

EDITORIAL

Open access (OA) refers to open online access to academic information, this is, scholarly research and literature freely available online. It is a model of dissemination of scientific knowledge that involves a radical change in the system of scientific communication having its roots in the international movement bearing the same name.

Open access has sparked interest from different people and institutions in the international arena who have created products, services and policies in favor of open access; some examples are the universities of Southampton (ROAR directory, EPrints software, etc.), Nottingham (with the OpenDOAR, Sherpa/RoMEO, Juliet, etc.), Lund (Directory of Open Access Journals), the University of British Columbia (Public Knowledge Project, promoter of OJS software for journal management and OCS, for congress management). The DRIVER project, which builds an infrastructure for European repositories, or Necobelac, working to develop the open access model.

The logo (Figure 1) used by the movement for open access to science is an open lock that symbolizes the elimination of barriers that constrain scientific information, and that limit access to these contents freely on the Internet. The lock, then, has to allow the opening of two doors: the economic one (free distribution) and the legal one (free copyright)



Figure 1 Open access logo (Public Library of Science)

One of the best known definitions of open access is developed by one of its main theorists, Peter Suber: "Open-access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions" [1]. In other words, users cannot only have free access to these sources of information, but can also download, copy, print, distribute them, etc. without any financial, legal or technical impediment different from those directly related to the internet access. The

meaning of the two faces of the lock is clear: science has to be freed from the economic and legal obstacles that hinder its dissemination. The only limitation in terms of reproduction and distribution and the sole role of copyright in this domain, should be to give authors control over the integrity of their work, and the right to be properly recognized and cited.

The Budapest Declaration allows a better contextualization of the essential elements that have facilitated open access: "i) an old tradition that is the willingness of scientists and scholars to publish the fruits of their research in scientific journals without payment only for the sake of research and the dissemination of the knowledge", and ii) a new technology that is Internet, making possible an unprecedented public good. The public good is the digital distribution and without restrictions to the whole world of peer-reviewed scientific literature. "Removing access barriers to this literature will accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge" [2].

In order to achieve open access, all authors would have to publish in open access journals, something that is unbalanced since Open Access journals do not reach 20% of the total publications, so this measure should be complemented with the archive in repositories of the articles that are published in commercial journals. The authors would deposit their preprints or postprints articles in open access repositories. Some of the most well-known repositories are arXiv.org for Physics, or Central PubMed for Medicine; indeed, every time more institutional repositories are being created.

In December 2001, a meeting was held in Budapest sponsored by the Open Society Institute (of the Open Society Foundation, sponsored by George Soros) where the Budapest Declaration (Budapest Open Access Initiative, 2002) was approved, which defined, for the first time, the open access as free access through the Internet to the scientific literature, respecting the current copyright laws, and establishing the two strategies to achieve open access previously discussed: the green access (the deposit of documents in repositories) and the golden access (the publication in open access journals).

Likewise, the Berlin Declaration on Open Access 2003 establishes two conditions for open access [3]:

1. "The author(s) and right holder(s) of such contributions grant(s) to all users a free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship (community standards, will continue to provide the mechanism for enforcement of proper attribution and responsible use of the published work, as they do now), as well as the right to make small numbers of printed copies for their personal use".
2. "complete version of the work and all supplemental materials, including a copy of the permission as stated above, in an appropriate standard electronic format is deposited (and thus published) in at least one online repository using suitable technical standards (such as the Open Archive definitions) that is supported and maintained by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving".

On the other hand, the Bethesda Statement (2003) on open access publishing defines scientific research and its objectives as an interdependent process where each experiment is informed by the results of others. Research scientists and the professional societies that represent them have a great interest in making sure that the results of research are disseminated as immediately, widely and effectively as possible. Electronic publications of research results offer the opportunity and the obligation to share research results, ideas and discoveries freely with the scientific community and the public [4].

Similarly, in 2010, coordinated by FECYT, the declaration of the Alhambra was approved in Granada, which contains recommendations and an action plan to promote open access in the countries of southern Europe.

Regarding the organizations related to the open access movement, a special mention should be made about SPARC (The Scholarly Publishing and Academic Resources Coalition), which was founded in 1997 by the ARL, whose main objective is to try to correct the imbalances existing in the academic publication system. It has about 800 institutional members in North America, Europe, Japan, China and Australia, most of which are libraries. In Spain, REBIUN has played an active role in the development of open access to science, which has been manifested in several workshops (2003), in its annual meeting statement (2004) and in some of its strategic plan's objectives. Also noteworthy are the actions carried out in Catalonia by the Consorci de Biblioteques Universitàries de Catalunya (CBUC) that have achieved the involvement of the Catalan

government for the approval of commands by universities. As we can see, librarians and their associations have played a very active role in promoting and disseminating the open access model. The explanation must be sought in the foundational origins of libraries, which are within the conservation, organization and dissemination aims of science and culture. The principles of open access fit perfectly with the traditional mission of libraries [5].

References

- [1] P. Suber. (2015, Dec. 5) Open access overview. [Earlham College]. Accessed Oct. 29, 2018. [Online]. Available: <https://legacy.earlham.edu/~peters/fos/overview.htm>
- [2] Budapest open access initiative. [Budapest Open Access Initiative]. Accessed Oct. 30, 2018. [Online]. Available: <https://www.budapestopenaccessinitiative.org>
- [3] Max Planck Gesellschaft. (2003) Berlin declaration on open access to knowledge in the sciences and humanities. [MAX-PLANCK-GESELLSCHAFT]. Accessed Nov. 01, 2018. [Online]. Available: <https://openaccess.mpg.de/Berlin-Declaration>
- [4] P. Suber. (2003, Jun. 20) Open access overview. [Earlham College]. Accessed Oct. 29, 2018. [Online]. Available: <https://legacy.earlham.edu/~peters/fos/bethesda.htm>
- [5] E. Abadal. (2012) Acceso abierto a la ciencia. [CORE]. Accessed Oct. 29, 2018. [Online]. Available: <https://core.ac.uk/download/pdf/11889005.pdf>

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