Open Access From the Point of View of a Faculty Member

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What is Open Access?

By "open access" to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.

The Budapest Open Access Initiative

Two Routes to Open Access

The Budapest Open Access Initiative recommends two complementary strategies to move towards wide spread open access.

- Open Access Journals. Many researchers are beginning to develop new journals with policies that will ensure open access to their contents, along with new approaches to funding the operation of these journals.
- Self Archiving. Self archiving is the process of making preprints available on the world wide web through either a personal, institutional, or disciplinary web site.

Why You Should Self Archive

- Whether or not you're committed to open access as a cause, there are two reasons why you should begin self archiving your work.
- Self archiving increases the visibility of your research. More readers will become aware of your papers and have the opportunity to read them.
- Self archiving increases the citation impact of your research. Several studies have shown that papers that are available online are more likely to be cited than papers that are not available online.

Studies of Increased Impact

- Lawrence (2001) found that articles in computer science that were freely available online were on average cited 336% more often than other articles in the same journals and conference proceedings.
- Brody et al. (2004) found that about 15% of physics articles were freely available online and that these articles were 233% to 557% more often cited than articles that were not freely available online.
- Kurtz (2004) found that restrictive access policies cut the readership of journal articles by a factor of two.
- See also the OpCit project's bibliography of studies of the effect of open access on citation impact.

Elsevier's Policy

You can post your version of your article on your personal web page or the web site of your institution, provided that you include a link to the journal's home page or the article's DOI and include a complete citation for the article. This means that you can update your version (e.g. the Word or Tex form) to reflect changes made during the peer review and editing process.

Elsevier

Springer's Policy

An author may self-archive an author-created version of his/her article on his/her own website and his/her institution's repository, including his/her final version; however he/she may not use the publishers PDF version which is posted on www.springerlink.com. Furthermore, the author may only post his/her version provided acknowledgement is given to the original source of publication and a link is inserted to the published article on Springer's website. The link must be accompanied by the following text: The original publication is available at www.springerlink.com.

Springer Verlag

ROMEO and SHERPA

- How do you find out what a journal's self-archiving policy is?
- You should certainly look to the journal's web site for a definitive answer.
- The ROMEO and SHERPA databases can be very useful for screening out journals that aren't friendly to self-archiving.
- The SHERPA database is organized by publisher. It lists policies on self archiving for many publishers.
- The ROMEO database is organized by journal.
- At this point, 69% of the 8603 journals in the ROMEO database are "green", allowing posting of both preprints (pre refereeing) and postprints (post refereeing.) Another 23% of the journals are "pale green", allowing posting of preprints.

Open Access to Research Codes

- The issue of open access to research codes is related to the issue of open access to journal articles.
- If you make the software that you've developed available to others, then it will be easier for them to replicate your results.
- If you make this software available under an open source license, then others may be able to improve your software and extend the research.
- Although I don't have formal studies to back this up, my own experience is that making software available helps to increase the impact of a research paper.

Digital Object Identifiers

- DOI's were developed by The International DOI Foundation to uniquely identify objects of intellectual property such as published papers.
- The DOI system allows publishers to assign permanent and unique numbers to individual papers.
- You can refer to a paper using a link such as http://dx.doi.org/10.1016/S0098-3004(01)00009-7
- The resolver at doi.org will then redirect the web browser to the published paper.
- The main advantage of DOI's is that although a publisher might change their web site and break a direct link to a published paper, the DOI link should work "forever".

An Example

The following example is taken from my personal web page.

A MATLAB Implementation of the Minimum Relative Entropy Method for Linear Inverse Problems (.ps), or (.pdf) with Roseanna Neupauer . The Software is also available. This paper was published as Roseanna M. Neupauer and Brian Borchers. A MATLAB implementation of the minimum relative entropy method for linear inverse problems. Computers & Geosciences 27:757-762, 2001.

Finding Self Archived Papers

- Unfortunately, it isn't possible to find a published paper through databases like ISI's Web of Science and follow links to the self archived version of the paper.
- Google Scholar has become the premier way to find self archived papers.
- I've also found Citeseer to be very useful for searching the computer science and optimization literature.
- There's an obvious need for better ways to search for self archived papers. The Open Archives Initiative may help.

Disciplinary Repositories

- The physics arXiv at Los Alamos National Labs, and now at Cornell University was the first major disciplinary archive.
- Many disciplines have since developed their own preprint archives.
- Disciplinary archives are very popular with their users, because they make it easy to search the research literature within that discipline.
- Note that leaving preprints up on a disciplinary archive puts you in violation of both Elsevier's and Springer's policies.
- One option is to put your preprint up on a disciplinary archive and then remove it from the archive when you transfer copyright to the publisher. Some archives don't allow this though.

Institutional Repositories

- Personal web sites tend to move around a lot, making it harder for search engines to keep up with what's available. An institutional archive provides a permanent solution.
- There are economies of scale associated with an institutional e-print archive that has thousands of papers. This is easier to manage than a hundred personal web sites with a dozen papers each.
- An institutional archive can be more easily indexed. The Open Archives Initiative has defined a standard for metadata describing e-prints that can be stored in an institutional archive along with the actual papers.
- Open source software for OAI compliant e-print archives is available from www.eprints.org.

Useful Web Resources

- The Budapest Open Access Initiative
  http://www.soros.org/openaccess/
- The Open Access Webliography
  http://www.escholarlypub.com/cwb/oaw.htm
- ROMEO database of journal policies
  http://romeo.eprints.org/
- The Open Archives Initiative
  http://www.openarchives.org/
- Eprints software for OAI archives
  http://www.eprints.org/