

The Unstoppable Rise of Open Access



Facebook didn't exist, and the idea for the microblogging service Twitter, now blithely quoted on television, hadn't yet entered anybody's head. But in 2003, the Internet was already an important presence. And because it made comprehensive, universal and free access to information possible for the first time, the Max Planck Society decided ten years ago, together with other German scientific organizations and international institutions, to sign the *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities*.

Since then, the *Berlin Declaration* has proved extremely potent and has become a cornerstone of the open access movement. It not only formulated the goal of open access, but also proposed concrete measures for achieving it. While 19 institutions were involved initially, it now has the support of over 440. That is impressive development. And yet academia, which large-

trend is rising. A further 12 percent are added to this via the "green road," which involves publication in a free online repository following primary publication. The number of such repositories has risen to 2,400; more than 9,900 titles are listed in the *Directory of Open Access Journals*. This represents an increase of almost 30 percent since May 2012.

This ongoing dynamic development is very positive given that open access is hugely important for science. First, as the *Berlin Declaration* states, "Our mission of disseminating knowledge is only half complete if the information is not made widely and readily available to society." Second, research thrives on the exchange of the very best ideas. The more comprehensively and immediately this exchange can take place and the greater the freedom we have to reuse results, the more effectively scientists can work.

In the case of interdisciplinary projects, in particular, new search methods will improve the processing of results from different disciplines. The advantage here is that information can be obtained faster and research will become more effective in terms of serving the common good. Given these benefits, almost 90 percent of the scientists who participated in the EU SOAP study presented in 2011 rated open access positively.

Its implementation, however, is taking time, as important adjustments have to be made to a system that is crucial to the world of science. The system in question is, of course, publishing, the lifeblood of science and research. There is a long tradition here whereby researchers regard scientific journals that have been established for decades and that are thus held in high regard as the crucial yardstick in evaluating the quality of their work. Through this publication process, they hope to gain the best possible reputation in the scientific world and to find stimulus for their careers. Accordingly, publishers can charge high prices when selling these journals to libraries.

Science doesn't exploit all possibilities

ly created and co-developed this medium, doesn't exploit its full potential. Unlike social media, for example, open access still lags behind the possibilities it has to offer.

Nevertheless, a lot has happened over the past ten years. Despite the obstacles, we have already made crucial progress on the path toward fulfilling the *Berlin Declaration's* goal of promoting "the Internet as a functional instrument for a global scientific knowledge base." Open access, the system whereby published research findings should be made universally available free of charge and for further use, is here to stay.

Around 10 percent of the specialist publications produced each year are now available via the "gold road," through direct publication in open access journals, and the

30 Days for Open Access

The tenth anniversary of the "Berlin Declaration" on October 22nd was marked by special weeks featuring events on the topic. An overview can be found online at: www.mpg.de/7614128/berlin10-open-access

This model has been around for a long time. However, given the significant increase in the price of journal subscriptions and the restrictions placed on open access for academia, it is no longer acceptable. Instead of the black box of subscription price calculations, we need models based on actual publication costs and characterized by transparency and sustainability. The money from

We need models that are transparent and sustainable

existing subscription budgets must be transferred to publication budgets from which the authors' publications can then be financed via open access.

This paradigm shift is already under way in many places. At the MPS, we have the Max Planck Digital Library, which acts as a joint service facility. It finances central open access publications and also improves the conditions for open access for all of our institutes by negotiating contracts with open access publishers and developing infrastructure like our own open access repository. In this way, standards are created that can benefit all of our scientists.

To ensure that free publication becomes as attractive as the conventional route, we are also doing everything in our power to promote high-class open access publications. These are being developed bottom up from within the scientific community. A good example is the journal *LIVING REVIEWS IN RELATIVITY*, which was established at the Max Planck Institute for Gravitational Physics in 1998 and which, based on its international citation ranking, has become the top place for publications in this field. In the humanities, publications like *DEMOGRAPHIC RESEARCH* are also well established.

Together with the Howard Hughes Medical Institute and the Wellcome Trust, the Max Planck Society also founded the online journal *eLIFE* in 2012 with the aim of establishing a top international journal as an open access alternative in the biosciences. The editorial board, staffed by renowned active scientists, views the authors as customers. The reviewing process – carried out by independent researchers – was therefore optimized to guarantee maximum quality and ensure that the publication process is less burdensome for the authors in terms of the amount of work they have to do and the timescales involved. Publication decisions take no more than 77 days on average.

Moreover, *eLIFE* consistently exploits the possibilities offered by the Internet. These include the fact that it enables the easy dissemination and further processing of knowledge – and that authors can track how demand for their publications is developing in real time. *eLIFE* is very innovative in offering this diverse mix of possibilities. Of course, it can't catch up with *CELL*, *NATURE* or *SCIENCE* overnight, but having already published around 190 scientific articles, its prospects are very promising.

Because open access is a global initiative on the part of academia, these two important approaches to the reorganization of the publication system must also be coordinated on an international level. We are fully involved in this process, including as a co-organizer of the follow-up conferences on the *Berlin Declaration*, which have evolved into a permanent platform. The eleventh conference is due to take place in Berlin on November 19th and 20th. This year's agenda also includes the discussion of political strategies. After all, open access has long featured on government agendas throughout the world.

However, the approaches differ. The German political system ultimately chose not to focus on the concept of open access as a whole, but on one of its key compo-

nents: copyright. The adopted legislative amendment guarantees the authors of scientific papers the right to provide open access to their work following its primary publication in a subscription journal. However, there are too many conditions associated with the provisions and, due to the almost complete exclusion of university-affiliated scientists, they don't apply to a large proportion of German researchers. Hence, we support further improvements to the legislation. This also concerns the general waiting period between primary and secondary publication, which, at 12

The federal government must adopt a political position

months, is too long. Moreover, the federal government should adopt an official political position and a national strategy on open access that is tailored to the European context.

The European Union is already one step ahead with the implementation of open access through its new Framework Programme for Research and Innovation that goes into effect from 2014: in principle, the results of all projects funded through Horizon 2020 are to be published through open access – and the associated costs covered by the funding granted. This will provide important impetus for the European research area, and will also act as a driving force for attaining the goal of the *Berlin Declaration*.



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