do their research and write up their results for publication in peer-reviewed journals for one reason, and one reason only: to make their findings accessible to as many potential users as possible. For it is their articles' usage and impact that pay their salaries and fund their research.

I also described (without yet assigning it a [color](#)), the “green” road to maximizing research access, in which authors deposit a supplementary “Open Access” (OA) copy of their article online in their own institutional repository for any would-be user worldwide whose institution cannot afford to subscribe to the journal in which that particular article was published.

This is called the green road to Open Access because 7716/8460 or [over 90%](#) of the journals registered to date (including all 254 published by [Haworth Press](#)) have already given this “[self-archiving](#)” their official “green light” for the sake of the benefits that [maximizing research usage and impact](#) provides not only for research and researchers, but for their publishers too, in maximizing their journal impact factors, visibility, and the usage of their articles:

“[W]e asked the American Physical Society (APS) and the Institute of Physics Publishing Ltd (IOPP) what their experiences have been over the 14 years that arXiv [for self-archiving] has been in existence. How many subscriptions have been lost as a result of arXiv? Both societies said they could not identify any losses of subscriptions for this reason and that they do not view arXiv as a threat to their business (rather the opposite -- in fact, the APS helped establish an arXiv mirror site at the Brookhaven National Laboratory).”
(JISC international author survey, [Swan & Brown 2005](#))

There is a second road to Open Access too, one that has not yet been fully tested, and hence still holds some uncertainties and risks for publishers: the “golden” road of Open Access (OA) Journal Publishing. So far only [1634 journal](#) are gold, and these consist of two kinds:

(G1) Some of the OA journals have a print edition and continue to sell it in the traditional way, through institutional subscriptions; but, in addition, they also make their (full-text) contents accessible online, for free for all, worldwide.

(G2) Other OA journals have instead adopted a [new economic model](#): They have abandoned producing a print edition, and rather than charging the user-institution per journal for online access, they charge the author-institution per article for publication.

[No one yet knows](#) how viable the two forms of OA journal publication will prove in the long run. Will free access online eventually eliminate the subscriber base for the print edition, and force G1 journals to convert to the G2 publication-charge model? Will the G2 publication-charge model be enough to make ends meet? How will it fare in competition with the conventional subscription model?

Some publishers (such as Springer “[Open Choice](#)”) have hedged their bets with a hybrid model: Springer authors can elect to publish without charge, in the traditional way, or they can pay to make their articles gold (with Springer then making the online version free for all). G2 publication charges vary from about \$500 ([BioMed Central](#)) to \$1500 ([Public Library of Science](#)) to \$2500 (Springer) or more per article. The reason the charges vary so much is partly that this is still a minority niche market (among the total number of peer-reviewed journals published: [c. 24,000](#)) and no one yet knows what charges the market will bear, nor even what the true costs of pure gold publishing would be. Journals also vary a good deal in their submission load and rejection rates.

Right now, institutions still want the print edition and have a serials budget that is committed to subscriptions. But if and when there were ever a wholesale transition to golden journal publishing across the boards, both the costs and the institutional resources available to pay them would look very different. A rough estimate of the revenue per article (for the 24,000 journals published today) for the average journal is about \$2000 (chipped in from those institutions that subscribe to that particular journal). If institutions no longer paid to subscribe to journals, 100% of their serials subscription budgets would be unspent. On the assumption (*if and when* this hypothetical transition were ever to occur) of (i) no longer having the expense of producing the print edition, and perhaps even (ii) offloading digital access-provision onto the research institutions themselves, thereby eliminating those production and distribution costs, journal publication costs would shrink to those of providing peer-review, copy-editing and (perhaps) mark-up alone. As long as that reduced cost averaged less than the current average revenue of \$2000 per article, the institutional resources are already there in the present system to cover them. Institutions would simply pay for the publication of their own outgoing research, instead of paying for access to other institutions’ incoming research.

But this is all pure [speculation](#) now, because we are here – with only about 2000/24,000 (8%) of journals gold, with demand for print still intact, with most institutional resources still tied up in subscriptions, and with author-institutions still leery about paying to publish. And there is one more thing: We have forgotten about green! The motivation for an author to publish in a gold journal rather than a non-gold one is that it will maximize access and impact. But self-archiving one’s own article will have the same effect! Consider the authors of Springer articles: Springer’s [502 journals](#) are all green. The “Open Choice” author actually has *three* choices: (1) publish conventionally and settle for the limited usage and impact that that limited access entails, (2) pay \$2500 for Springer to make your article gold to maximize its usage and impact or (3) self-archive your supplementary draft in your own institutional archive and maximize its usage and impact that way!

Moreover, the benefits of institutional self-archiving trump merely publishing in a gold journal, because the institutional archive also enhances the visibility and impact

of the researcher's institution, it is a means of record-keeping for the institution's own assets, and it is a means of monitoring, evaluating and rewarding institutional research performance. So chances are that even articles published in golden journals will need to be self-archived in the author's institutional archive. An institutional policy of requiring researchers to self-archive all their journal article output – with which [81% of researchers worldwide](#) have now said they would comply *willingly*, and which has been recommended for adoption by the [UK Select Committee](#), the [US Congress](#) and the [Berlin Declaration](#) – looks as if it will soon be adopted by all the research funding councils in the UK ([RCUK](#)) and has already been adopted by the [CERN megalab](#) (improving on an earlier, [weaker policy](#) adopted by the Wellcome Trust, which allowed a 6-month delay, and a [still weaker policy](#) adopted by the National Institutes of Health, requesting instead of requiring, and allowing a 12-month delay).

So whereas the golden road of OA publishing may prove to be the road of the future for journal publishing, the road to maximizing journal article access, usage and impact right now is the green road of OA self-archiving.

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