Five myths about open access publishing

In today's academic world, publishing your research is as important as ever. Luckily, the Internet has made the dissemination of new research easier. A new publication posted online can be read by a worldwide audience, increasing its value for driving new research and scholarship. Along with the expanded use of the Internet as a medium for the publication of established journals, a large number of new journals are being launched each year. Many of these newer journals publish open access articles, meaning that the articles can be freely downloaded by anyone, without any subscription or article download fees. Open access has been hailed as an improvement to scholarly publication because it allows for greater visibility of published research, but there are several misconceptions about open access journals. A few of these myths are listed below, along with the truth about open access.

Myth #1: Open access journals are not peer reviewed

While it is possible to find journals on the Internet that do not use a peer review process, **the vast majority of open access journals operate a peer review process that is identical to that used by traditional journals**. The application of peer review is one of the selection criteria used by the Thomson Reuters Science Citation Index™ (and SCI Expanded™) when evaluating journals for indexing.[1] Thus, any open access journal that has received an impact factor uses a rigorous review process for submissions. The term "open access" only refers to the availability of published material.

Myth #2: Open access journals are of poorer quality than traditional subscription-based journals

Open access journals are sometimes thought to be a last resort for otherwise unpublishable material. However, **many open access journals have established themselves as leaders in their fields, receiving high impact factors** (IFs). For example, the 2012 *Journal Citation Reports*® from Thomson Reuters ranks *PLOS Biology* #1 in the subject area of biology (IF: 12.690), and *PLOS Pathogens* is ranked #2 in both parasitology and virology (IF: 8.136). *Nucleic Acids Research*, an Oxford University Press publication, chose to go to a completely open access model in 2005,[2] yet the journal has seen its IF remain high (2005 IF: 7.552; 2012 IF: 8.278). Over 100 open access journals published by BioMed Central have now received IFs, and several are among the top 10% of journals in their subject categories.[3] Certain journals, such as *PLOS ONE*, explicitly seek to publish any scientifically and ethically sound research, regardless of perceived novelty or broad appeal. Even with its broad scope, however, *PLOS ONE* is still cited frequently overall (2012 IF: 3.730). The IF is not the only way to assess a journal, but this commonly used metric still speaks to the success of many open access titles.

Myth #3: Open access articles are not copyrighted

Some researchers fear that publishing an open access article means that the material is not protected by any form of copyright, but this is not true. In fact, **open access frequently allows authors to retain the copyright to their material instead of handing the rights over to the journal**. In some cases, authors publishing in traditional journals may require permission to reuse their own figures or text when teaching a class! Open access material has no such restrictions.

Many open access journals make use of Creative Commons licenses, which allow for reuse of material provided that the original author is cited at all times. Such licenses ensure the maximum visibility for your work, with proper attribution.

Myth #4: Open access is just a passing fad

Some researchers may consider open access journals to be "trendy" but likely to fail in the face of traditional publishing. Recent data regarding open access, however, argue otherwise. More and more open access journals are launched each month; 98 journals were added to the Directory of Open Access Journals (www.doaj.org) in December 2012, bringing the total number covered by the directory to 8,602. Even established open access publications like *PLOS ONE* are showing **unprecedented recent growth**. *PLOS ONE* currently publishes over 70 articles per day, with a total of approximately 14,000 articles published in 2011, or 1 out of every 60 papers indexed on PubMed that year.[4] The success of *PLOS ONE* has caught the attention of some major players in the publishing world, who are now seeking to emulate its success. Among the new open access journals launched recently are *Scientific Reports* (published by Nature Publishing Group; www.nature.com/srep), *BMJ Open* (British Medical Journals group, bmjopen.bmj.com), *PeerJ* (peerj.com), and *eLife* (a joint venture of the Howard Hughes Medical Institute, the Max Planck Institute, and the Wellcome Trust; www.elifesciences.org).[5] Furthermore, mandates requiring that research be made freely available to the public have been issued by funding agencies such as the US National Institutes of Health and individual research institutions including Harvard University.[6] **The interest of major publishers, institutions, and funding bodies indicates that the new open access model is here to stay**.

Myth #5: Open access only helps readers, not authors

Even authors who recognize that open access journals are legitimate avenues for reporting research can harbor the misconception that open access is solely an altruistic endeavor. Certainly, open access is beneficial to readers because it provides a cost-free means of viewing published articles. Open access is also predicted to provide a greater return on expenditures for research.[7] However, **open access benefits authors as well**. A recent large-scale study analyzing over 27,000 published articles has revealed that open access articles receive more citations than articles for which subscriptions are required, even after controlling for possible confounding variables including the country of origin, journal IF, and area of study.[8] Thus, the increased visibility for a published article often leads to increased citation frequency, which benefits every researcher.

Open access is gaining ground in the realm of scholarly publication, but there are many misunderstandings about the meaning of open access. We hope that this paper has helped to separate the truth from some of the myths.

---

[1] http://thomsonreuters.com/products_services/science/free/essays/journal_selection_process/

[2] "Open access publication." *Nucleic Acids Res*. 31(21):6063. doi:10.1093/nar/gkg843 (2003)

[3] http://blogs.openaccesscentral.com/blogs/bmcblog/entry/more_than_one_hundred_biomed

[4] MacCallum CJ "Why *ONE* is more than 5." *PLoS Biol* 9(12): e1001235. doi:10.1371/journal.pbio.1001235 (2011)

[5] http://www.hhmi.org/news/elife20111107.html

[6] http://osc.hul.harvard.edu/hfaspolicy

[7] Houghton J and Sheehan P "The economic impact of enhanced access to research findings." http://www.cfses.com/documents/wp23.pdf (2006)

[8] Gargouri Y, *et al.* "Self-selected or mandated, open access increases citation impact for higher quality research." *PLoS ONE* 5(10): e13636. doi:10.1371/journal.pone.0013636 (2010)