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OA2020: Rebooting Open Access for Implementation at Scale

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For well over ten years there has been a demand for free access to the outputs of scholarly work, with ‘open access’ (OA) being the focus of an approach that stands, full of promise, in complete contrast to the prevailing model. Despite this demand for open access, only about 15 percent of scholarly articles per year are currently available in this format. Proponents of OA are therefore now beginning to wonder whether to rethink the initiative’s strategic direction: whether open access needs a reboot, so to speak, to achieve the very concrete goal of transforming the publishing industry’s business model that – despite the demand for OA – is still based on subscriptions.

Today it is almost impossible to imagine how academic work could take place without the use of the internet. Publishing environments already utilize digital technologies to support every aspect of the production process, from manuscript preparation to submission and peer review, and in almost all cases publication has an electronic form, regardless of whether there is a parallel printed version. But at that crucial moment of the finished product’s distribution, the digital process is disrupted in a detrimental way. Rather than being exhaustively promoted through the extensive real-time distribution possibilities that are an inherent feature of the internet, the laboriously created and quality-controlled publication is managed according to a philosophy of scarcity which, from a 21st-century perspective, has to be seen as artificial. In a value-destroying act, content is placed behind paywalls and the opportunities for unrestricted access are eliminated through the publishers’ energetic technical and legal efforts.

The remarkably tenacious conventions of the subscription system are responsible for this scarcity. These result from entrenched policies and procedures that were established between publishers and libraries over a period of many decades, such that access to the content of a scholarly journal is restricted to those readers whose library has acquired a subscription. This basis of exchange, to which both libraries and publishers readily accede, has remained surprisingly unaffected by the modernizing pressures of digitization. Hardly any other area of scholarly communication has escaped change to this extent. The situation is all the more perplexing, given both the overall importance of journals to scholarship and the substantial amount of money involved.

The idea of scholarly journals dates back 350 years to a period in which the compilation of scientific papers and their distribution, in particular, presented significant challenges; these two dimensions governed 'access'. This centuries-old production challenge has defined the approach to scholarly communication up to the beginning of the 21st century. Although this physical distribution challenge has been eliminated in today's internet environment, the subscription-based distribution and financing model persists, along with its inherent scarcity effect. It is beginning to dawn on the scientific community that the subscription system itself is the most significant barrier to open access, and that it will be necessary to tackle this problem if OA's breakthrough on a larger scale is to be achieved.

The free – in the sense of unrestricted – access to the results of scholarly work through the removal of all the barriers that exist is, in principle, the central objective of every open access initiative. As the instigator of 2003's *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities* and co-host of twelve Berlin Conferences so far, the Max Planck Society has been at the center of the debate and is recognized the world over as one of the driving forces of the movement. Along with a steadily growing number of scholarly institutions in many countries, the Max Planck Society is involved in projects, alliances and pilot enterprises to advance the principle of open access. After a decade of international development work, open access is now firmly established in science policy discourse all over the world. It is significant that the Global Research Council, established in 2012, immediately devoted attention to this topic, devising a corresponding resolution within a year of the Council's foundation. At the national level, various initiatives have articulated increasingly ambitious goals, predominantly in Europe but also in other parts of the world. In South Korea, Open Access Korea (OAK), launched in 2010, stands out as the most prominent platform. The Asian countries, in general, have demonstrated a growing interest in open access in the recent years. A good share of regional conferences were organized, and the number of resolutions and policy statements is also growing significantly in that region.

There is a striking gap between the widespread embedding of open access as an objective in science policy-making and the rather sobering fact that, despite all this support, only 15 percent of scholarly papers per year are published as open access. Significantly, this OA proportion – which currently increases by about one percentage point a year – does not by itself exert any transformative pressure on the subscription system. So far there has been no sign of any shift in the prevailing distribution and financing arrangements, nor any diminution of the relentless cost pressures suffered by libraries as a result of the annual price increases demanded of them in a monopolistic journal landscape year after year. Despite the many achievements of open access to date, the traditional subscription system continues to prevail. Indeed, it is thriving: the return on sales of the big commercial publishers continues to boom, with margins ranging between 30 and 40 percent. There is much more money to be made in publishing scholarly information than in the automobile or oil industries; only Google and Apple are similarly profitable.

Proponents of open access are increasingly realizing that while all the measures of the past ten years have certainly been useful – as seen in the adoption of requirements and mandates, the set-up of institutional repositories as instruments of the 'green road' of secondary publication, and the countless recommendations and other documents supporting a broad advocacy strategy – nonetheless there needs to be a new strategy to bring open access into being on the grand scale. The measures implemented during the past ten years have been excessively focused on adjusting scientific practices to a particular notion of open access. It had been envisioned that the scholars would have to move towards open access, so the governing idea had been to steer their behaviors in a certain direction. Perhaps it is time to invert that focus and move in the opposite direction? Rather than putting the onus on scholars to have to act in the spirit of OA, an alternative approach would be to anchor this functionality anywhere it concerns them in their daily activities.

It is crucial that open access should include the familiar and established journals that offer a perceived level of quality and certain career opportunities. If a scholar is attracted by a journal's reputation and wants to publish there, we should surely not view the stance of the scholar to be an obstacle but the expensive and restrictive business model of these journals. Establishing OA as the standard for scholarly communication requires that the corpus of scholarly journals – currently distributed through the subscription model and withheld from free use behind a paywall – be shifted to an open access business model on a large scale. The transition of existing journals is the ultimate and crucial goal of the transformation of publishing to open access: the payment streams that have traditionally been directed towards financing journal subscriptions, and hence read-only access, should be redirected towards the immediate payment of publishers' publication services.

