

Conférence inaugurale

The realities of Open Access: how common misbeliefs are blocking the transition to a new scientific publishing system

*Les Réalités de l'Accès Ouvert: Comment les préjugés empêchent
la transition vers un nouveau système d'édition scientifique*

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Résumé : Le libre accès s'est considérablement amplifié au cours de ces cinq dernières années. Il y a déjà 30% des publications en anglais dans les revues des Sciences, Techniques et Médecine (STM) qui sont en libre accès. Faire du libre accès un modèle de publication par défaut est possible. Cependant, ce modèle est entravé par un ensemble de fausses idées, telles que le niveau scientifique modeste, la hausse des prix, la difficulté de convertir les revues existantes en libre accès. Dans cet article, nous expliquerons la réalité et les raisons pour lesquelles de nombreux scientifiques et universitaires sont encore réticents à soutenir pleinement le libre accès, en particulier dans les pays du Sud. Nous allons montrer que beaucoup de ces idées dominantes sur le libre accès sont fausses et ne sont pas basées sur des faits. Nous montrerons également comment une meilleure information, un changement d'état d'esprit et de nouvelles politiques prises par les gouvernements et les organismes de financement peuvent rendre le libre accès une réalité pour les scientifiques du Sud dans les 5 prochaines années.

Mots-clés : Libre accès, barrières, impact, pays du Sud, transition.

Abstract : Open Access has grown enormously in the last 5 years and already 30% of all English language STM papers is published in open access. Making open access the default publishing method however

is hampered by a set of common misbeliefs especially the idea that open access is low quality science, is too expensive, it is too difficult to convert existing journals to open access, there are no good business models and others. This paper explains the realities of open access that defy many of the reasons why many scientists and universities are still reluctant to fully support open access, especially in the global south. We will show that many of these prevailing ideas on open access are false and are not based on facts. We will also show how better information, a change in mindset and new policies by governments and funding bodies can make open access a reality also for scientists from the global south in the next 5 years.

Keywords : Open Access, barriers, impact, global south, transition.

1. Introduction

DOAJ is an indexing service for open access journals that is widely recognized as the authoritative source for quality journals (Directory of Open Access Journals). Science Europe representing 27 research organizations in different European countries has recently announced a directive that all research funded by the European Union must be published in an open access journal where only articles in journals registered in DOAJ, SCOPUS OR Web of Science are eligible for funding (New Science Europe Principles).

The number of quality open access journals in 2016 is 9,159 (data DOAJ) and it can be seen that the numbers from the global south are still very low, especially from Africa and Asia (Fig.1). The reasons for this discrepancy is due to a large extent to prevailing and persisting misbeliefs surrounding open access in these parts of the world. In addition the main concepts of open access are not very well known by scientists and universities in the global south.

In the first place normal peer review is as an essential part of the publishing process in open access publishing as it is in toll access publishing (Wicherts 2016). In this respect there is no difference with conventional publishing. The biggest difference is that Open access publishing is a system where publications are freely accessible online without pay for the users. In addition open access requires clean copyright and clear licensing conditions. Many publishers seem to think that it will be sufficient to make a paper free to read in the internet and /or downloadable from the journal website. This form of open access is known as gratis open access and has little to do with the open access as defined by the BOAI (BOAI 2002). This is the definition that DOAJ uses

to index open access journals. This definition also entails that access should be immediate upon publication of the articles. This means that embargoes are not acceptable. A number of journals are using a system where authors can choose to publish their articles open access, leaving part of the journal articles continue to be subscription based. These hybrid journals are also not accepted for indexing by DOAJ. Although some publishers sell the hybrid system as a transition phase towards full open access, the reality is different. Hybrid journals generate more money because in addition to subscription fees, open access articles generate extra income.

Two forms of copyright ownership are seen in scientific publishing. Often the publishers demand for transfer of copyright in the form of a publishing agreement. In the other case the publisher leaves the copyright with the author but asks for non-exclusive publishing rights. Both can be accepted as open access if the articles are published using a open access licensing agreement. A special case is when the publisher leaves the copyright with the author but asks for exclusive publishing rights. Although the article will be published open access the author here only retains part of his copyright.

In addition to this lack of information there are some very persistent misbeliefs on open access especially among governments, universities and scientists in the global south, which provide a severe hurdle to the implementation of open access publishing in these parts of the world.

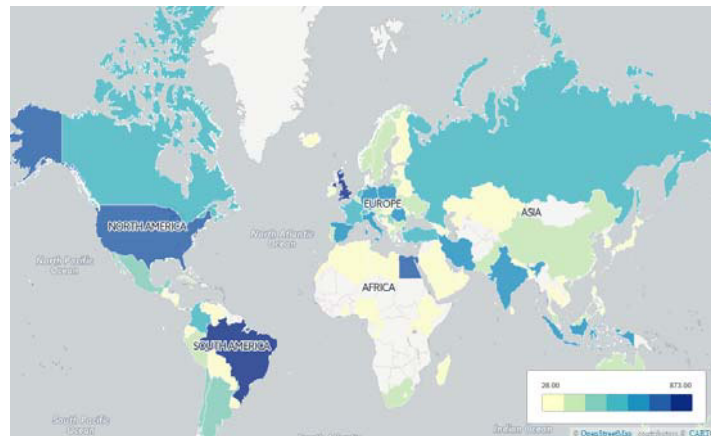


Fig1. Global Distribution of Open Access journals 2015.

