

## The flavors of open access

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### **Abstract:**

**Purpose** – The purpose of this paper is to present various aspects of open access that are being discussed and debated in recent years.

**Design/methodology/approach** – The paper briefly reviews the flavors such as open access definitions, open access initiatives, platforms for open access, and players in the open access movement.

**Findings** – The paper finds that, while the debates on open access continue, there is no doubt that librarians can play an important role to help achieve faster and wider dissemination of research discoveries and new knowledge of which they have been disseminators and keepers for centuries.

**Originality/value** – The article may help readers further their understanding of the complexity of open access and raise awareness on some of the key points.

**Keywords:** Financing, Communications, Educational research, Publishing

**Paper type:** Viewpoint

### **Article:**

Debates and discussions of open access (OA) have received increasing attention in the academic, scholarly research, and publishing communities in the United States and around the globe. Though the concept of open access itself is still evolving, there are many aspects of the discussions. This paper briefly reviews some of these centered around open access that may help further understanding the complexity of the open access concept.

### **Open access definitions**

There are numerous definitions and interpretations of open access. The 2002 Budapest Open Access Initiative's definition on open access is quite comprehensive:

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 (Budapest Open Access Initiative, 2002).

Another definition of open access from the Association of Research Libraries (ARL) in the United States refers to “any dissemination models created with no expectation of direct monetary return and which makes works available online at no cost to the readers” (ARL, 2007). There are other similar definitions. Two examples are the Bethesda Statement on Open Access Publishing (2003) and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003). In essence, most open access proponents agreed that scholarly literature should be freely available online (Suber, 2003). To make it more inclusive, Lynch (2006, p. 5) defines open access as “an increased elimination of barriers to the use of the scholarly literature by anyone interested in making such use”.

### **Open access initiatives**

Since the 2002 Budapest Open Access Initiative, there have been several major public initiatives supporting open access. These initiatives are: Bethesda Statement on Open Access Publishing in June 2003, Berlin Declaration on Open Access to Knowledge in the Science and Humanities in October 2003, ACRL Principles and Strategies for the Reform of Scholarly Communication in August 2003, UN World Summit on the Information Society Declaration of Principles and Plan of Action in December 2003, OECD Declaration on Access to Research Data from Public Funding in January 2004, IFLA Statement on Open Access to Scholarly Literature and Research Documentation in February 2004, and Wellcome Trust Position Statement on Open Access, updated in September 2005. These initiatives have demonstrated that the open access movement has continued gaining momentum from library and information associations, research funding agencies, scholarly societies, and institutions of higher education. Because open access primarily focuses on research journals, Lynch (2006, p. 5) concludes that “open access to the research journal literature is inevitable, and that open access has compelling advantage”.

### **Paths to open access**

The Budapest Open Access Initiative recommends the two strategies of achieving open access: through self-archiving and open access journals. Self-archiving allows authors to deposit their refereed journal articles in open electronic archives that can be located and used by the public. Open access journals includes launching a new generation of refereed journals committed to open access, and helping existing journals that elect to make the transition to open access (Budapest Open Access Initiative, 2002).

One path to self-archiving is through institutional repositories hosted by university and research institutions. Authors post their final versions of the peer-reviewed journal articles to their institutional repositories to allow for public access. E-Scholarship from the University of California is one such example. Using the e-Scholarship Repository, a free and open-access infrastructure, scholars and researchers from the University of California system are able to disseminate their research findings, including pre-publication materials, journals and peer-reviewed series, post-prints, and seminar papers. These materials are freely available to the public online (E-Scholarship, 2007).

At other universities, repositories are often hosted by libraries or by campus IT units. This type of deposit of journal literature in repositories has, so far, received the strongest support (European Commission, 2006, p. 6). In the United States, more than a half of university libraries within the Association of Research Libraries (ARL) host these types of repositories (Lynch, 2005).

In addition to institutional repositories, a discipline-based repository, such as arXiv, an e-print service with open access, also facilitates research in the fields of physics, mathematics, non-linear science, computer science, and quantitative biology by allowing periodic postings of researchers' journal articles. ArXiv is owned, operated and funded by Cornell University and is also partially funded by the National Science Foundation (ArXiv, 2007).

Author self-archiving is another path to open access. Authors can post their journal articles on their personal web sites, after they negotiate with journal publishers on terms that allow them to do so. Their journal articles can be accessed by the public. Harnad (2006) calls now the time to mandate the self-archiving of all journal articles.

In the case of either institutional repositories or self-archiving, authors and funding agencies have to take a time embargo into consideration. The period of time embargo can be six months, 12 months, 24 months, or an unspecified embargo period. The US Federal Research Public Access Act of 2006 (FPRAA Bill) proposes a delay of up to six months in providing open access to journal articles on the Internet. From researchers' perspectives, immediate access to journal articles help disseminate new findings quickly. However, publishers take an opposite stand. They argue for a longer period of embargo to allow for their cost recovery (European Commission, 2006, p. 7).