For more than a decade such pioneer publishers as Biomed Central and PLOS have been demonstrating ways in which OA-conforming business models can be developed and managed. Many publishers have followed their particular example that is based on publication fees, the so-called article processing charges (APCs). Earlier studies such as the EU-funded project SOAP (Study of Open Access Publishing) in 2009-2011,[1)] have found that it is particularly those open access publishers with large article volumes and organized as a commercial enterprise that are leaning towards APCs as the predominant source of income. However, the practice of open access publishing also embraces other successful financing models that should not be overlooked.[2)]

Many individuals and organizations are involved in advancing the debate about the transition to OA and the eventual elimination of the subscription system, not least of which is the Max Planck Society. In April 2015 the Max Planck Digital Library (MPDL) published a white paper[3)] that comprehensively makes the case for a large-scale transition to open access, a standpoint that is based on a careful analysis of both publication data and scholarly publishers' turnover figures. Market analyses show that scholarly publishers generate annual revenues in the range of 7.6 billion euros from journal subscription sales. According to relevant publication databases such as the *Web of Science*, the number of annual articles in internationally published journals amounts to about 1.5 million. This implies a figure of about 5,000 euros being applied under the current subscription system to every single article; this is a substantial sum that exceeds by far the actual costs that we observe in the pure OA publication market. The declared costs in that market segment are at a median of 1,300 euros for German universities.[4)] Even assuming that publication numbers and median prices will eventually be higher, all the available evidence suggests that a conversion of the subscriptions model to OA will be feasible within the limits of the financial resources that are already being deployed, without additional costs. In short, it is clear that there is already enough money in the publishing system for a transition to OA.

Since its release in the spring of 2015, MPDL's white paper has become a central reference document for the global transition debate. The interest it stimulated was apparent at 'Berlin 12', a two-day international conference in late 2015 at which 100 representatives from 19 countries accepted the Max Planck Society's invitation to discuss the acceleration of the transition to open access.[5)] There was general agreement at the meeting to working collectively towards the transformation along the lines of the arguments presented in this paper. The outputs of the conference, an

1) http://project-soap.eu/
2) Cf. study "Converting Scholarly Journals to Open Access: A Review of Approaches and Experiences", released August 2016 (https://dash.harvard.edu/handle/1/27803834)
3) http://dx.doi.org/10.17617/1.3
4) For the collection and dissemination of information on fee-based open access publishing see https://github.com/OpenAPC/openapc-de; a visualization layer for the same data can be found at: http://treemaps.intact-project.org/
5) http://www.berlin12.org/

Expression of Interest and a *Roadmap* action plan, were released in March 2016 as part of the *Open Access 2020* campaign.[6] Since then, there has been a steady increase in the number of scholarly organizations that have committed themselves to this campaign by signing the *Expression of Interest*. At the same time, increasing numbers of individual organizations and associations are recognizing that the subscription system is significantly past its expiry-date, and that the financial flows need to be adjusted for the effective reformation of a system in which the substantial current spend produces levels of accessibility that appear meagre and intolerably restricted in the 21st century's digital world. It is becoming increasingly clear that a vastly superior system of scholarly communication could be developed, and financed at no greater level of investment than the current system requires.

What needs to happen to bring about the desired transformation? The key to success is in the hands of those institutions that administer the funds, deciding where to allocate them and where not to; namely, the scholarly institutions, represented in this matter by their libraries. A substantial part of the campaign for change therefore needs to be directed towards libraries and their umbrella organizations. Now that OA's financial viability has been demonstrated, a planned transition of the basis of payment from subscriptions to publishing services will involve the application of new parameters and the development of new process workflows. Libraries will need to gather much more accurate information than they have in the past about the volume of publications and their distribution among the various publishers, so as to develop transition scenarios and cost models, and on this basis establish target-oriented transitional models with publishers. Such transitional approaches have been steadily spreading for about two years and are the furthest advanced in Great Britain, the Netherlands, and Austria. In Germany the MPDL has been actively working on transition models, and has been involved in a pilot project with Springer since late 2015. Other institutions have been following this lead, with the result that new announcements and contracts can be expected very soon.

A new contract model – described in professional circles as *offsetting* – has been established to support the transition; it provides a good entry-point for a systematic redeployment of licensing costs (subscriptions) as publication costs. This approach attempts to release the stranglehold of subscriptions by demanding additional open access services based on current sales volumes. In this model the library remains a subscription customer, continues to receive the required access rights, and secures for its patrons the right to publish in open access – all of which should ideally be achieved within the range of the current spending level. Offsetting's wider aim is a system change; it is a transitional model, since it is not only the contracts' basic rationale that

6) http://oa2020.org/

must be changed in the spirit of open access, but also the underlying financial flows and related accounting processes.[7)]

By means of such transitional models, scholarly organizations are offering publishers the opportunity of an orderly transformation. Though the targets of the transformation are the business model and the basis of payment to publishers, the aim is nonetheless to preserve publishing services as such and ensure their remuneration in a fair and appropriate way. The disruptive element of the transformation is directed only towards the financial flows rather than at the exchange relationships between the research and publishers overall. Research and publishing can unite in a large-scale transformation of these old-fashioned business models to put an end to the current artificial scarcity of scholarly content and create an environment that is geared towards maximum distribution, thus satisfying the legitimate expectations of a digitally-enabled world. At a time when information can be tweeted around the globe in seconds, the existing mode of scholarly communication seems absurd. If the orderly transformation of academic publishing is not achieved within the next few years, it will not be long before the next generation simply pulls the plug on it. In that sense, OA2020 is not only a bridge into the future but also a shield against a more massive disruption that could very easily happen.

7) For further reading: The ESAC initiative released a “Joint Understanding of Offsetting” (http://esac-initiative.org/esac-initiative-releases-a-joint-understanding-ofoffsetting/)

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