Open access to scientific publications: the final step

by Ignasi Labastida*

In the first decade of this century the emergence of the open access movement has brought significant changes in the current dissemination of research results. Nowadays every researcher is aware that, one way or another, the results of their research must be accessible to all, at the insistence of those who fund such projects. Nevertheless, it is surprising to see the relatively small proportion of documents publicly available, when compared to the total number that are published. Perhaps the fact that doubts still remain as to what open access actually involves, together with a failure to monitor compliance with the requirements, means that the percentage fails to increase. The time has now come to take the final step if we wish to make a clear commitment to open access.

The beginnings of Open Access

At the end of 2001, the Open Society Initiative (OSI) held a meeting in Budapest in order to discuss the state of scientific communication. The conclusion reached at that meeting was that it was necessary to pursue a dissemination of research outputs without any barrier, whether technological, economic or legal. As a result, anyone would be able to access those results witout a paywall and they could be reproduced freely, so long as authorship is acknowledged and integrity of the work is respected. This is the aim of the Budapest Declaration, published in February 2002, which forms the basis of the open access movement [1].

To achieve the Budapest objective, two strategies were proposed, which became the two current types of open access. The first strategy is to self-archive any document that has been published in a peer-reviewed publication. In this strategy it is assumed that there are no legal impediments to researchers in doing so, either because they still hold the copyright to their work or because they are allowed to do so by the rights holders of the publications. Currently most journals allow some kind of self-archiving [2] but it is not so easy in certain disciplines that publish in other formats such as monographs. The second strategy that was proposed was the creation of a new generation of journals that follow the open access model, i.e. publications that can be accessed free of charge and that use copyright to facilitate the reuse of their content instead of banning it. Currently some noted journals follow this model and initiatives exist to explore open access models for monographs [3]. One of the main challenges posed by these new publications is finding a sustainable business model. Clearly, publishing has a cost and therefore new sources of income need to be sought if the contents are available free of charge. One of the most widespread income models is to ask for a fee for publishing.

The growth of the open access movement has been possible thanks to the creation of repositories. These are digital archives that host copies of

[1] Budapest Open Access Initiative (2002), http://www.budapestopenaccessinitiative.org/read

[2] RoMEO Statistics [Dec. 2015] http://www.sherpa.ac.uk/romeo/statistics.php

[3] Collins, E.; Milloy, C.; Stone, G.; Guide to open access monograph publishing for Arts, Humanities and Social Science Researchers, JISC (2015), http://oapen-uk.jiscebooks.org/files/2015/07/Guide-to-open-access-monograph-publishing-for-researchers-final.pdf

published or unpublished materials, making them available to the public free of charge. Repositories can be institutional, or disciplinary, depending on who is behind them providing support. It is also important to mention the harvesters, those repositories which serve to collect metadata from other repositories and organise them according to specific criteria such as geographical relevance or topic area. Such metadata harvesting is possible because repositories generally use standard protocol and metadata schema. However, the emergence of policies or mandates requiring researchers to self-archive has provided the final impetus.

Policies to promote open access

The difficulty involved in obtaining content for the first repositories led to the emergence of institutional policies in favour of open access. In Europe, in 2004, the rector of the *Universidade do Minho* [Braga, Portugal] decided to provide financial incentives to those departments which comply with a new policy: a copy of all published research results should be posted in the institutional repository [4] A few months earlier, Queensland University of Technology passed a similar mandate [5]. Since then, these early initiatives have been followed by hundreds of institutions around the world [6]. At the same time, research funding bodies, both public and private, have also adopted similar policies requiring grant beneficiaries to make research outputs publicly available. They not only call for self-archiving, they also provide funding for publishing in open access journals that charge for article processing.

The reaction of publishers to open access

With the emergence of such policies, there have been different responses

[4] Universidade do Minho Open Access Policy (2004), http://www.eprints.org/openaccess/po licysignupfullinfophp?inst =Universidade%20do%20 Minho

[5] Queensland University of Technology Self-archiving Policy (2003), http:// www.eprints.org/openaccess/policysignup/fullinfo.php?inst=Queensland%20 University%20of%20 Technology

[6] Research Organizations Open Access Repository Mandates and Policies, ROARMAP (2015), http://roarmap.eprints.org/ view/policymaker_type/ research=5Forg.html

amongst traditional journal publishers. On the one hand, some publishers have decided to start their own open access journals or even buy others that only publish according to this model, such as the absorption of Biomed Central by Springer. Another remarkable change has been the modification of the transfer of copyright documents: there are publishers no longer requiring an exclusive transfer of copyright, i.e. they do not insist on being the copyright holders, instead they acquire a license to publish. While this change may appear positive, in practice it is not. The licence is exclusive and it does not allow authors to exercise their rights freely, but rather to adhere to a series of restrictions. Both in this case and in that of transfering copyright, public access cannot be provided after a period of time has passed once the article has been published. These periods of time are known as embargoes and range from three months to sixty, though they generally last between twelve and twenty-four months. The problem with such embargoes is that they are not the same as those established in the mandates of research funders, which tend to be lower. Publishers have a solution: if a researcher is unable to adhere to the policy they can opt to provide their article as open access upon payment of a fee. This model is known as the hybrid model, since in such journals there are open access articles, offered free of charge which can be freely reused, while access to the remainder is restricted to subscribers or those who pay for one-time access.