Source https://scinoptica.carto.com/viz/b3fd1544-7bf5-11e6-a483-0ecd1babddde5/embed_map: Data DOAJ.

2. Common misbeliefs

2.1. Open access is always lower quality

In 2013 John Bohannon published an article in *Science* that seemed to show that open access journals commonly lack proper peer-review since a large number of selected open access journals published a bogus article (Bohannon, J. 2013). The study was heavily criticized since it did not make a comparison with conventional journals. The site retraction Watch provides ample evidence for bad quality publications in many well known and reputed subscription journals. Other factors also demonstrate the wrongness of this assumption. If we assume that Scopus is an index of quality journals, only 15-20000 journals on a total of 100000 are quality journals: 80% is lesser quality. Assuming further that DOAJ lists the quality of open access journals, 9000 on a total of 40000 are quality journals : about 80 % is of lesser quality. The numbers show that there is no big difference. Note that journals listed in DOAJ are as rigorously checked as journals in Scopus. All journals have peer-review and follow the guidelines for Good Publishing Practice (Olijhoek, T, Mitchell, D, Bjørnshauge, L (2015)

2.2. The impact factor determines the quality of journals and open access journals have low impact factor

In fact the focus on the impact factor has reached deplorable dimensions where researchers in for instance Russia and also in China receive payments for publishing their work in high impact Scopus listed journals. In reality the impact factor of a journal is not related to the quality of the journal or the quality of the individual articles in a journal. The impact factor is based on average citation scores and >75 % of articles feature citation scores well below the impact factor of the journal (Larivière, V. et al 2016). Therefore researchers have proposed to replace the impact factor with citation distributions. Even doing so the quality of scientific content of a journal can only be truthfully be assessed by measuring the article citation scores, or better still the relative citation scores of individual articles. This will correct for the average differences in citations between different fields of science (ref) as a complementary measure the social media impact is increasingly being used to assess the practical impact. Examples are the altmetric scores as calculated by altmetric.com and the scores generated by Impact Story. Another much lesser mentioned disadvantage of the JIF is that it is heavily biased towards English language journals, putting publications from countries in the global South at an immediate disadvantage.

2.3. Open access is too expensive

Adversaries of open access often argue that APC charging open access journals make open access too expensive. However 75% of open access journals do not charge APC and those that do often have waivers for those who cannot pay the fees (Crawford W (2016)). The estimated costs for publishing was \$ 8 Billion for an annual volume of 1,5 Million papers in 2008 (STMReport 2010) An estimate for the cost of an open access paper has been given as \$1350. If all of the scholarly publishing would convert at once to open access this would mean that costs would drop from \$8 Billion to \$2 Billion (Taylor, M(2012)). The average doubling time of scientific output is 23.7 years and the cost per article increases on the average with 2-3% per year (STM Report 2015). Although the current open access rates are still affordable for full open access journals, the cost for open access in hybrid journals rises continuously (Swan, A. (2016)). The greatest danger to open access is an uncontrollable rise in APC to balance the loss of subscription incomes with toll access publishers.

2.4. There are no good business models available for open access

In fact an extensive study on the transition to open access shows many successful models for open access (Solomon, D. et al (2016)). The study estimates that the number of converted journals from subscription to open access is 3000-4000. The authors state that 15 different flipping scenarios exist: 10 based on APC and 5 without APC. In their study they correct a large number of what they call "myths and misunderstandings". For example some stakeholders believe that the only economic viable way to flip a journal to Open Access is to levy APC's. Some believe that flipping a journal must result in lower revenue, lower citation impact or lower quality. The report shows all this to be false.

2.5. Publishing in open access will not be useful for career building

In fact publishing using open access will increase readership and number of citations, both important factors for career building. The problem lies in the fact that still many universities and institutions look at the number of publications in high impact journals, which are mostly subscription journals. The way forward here is when selection committees learn about the realities of open access and change their policy by judging scientists on what they publish and not on where or how much they publish. This policy is already in place in the Netherlands where the Scientific Research Organization has adopted this in 2016.

2.6. Open access publishing will not increase readership or citations of your work

A number of studies have claimed that there are no citation advantages using open access. Others say the opposite. A recent study (Mc Kiernan, E. et al (2016)) makes a strong case for more citations for open access papers. Readership also increases. I believe these data to be true. In addition I think that papers and also citations are more often factually read if the publications are open access. For citations of articles from subscription journals I am less sure that these are really read and used to the same extent.

3. Conclusions

The growth of open access is unstoppable. In countries of the North many governments and funding agencies have adopted policies that require publicly financed research to be published in open access journals.

In countries of the global south misinformation and misbeliefs are still major obstructions for the transition to open access. Education on the principles and realities of open access can remove these hurdles and open the way to a scholarly publishing system that does not disadvantage poor countries, other languages than English, non-western companies and societies as a whole in the global south.

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