### **The players of open access**

The pace of implementing open access varies from one country to another. Some scholars see its potential and quickly become advocates. For instance, Richard J. Roberts, Nobel Prize-winner, states that "open access is the only model of the future and the debate should be how we can get there as quickly as possible" (European Commission, p. 6). There are many players in the open access movement. Some are advocates, some are spectators, and others take quite opposite stands.

#### ***Advocates***

European funding agencies have taken a lead toward open access literature. For example, the Wellcome Trust recently amended its grant condition "that electronic copies of any research papers that have been accepted for publication in a peer-reviewed journal, and are supported in whole or in part by Wellcome Trust funding, must be deposited into PubMed Central (PMC)". Further, it requires that these papers be made freely available via web-based repositories as soon as possible, and in any event within six months of the journal publishers' official date of final publication. This requirement from Wellcome Trust applies to all grants, regardless of award date (Wellcome Trust, 2007). In Germany, the Deutsche Forschungsgemeinschaft (2007) (DFG – German Research Foundation), a central public funding organization responsible for promoting research in Germany, has established a policy on free access to research results that it funded (European Commission, 2006, p. 6). Furthermore, European particle physics funding agencies

held its first meeting on November 3, 2006, at the European Organization for Nuclear Research, the world's largest particle physics center (CERN, 2006), to establish a consortium for Open Access publishing in particle physics, namely, Sponsoring Consortium for Open Access Publishing in Particle Physics. This is the first time an entire scientific field is exploring the conversion of its reader-paid journals into an author-paid Open Access format.

In the United States, the National Institute of Health (NIH) (2007) introduced a voluntary policy in January 2005, requesting that researchers "provide electronic copies of all final versions, peer-reviewed manuscripts, upon acceptance for publication, if the research was supported in whole or in part by NIH funding" (NIH Public Access Fact Sheet). Another example in the USA is the Federal Research Public Access Act of 2006 (FRPAA), introduced in May 2006 by John Cornyn (R-TX) and Joe Lieberman (Independent-CT). It would require that 11 USA government agencies (the Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, Transportation, Environmental Protection Agency, National Aeronautics and Space Administration, and the National Science Foundation) with annual extramural research expenditures of over \$100 million make manuscripts of journal articles stemming from research funded by that agency publicly available via the internet. The bill continues receiving support from university and research communities. More than 130 higher education leaders signed to support this bill.

### ***Critics (if not foes)***

While the open access movement for research literature has presented many benefits to researchers, scholars, and to the public, its complex nature should not be overlooked. To many for-profit publishers, subscription fees represent major revenues to cover their publication costs. Open access will, to some extent, eliminate such income revenues which is not acceptable by for-profit publishers. They are trying to counter the benefits of open access and present their side. In a recent letter from the Professional/Scholarly Publishing (PSP), Division of the Association of American Publishers, the publishing group expressed its legitimate concerns that government mandated open access could have unintended consequences for the scientific community. Further, the group believes that government mandated open access could put essential aspects of the system at risk and could undermine the quality, sustainability or independence of science (PSP Response, 2007). Nonetheless, other publishers, for instance, Oxford University Press, have published some journals open access, with a small author fees to sustain the model. In that model, the publishing costs are paid by authors, instead of readers. Proponents of open access appear to favor that universities redirect funds from subscriptions to author fees to support open access journals (S. Harnad, 2006). It is still uncertain whether or not author fees paid by the grant funding agencies, universities, or libraries, will be able to cover all publishing costs. More questions need to be answered on this model. J. Harnad (2007) warned that the notion of regarding open access as cost-cutting and results in lower subscription rates for publishers is a fallacy.

### ***Observers (or slow movers?)***

Obvious benefits for authors in the open access movement are that they are able to more quickly and widely disseminate their research and have increased citations and readership through open access (Gedye, 2006). However, authors' knowledge and perception of open access varies. Because of that, some of them are not ready to embrace this movement. They are not quite

convinced by this model. In 2004, Schroter and Tite sent an online survey to 1113 authors who had submitted articles to British Medical Journal, Archives of Disease in Childhood, and Journal of Medical Genetics. The survey assessed the authors' familiarity with and perceptions of open access and author-pays publishing. The findings indicate that, though there is greater awareness than before, many authors did not have much knowledge of the open access publishing model. Many authors (66 percent) still considered journal reputation and perceived quality as being more important factors in their decision to submit articles to a journal than whether it has an open access policy (Schroter and Tite, 2006). Many authors are confused with open access platforms such as self-archiving or institutional repositories which are not a substitute for an established peer review process. It may take a longer time for authors to fully realize the benefits from the open access movement.

While the debates on open access continue, at the author's university, librarians are preparing for an educational campaign in 2007 that informs teaching faculty, researchers, and scholars of the benefits and issues of the open access movement. There is no doubt that librarians can play an important role to help achieve faster and wider dissemination of research discoveries and new knowledge of which they have been disseminators and keepers for centuries.

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