



OPEN ACCESS: PERCEPTIONS AND MISCONCEPTIONS

<http://www.hifa.org/news/open-access-perceptions-and-misconceptions>

Background paper for a HIFA thematic discussion sponsored by Elsevier and *The Lancet*. 22 July - 18 August 2019

The HIFA working group on Access to Health Research is delighted to announce our upcoming sponsored HIFA thematic discussion:

The discussion starts on 22 July and will last for 4 weeks. The main discussion will be on HIFA (English) and we shall also hold parallel discussions on CHIFA (child health and rights), HIFA-Portuguese, HIFA-French, HIFA-Spanish and HIFA-Zambia.

Here are some of the questions and myths we'll be exploring:

- What is open access? What is the difference between open access and free access? What are the different types of open access?
- Myth 1: Open access journals have a less rigorous approach to quality control and peer review than subscription journals
- Myth 2: Open access journals discriminate against authors who cannot afford article processing charges
- Myth 3: Open access will not make any difference to health policy and practice.

The key findings from our discussion will be collated and presented at the Asia Pacific Association of Medical Journal Editors Convention in Xi'an City, China, 3-4 September 2019.

Join HIFA today to take part! www.hifa.org/joinhifa

We are grateful to The Lancet and Elsevier for providing sponsorship for this thematic discussion. (Note: HIFA invites all organisations, and especially our 300+ official supporting organisations, to consider sponsorship of a future thematic discussion of your choice - sponsorship of discussions enables HIFA to thrive and brings collective focus to priority global health issues. Contact the HIFA Coordinator for details of sponsorship opportunities.)

Background Paper: 'Perceptions and Misconceptions around Open Access Publishing'

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<http://www.hifa.org/working-groups/access-health-research>

Introduction

Open Access (OA) publishing is arguably one of the most important determinants in ensuring equitable, ethical and sustainable dissemination of health research and thereby reduce suffering and save lives. A review of cross-disciplinary OA prevalence conducted in 2018 estimated that 28% of all journal articles are OA (1). Across disciplines, biomedical research and mathematics have the highest proportion of OA output (over 50%), followed by clinical medicine (48%) and health (42%) (1). Globally, Brazil, the Netherlands and the UK produce the highest proportion

of Gold OA for each country's total research output, contributing 32.8%, 25.2% and 42.1%, respectively (2).

The proportion of OA literature is continuing to increase through support from universities, governments, funding bodies and publishing journals. Currently, there are over 12,500 open access journals registered in the Directory of Open Access Journals (DOAJ) and over 4,500 repositories in the Registry of Open Access Repositories (ROAR) database (3,4). Despite the success of the OA movement, findings from the literature and previous HIFA thematic discussions have highlighted variable perceptions, and several misconceptions regarding OA which may be limiting the evolution of OA. These relate broadly to: definitions and types of OA, self-archiving, equity, credibility, sustainability, cost and social and academic impact

In order to encourage further uptake of OA publishing models, especially in LMICs, it is essential to bring clarity to these issues.

Definitions and types of OA

In the early 2000s three meetings in Bethesda, Berlin and Budapest set the scene for OA. In 2002 the Budapest Open Access Initiative (BOAI) (5) defined comprehensively the term 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'.

This definition is not used by all publishing bodies and notably does not mention Creative Commons Licensing which (6), although the organisation had been founded in 2001 had not yet become a widely used tool. HIFA members have commented on the need for publishers to acknowledge the difference between free-access from open access - which is dependent on the use of licensing.

Wikipedia colour codes (7)

Gold OA (or journal based OA) Full open access publishing is performed by gold OA publishers or via individual fully open journals. The publisher makes all articles and related content open immediately on the journal's website. In such publications, articles are licensed for sharing and reuse via creative commons licenses or similar.

Green OA (or repository based OA). is when after peer review by a journal, authors an author posts the final author accepted manuscript ("AAM" or "postprint" without copyediting or journal branding usually to an institutional repository or to a central open access repository such as PubMed Central..

Hybrid OA. Hybrid open access journals contain a mixture of open access articles and closed access articles. A publisher following this model is partially funded by subscriptions, and only provide open access for those individual articles for which the authors (or research sponsor) pay a publication fee.

Bronze OA. This term refers either to articles from entire journals that publish articles initially as subscription-only, then release them freely after an embargo period (varying from months to years), or alternatively may refer to individual articles or collections of articles which have been made freely available ad hoc. In either case these articles do not have a creative commons licence

Piwowar's (1) work identified that the majority of OA publishing is neither gold nor green, rather it is bronze. Piwowar define this term as literature which is free to read on the publisher page (on OA published sites), but is not accompanied by an explicit open license (1) . Bronze OA is confusing and problematic because the lack of a CC license means that access to it can be revoked at any time.