The hybrid model appeared in response to the available funds to pay for open access publications. Traditional publishers didn't wish to miss the opportunity to obtain part of these funds. Thus, apart from subscriptions and one-off payments, they now have a new source of income which is by no means negligible. According to the Wellcome Trust, one of the most important funders of biomedical research, last year they paid nearly four million pounds to publish according to this hybrid model[7].

The hybrid model has been the subject of much criticism, mainly because it seems it has little effect on the price of subscriptions, leading various institutions to question whether the fees are in fact being charged twice [8]. Nevertheless, funding agencies continue to accept it as a legitimate part of spending on research projects.

The situation in Catalonia

One can examine the status of open access in Catalonia from the perspective of researchers and institutions. On one hand, researchers are affected by different policies. Most Catalan universities have institutional policies that require open access. The introduction of these policies is the result of the plan approved by the Interuniversity Council of Catalonia (CIC) in 2009 which proposed a set of actions towards open access.

In order to put these proposals into effect, universities have created repositories, many of which are harvested in Recercat, the first research repository created in 2005 and managed by CSUC, the Catalan Consortium of University Services. Recercat also hosts content from institutes and research centres.

Aside from institutional policies, Catalan researchers who receive funding from the Spanish governement or the European Commission through research projects must also comply with open access requirements. In December 2011, the Spanish Law 14/2011 came into force. The so-called 'Science

[7] Wellcome Trust, The Reckoning: An Analysis of Wellcome Trust Open Access Spend 2013-14, Wellcome Trust Blog (2015), http://blog.wellcome.ac.uk/2015/03/03/the-reckoning-an-analysis-of-wellcome-trust-open-access-spend-2013-14/

[8] LERU calls for fundamental change to the financial model behind journal publishing, LERU Press Release (2015), http://www.leru.org/files/general/2015_03_18_LERU_calls_for_fundamental_change_to_the_financial_model_behind_journal_publishing.pdf

Law' includes a clause which stipulates that the published outputs derived from research which is largely state-funded must be accessible to the public no later than twelve months after publication. Such access can be provided through a disciplinary or institutional repository. The European Commission has also opted for open access. In the 7th Framework Programme, it piloted an initiative in a limited number of areas which called for the public dissemination of the published results. Currently, under the Horizon 2020 program, any beneficiary of a project is required to make any results public within six months of publication, twelve in the case of social sciences or humanities.

As for support for open access journals, both Spanish and European projects include budgetary provisions aimed at financing their publication. At the institutional level, the *Universitat de Barcelona* has provided funding since 2010 [9].

The final step

It appears we have reached a point where we need to go further if we truly wish to ensure that open access becomes the default model. On one hand we need to monitor the policies which are in place and encourage compliance, while penalizing non-compliance. In this regard it will be interesting to see the results of the policy adopted by the *Universitat Politècnica de Catalunya*, following the model of the University of Liège, of only assessing those research outputs available at its institutional repository [10]. The danger of this policy comes from having a repository full of documents which are inaccessible to the public due to copyright restrictions.

Perhaps the time has also come to stand up to the demands of publishers, especially with regard to embargoes. In many cases, institutions as the beneficiaries of research funds are liable for fulfilling their requirements and, therefore, the results must be made public before publishers typically allow them to be. This commitment to meet the demands of those who fund research is one of the points raised by the 'Christmas is over' campaign organised by the League of European Research Universities (LERU) [11]. The other issue tackled by the campaign is bringing an end to support for the hybrid model, committing to a transition process towards truly open access, and using the funds which are currently spent on subscriptions to cover publication costs. The British and Dutch governments are committed to this transition and are proposing such a change during negotiations with publishers to renew access to publications. While some publishers have accepted it, others are still reluctant, endangering some relevant renovations [12].

Given the current situation, we now face the challenge and the opportunity to give a final push to open access to promote the access to knowledge.

[9]Ajuts de la Universitat de Barcelona per publicar en accés obert, Vicerectorat de Política Científica de la Universitat de Barcelona (2015), http://crai.ub.edu/que-ofereix-el-crai/acces-obert-UB/publicar-ajuts/ub

[10] Acord 177/2014 del Consell de Govern pel qual s'aprova l'assignació de punts PAR únicament per publicacions en accés obert, Universitat Politècnica de Catalunya (2014), https://www.upc.edu/normatives/butlleti-upc/hemeroteca/2014-2015/butlleti-upc-158/bupc-158-docs/docs-consell-govern/8.04AprovacidelassignacidepuntsPARnicamentperpublicacionsenaccsobert.pdf

[11] Christmas is over. Research funding should go to research, not to publishers!, LERU Statement for the 2016 Dutch EU Presidency, LERU (2015), http://www.leru.org/index.php/public/extra/signtheLERUstatement/

[12] Elsevier open access negotiations in deadlock. Academics must act, Open access fact sheet, VSNU (2015) http://www.vsnu.nl/files/documents/Publications/Factsheets/33_Elsevieropenaccessnegotiationsindeadlock.pdf

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