

## Open Access Publishing: Opening the Access versus Accessing the Open- A Multidimensional Perspective

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### Abstract

Open access is a publishing model which allows free unrestricted access to published articles in scholarly journals. This editorial aims to introduce the model in terms of a multidimensional perspective, its perceived benefits and probable harms, right from history of development of the model to its present state, with implications for the future of the Journal. This perspective is approached bidirectionally, into the past to note the milestones of development, and into the future to cater to the needs of the stakeholders.

**Keywords:** Open access; Scholarly publishing; Editorial; Journal policies

### Introduction

The primary goal of research is to identify, improve and expand knowledge and thus publication is a form of dissemination of scientific information which is regarded as an accepted and recognized form of intellectual contribution in the professional community [1]. In the present 'publish or perish' era, authors and researchers are under a huge pressure to improve research productivity which paves way for changes in publishing model over the years [2]. In line with the definition, purpose and dimensions of research [3], this editorial aims to introduce the model in terms of a multidimensional perspective, its perceived benefits and probable harms, right from history of development of the model to its present state, with implications for the future of the Journal.

*'The most important element that restricts researchers is access to information.'*

-Subbiah Arunachalam, India, 2003 [4].

### Opening the Access- From Past to the Present

#### Types of open access

Evolution of present from the past witnessed two main types of open access namely the Gold OA and Green OA. Gold OA is again subdivided into direct and delayed subtypes [5]. A detailed description of the types is provided by Laakso et al. [5].

**Gold open access:** is a form of OA where the document is made available by the publisher to whom the document has been submitted. Gold OA means that the content of the actual journal publishing the article is, either totally or to some extent, freely accessible to the public. Direct sub-type of Gold type OA is the most basic type of OA and it involves distribution of articles immediately upon publication for-free or at no-cost to the reader. Delayed OA is another sub-type of Gold OA where the free availability of published articles is made available after a preset time period usually termed as the 'embargo'.

**Green open access:** means self-archiving of the author's work; be it a manuscript, a pre-print version of a manuscript accepted to be published in a scientific journal, or the actual published paper itself. Self-archiving by the author can be done by uploading the paper to the author's personal homepage or to the author's institutional repository or in subject-based repositories.

#### Milestones of opening access

(Major portion of the following content was adapted from [5,6] under open access policy, unless otherwise cited):

**1992:** The International Network for the Availability of Scientific Publications (INASP) was established by the International Council for Science in 1992 to provide support for networking between information providers and users, particularly to bridge the information divide between the developed and developing world [7].

The term Open Access was coined by the Budapest Open Access Initiative (BOAI), in 1990s, which originated within the framework of an event of the Open Society Institute (OSI) [8]. The directory of open access journals (DOAJ) was started in the year and it included journals. Now DOAJ has 7893 journals, with 167 journals added in May 2012 alone [9].

**1998:** The OA movement gained further momentum in 1998 with the founding of the Scholarly Publishing and Academic Resources Coalition (SPARC), a library-backed advocacy group that publishes alternative, lower-priced journals in selected subject areas [6].

**1999:** In May 1999, the Director of the US National Institutes of Health (NIH), Harold Vermus, proposed a project, the then dubbed "E-biomed" (now called "PubMed Central") [10].

**2000:** Another major development was the creation of BioMed Central (BMC), an open access commercial publisher begun by Vitek Tracz, former chair of the Current Science Group. After selling off a number of publishing businesses to Elsevier, Tracz founded BMC, based on the "author-pays" model. Most of BMC's journals are free online and supported by author fees (approximately \$600 to \$1,800 per article) and institutional memberships. For those affiliated with organizations that join, publication charges are reduced. Today, BMC is a major player in the movement, having over 460 institutional members and publishing more than 110 OA journals [6].

**2002:** Health InterNetwork Access to Research Initiative (HINARI) was launched in January 2002 and initially allowed not-for-profit institutions in countries with a gross national product (GNP) per capita of less than US\$1000 (£556; €825) per year (as calculated in the World

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Bank's report in 2001) to receive free online access to more than 1500 journal titles [11].

**2003:** NHS announces membership deal with BioMed Central which was immediately followed by Joint Information Systems Committee (a committee of UK further and higher education funding bodies) buying institutional memberships of BioMed Central for all 180 universities in the UK. The year also witnessed the release of most acclaimed Bethesda Statement and Berlin Declaration on Open Access Publishing, with suggestions as to what institutions, funding agencies, libraries, publishers, and scientists could do to bring it about. Public Library of Science launches its first open access journal, PLoS Biology.

**2005:** 27% of all the articles in Pubmed were accessible as OA articles. More than 70% of the OA articles were provided through journal websites. Mid-rank commercial publishers often provided OA articles in OA journals, while society publishers tended to provide OA articles in the context of a traditional subscription model. The rate of OA articles available from the websites of individual authors or in institutional repositories was quite low [12].

**2007:** According to the European commission document, there are some 2000 scientific journal publishers globally, producing about 1.4 million articles a year. Of these publishers, just fewer than 800 are in the EU, accounting for 49% of the total journal output. Currently, 10% of all articles are published in open access journals [13]. Mark Patterson, director of publishing at the open access Public Library of Science, said, "The AAP's [American Association of Publishers'] action is an indication of how strong the open access movement has become. There has been huge progress towards open access over the past year in particular", he said, and he predicted that "comprehensive open access is now inevitable" [14].

**2010:** The OA journals publishing group Scholar science journals were started which published many journals including our journal, The JSMDs.

## Accessing the Open- From the Present to the Future

Now we take a look at the OA publishing policy from a multi-dimensional perspective of publishers, editors, reviewers, authors, institutions, librarians and readers, and so on.