- *What does Bronze OA mean to the HIFA community?*
- *Should this bronze literature continue to be labelled open access (or clearly noted as just “free”) if no reuse license is made explicit?*

Note: Nottingham colour coding : The original colour code was established by the JISC-funded RoMEO project in 2003 to clarify different publisher rights, permissions, and restrictions. This code makes the distinction between publishing colour and archiving colour. See below.

Publishing colour

Gold - open access publishing

Archiving colours

Green - can archive pre-print and post-print

Blue - can archive post-print (ie final draft post-refereeing)

Yellow - can archive pre -print (ie pre-refereeing)

White - archiving not formally supported

Green and Gold refer to different types of business model, however there is much overlap between these models. As noted in the Nottingham colour guide, ‘open access repositories are a supplementary form of communication that exists alongside the traditional and open access publishing models. Therefore the green, blue, yellow and white colour categories are independent of the business model that a particular journal may follow. Material published in an open access journal can be freely re-used by its author and archived, so all “gold” publishers are actually “green” for the purposes of archiving!’

Free vs Open

Although many would argue that OA as defined by BOAI should be the end goal, HIFA members have discussed the relative benefits of free (but not open) access versus true open-access versus restricted-access. Piwowar et al. (1) state that most green OA articles do not meet the BOAI definition as they are free-access only and do not extend re-use rights. (Note: This last sentence needs clarification, as it suggests most articles described as green OA in repositories are in fact not OA at all in terms of re-use rights?)

How is free to all access vs open access perceived by the HIFA community ?

Perceptions about self-archiving

According to 2019 statistics for the 2561 publishers on the RoMEO database, 81% allow some form of self-archive mechanism (8). However, one commonly described myth is that the only way to publish OA is to publish in an OA journal, assuming that Gold OA is the only option. This is perhaps due to a lack of awareness, or understanding, about OA options. The right to self-

archive has been identified as an area of confusion for researchers. An analysis of OA trends in Global Health research found that 60.8% of researchers do not self archive even when it is within author rights (9). Harnad et al. (10) highlighted three reasons as to why the number of self-archived articles is significantly fewer than expected. Namely a) researchers are unaware or uncertain about the permission to publish b) researchers are concerned that using repositories may negatively impact publication acceptability c) self-archiving is seen as hard work (10). Through open access policies, permission to self-archive may be retained by the authors even when all relevant rights have been handed to publishers. The Harvard Model Open Access Policy (11) was the precursor of policies which have been widely adopted by many universities and which allow researchers to retain green OA rights. Specific publisher rights are also searchable in the RoMEO/ SHERPA database (8).

Equity in OA

Copyright

Copyright in OA has been the focus of many discussions, with several university and academic sites noting a misconception that publishing OA means an article is not copyrighted (8). In OA, the copyright may be retained by the author or by the publisher depending on the journal, just as in restricted access publishing.

Awareness and accessibility

There is a danger of correlating OA with equitable research. In 2015, HIFA members noted that: 'open access means to people in the LMICs access to information produced by people in the developed north.' (12). In LMICs, initiatives like HINARI improve free, but not open, access to academic resources from the developed world, however, the availability of local, relevant information remains a barrier to equity in OA. In one HIFA discussion it was noted that: 'For those in academic settings there are guidelines for the journals in which they are required to publish in. An academic is required to publish a certain fraction of his/her publications in foreign/international journals. Hence you may find content highly relevant to a particular country published in a journal that is not accessible to readership from that country.' (13) This perhaps suggests that the international journals chosen are restricted access or that repositories are not being used. The challenge facing many LMICs is often not the lack of research output, rather poor research dissemination (14). Several studies in Africa have recognised the low prevalence of institutional repositories as a significant barrier to scholarly communication and have called for further action to increase the development of IRs (15). In the recent ROAR statistics an analysis of repositories by continent identified that Europe contributes 46%, Asia 20%, North America 17.4%, South America 8.9%, with 4.5% from Africa (3).

The platform African Journals Online (AJOL) has sought to address this problem by increasing the visibility and usability of African research. As of July 2019, the AJOL online library hosts over 500 peer-reviewed, African published Journals (251 of which are OA) from 32 different countries (16). Other notable large scale open access initiatives from outside the developed world are Scielo and related initiatives in Latin America (17).

Although awareness of the existence of OA is widespread, the understanding of how and where to find resources is a challenge to be addressed. A study conducted in Ghana identified that only 40% of the research scientists sampled were aware of DOAJ and 56% highlighted that a low

awareness of OA journals was a barrier for them (18). Additionally, poor infrastructure, such as internet connectivity and electrical supply, prove to be significant challenges in allowing Open Access to be truly accessible (18).