### Publishers

The main decision-making stakeholders in scholarly publishing towards choosing publishing models are the publishers. For publishers, OA was more an imposed choice rather than self-selected policy. The initial reaction to OA movement witnessed publishers reacting dually, with most of them against it.

Commercial publishers' main arguments against OA involve economics, editorial quality and ethical concerns, and advocacy of the existing system [6]. In response to pressures from the OA movement, biomedical commercial and society publishers recently crafted a collaborative plan to provide more full-text access to literature for the general public. They joined with several patient advocacy groups (the American Cancer Society, the American Diabetes Association, and the American Heart Association) to make the content of hundreds of current journal articles freely available online through the groups' Internet sites. Interpretive text, furnished by experts from the associations, accompanies the links to full-text articles [6].

Like their commercial counterparts, most nonprofit publishers argue against OA, predicting that scientific societies will fold if their

journals are forced to adopt this publishing model. These groups favored delayed OA as a viable alternative.

### Editors

Editors are responsible for maintaining the quality, quantity and timing of submitted and reviewed articles for the Journal. They are professional and scientific experts in the related fields, and thus need to be aware of issues that arise due to online availability of full text content such as plagiarism and other forms of scientific misconduct. Although they are considered on par with publishers, their role is professional whilst the latter's role is technical and financial. Mostly, editors' work is honorary and hence there is a trend to favor open-access amongst the editors, to improve journals' ranking status in the professional domain [15].

### Authors (researchers)

For researchers, however, increased costs may impede their ability to access scientific research. The lower cost of electronic publication and dissemination in combination with increases in total or potential subscription costs has given rise to the recent debate about "open access"- moving from a publishing model where readers pay for access to one where authors pay for publication [16].

Some scientists deposited copies of their published articles in open access repositories, a process called self archiving. Because of their wider reach and increased visibility, open access articles were cited 50-300% more often than non-open access articles from the same journal and year. Hence self-archiving enabled a quick, easy, lawful, and beneficial method to enhance access to one's published paper thereby improving its readability and citation index [17].

Only 10% of authors had submitted to an author-pays journal. Compared with non-open access subscription-based journals, 35% agreed that open access author-pays journals have a greater capacity to publish more content making it easier to get published, 27% thought they had lower impact factors, 31% thought they had faster and more timely publications, and 46% agreed that people will think anyone can pay to get published. 55% thought they would not continue to submit to their respective journal if it became open access and charged, largely because of the reputation of the journals. Half said open access has 'no impact' or was 'low priority' in their submission decisions. Two-thirds said they would prefer to submit to a non-open access subscription-based journal than an open access author-pays journal. Over half thought they would have to make a contribution or pay the full cost of an author charge (56%) [18].

### Institutions

Academic and research institutions generally support the OA concept to increase availability and lower costs of access to scholarly literature. Institutions develop and maintain systems architectures in order to ensure that only authorized users have access. Institutions should highly value funding models that promote universal access to their research output. The time is now for broad-scale adoption of institutional OA funds [19].

The Association of American Medical Colleges and the Association of American Universities offered a qualified endorsement of the NIH proposal, which enabled archiving in institutional repositories. Though traditionally not exercised, research institutions, universities, and government grant agencies could assert their legal rights to their employees' works and prohibit their authors from transferring copyright to publishers [6].

## Librarians

Librarians act as a bridge between authors/readers and journals in an institutional setting. Some librarians question the economic viability of the author-pays model and wonder if OA or the NIH proposal will alleviate the journal pricing crisis. Many librarians recognize that even if the OA movement does not provide immediate budgetary relief, it may at least galvanize current players to seek alternatives and compromise solutions that could lead to improved information access [6]. One of the historical developments in library and information sciences is the evolution of Public library of science (PLOS) as an OA publisher, which greatly enhanced education [20] that later evolved further as a public policy [21].

## Readers

The reading population could be either professional (occupationally related to the published article) or non-professional (general public), where the latter is very minimal in number. Professional readership is a direct measure of 'visibility' and 'reach' of the scientific information. This readership is often indirectly indicated by the number of times a published article is found in another publication (journal and non-journal websites alike). Terminology such as citation count, citation index and impact factor involve related but yet different forms of manifestation in this context.

The probability that an article could be found online at a non-journal website correlated with the journal impact factor and the time since initial publication. Papers from higher impact journals and more recent articles were more likely to be located. On average, for the high impact journal articles published in 2003, over a third could be located at non-journal websites [16].

## About JSMDS:

JSMDS publishes articles on sports medicine and related fields written by authors from all parts of the world in a Gold type 'open-access', 'author-pays' publishing model. The success of Gold OA publishing is further enhanced by reduced 'time-to-publication' from time of acceptance of an article; rapid four-week expert peer-review; and, double-blinding of reviewers and authors to minimize bias. JSMDS aims thus to publish articles immediately upon acceptance following a rapid four-week double-blind peer-review to enable faster and wider dissemination of quality scientific information in an unbiased manner.

The unbiased review and publication of submitted manuscripts is ensured by both a globally well-represented (12 developed and 6 developing countries) editorial board (18 countries) and a double-blind peer-review. Also to enable equal opportunity amongst authors (between the haves and have not's), special considerations are given to provide discounted or waived publication fees to authors based upon the merit of their application request.

JSMDS also welcomes original articles and review commentaries on OA publishing model and ensuing perceptions and experiences from all stake-holders, ranging from professionals to general public. JSMDS also vows to work together with other Journals in this noble effort through a broader collaborative framework.

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