Credibility of OA Journals

The issue of OA journal credibility and quality has been raised in HIFA discussions, with some believing that ‘The review and editorial process gives an impression of being less stringent’. However, open access merely refers to a form of distribution, not editorial model. The publishing model (open-access versus restricted-access) is not an indicator of quality, but some people perceive that open-access publishing is in some way inferior. Such perceptions are driven partly by the existence of predatory journals, which abuse the author pays model common in OA publishing (19). As Peter Suber states “Scam OA journals and publishers do exist, and they give OA a bad name. The discussion of them is necessary and justified, but it’s out of proportion to their actual numbers, which also tends to give OA a bad name. It’s as if the widespread discussion of doping in sports tended to inflate most estimates of how many athletes are guilty.” (20). Increasing awareness of parity of quality of peer-reviewed OA journals through DOAJ is therefore a priority. It should be noted that in order to be included in the DOAJ, journals must employ peer review or quality control processes.

The issue of credibility in OA remains a global challenge but is mostly fuelled by misinformation. It was reported by the Study of Open Access Publishing (SOAP) survey (a survey analysing mix of low, middle and high income countries) and other studies specifically in LMICs, that one of the main reasons for not publishing in OA journals was due to the perceived journal quality (21, 22, 23). OA journals also tend to be newer and not listed as “acceptable place to publish”. Hence more relevant ways of assessing and encouraging indeed the development of OA journals is needed, that better reflect local needs.

During a HIFA discussion it was also noted that ‘ In the 'publish or perish' world of academic institutions in LMICs, we hear reports of discrimination against research published in open access journals’ (12). This discrimination may be fuelled by misconceptions discussed above, such as perceived low OA journal quality/ lack of peer-review in OA journals. There are many high quality OA journals available, which are made searchable through the DOAJ. As discussed above, the peer-review process is rigorous for most OA journals.

Sustainability of OA

A restricted-access journal may be perceived to be more sustainable if the publisher relies on subscription revenue to fund it. A move to OA requires a shift in business model to keep it sustainable. HIFA members have discussed reservations about OA online models for journals in LMIC which derive most of their funding from paper copy sales stating that the pay –to –publish is unlikely to be successful, especially for small specialist journals (24) . However, in Latin America there are successful models of OA, which are based on national/consortial funding.

A study by Houghten et al. (25) demonstrated some of the economic benefits of OA , namely that OA is expected to allow for a greater return on expenditures for research. HIFA members noted that many African medical journals using an OA business model are succeeding and expanding their library (24).

Cost of OA

There is a perception that OA publishing (the “gold” route) is always an expensive route for researchers. This is perhaps due to a misconception that pay to publish is exclusively associated with OA (26). Singh et al. identified that 72% (n= 2509) Indian health researchers were not interested in the pay to publish route and that the main barrier to paying APCs was due to a lack of research grants (23). This is supported by other studies in Africa highlighting APCs a deterrent to publishing OA (22, 27).

Many fully OA journals do not charge APCs (DOAJ). One study has shown that only 27% of peer-reviewed OA journals (out of 14, 086 journals) have a confirmed publication fee (28). Many other journals offer substantial waivers to authors from specific countries or for researchers with financial constraints (e.g. PLOS <https://www.plos.org/fee-assistance>) Additionally, there are over 100 initiatives providing financial support for APCs. By contrast hybrid journals always charge an APC - and may do on top of other charges. For example, *PNAS* charges \$1640 per research article with a surcharge of \$1500 to make the article OA (29). A study by Theo Andrew highlighted that hybrid journals also charge more per article than OA journals. (30)

The ‘author-pays’ terminology may be misleading, as most APC funds are paid by funders, or universities. The SOAP survey identified that in OA pay-to-publish routes, the fees are paid usually paid by funders (59%) or by universities (24%) and by authors themselves only 12% of the time (14).

Social and academic impact

There is evidence to suggest that OA articles are associated with an increased citation count (1, 26). Wang et al. (31) demonstrated that OA articles receive more attention on social media and The Wellcome Trust reported that their OA funded articles were downloaded 89% more when compared with restricted-access content (21). Furthermore OA articles are more likely to be cited in wikipedia articles, thus extending their reach further.

Do HIFA members perceive OA to be associated with increased citation count and does this influence the decision to publish OA?

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Acknowledgement: We thank HIFA volunteer intern Catriona Grant for her invaluable help with this project. <http://www.hifa.org/support/members/catriona>