

Exploring Scholarly Publishing: The Complex Journey Towards Open Access

Gernot Deinzer 

Universität Regensburg, 93042 Regensburg

23. Oktober 2024

DOI:[10.5283/epub.59426](https://doi.org/10.5283/epub.59426)



The objective of Open Access is to facilitate immediate, cost-free, and reusable access to scholarly publications. Initially driven by the scientific community, it has since been adopted by commercial publishers as well. This has resulted in a considerable number of open access publications. However, despite the existence of repositories for three decades and the availability of commercial open access journals for two decades, scientific publishing remains far from being completely open. This section will provide an overview of the various models for publishing open access.

Repositories: It is evident that institutional and subject-based repositories continue to play a pivotal role in scientific communications. Initiatives such as the [Confederation of Open Access Repositories \(COAR\)](#) are striving to modernise the existing infrastructure. It is imperative for research institutions to reinforce their stance on Open Access by extending support to such initiatives and rapidly integrating the latest developments. In instances where the rights of use are transferred to third parties, it is of paramount importance to ensure that the author retains the right to deposit the final version with an open licence.

Gold Open Access Journals with Article Processing Charges (APCS): After a successful start, BioMed Central and PLOS are the most prominent new publishers. They have set up open access journals with article processing charges. This has resulted in the acquisition of new publishers by established entities such as BioMed Central by Springer/Nature or Hindawi by Wiley, as well as the replication of successful business models by major publishers. The market for open access publishing is increasingly dominated by major publishing houses. Conversely, new publishers specialising in open access are occasionally deemed to lack the requisite quality standards for scientific publication. These journals are selected by scientists due to the accelerated publication process, from submission to publication. This ultimately results in a loss of confidence in the scientific community.

Even if waivers are available for scientists who are unable to pay for publication, this model appears to favour scholars who have access to internal or external funding. Those who lack such funding, for instance young researchers, are unable to afford the publication fees and therefore face a disadvantage in their academic careers. This is unless libraries or institutions take over the fees, but they are facing challenges in managing unpredictable expenses, particularly given the difficulty in predicting the number of articles and the heights of APCs. The establishment of a global infrastructure, such as [OpenAPC](#) and [openCost](#), to ensure transparency in publication costs could help address these challenges.

Transformative agreements (TA): The role of TAs was established with the objective of facilitating the transition of scientific publications from a subscription-based model to an open access format. It was expected that the addition of a publishing component to subscription contracts would result in a critical mass of open access articles within a journal, leading to a complete transition from subscription to open access. From the perspective of academic institutions, state and country, such contracts appear to be highly attractive. It is now relatively straightforward to meet the open access rates that are required by funders or political bodies. But such contracts are geographically limited to parts of Europe and North America, which results in a relatively small proportion of publications within a single journal being open access. Such agreements do not result in a genuine transformation process; rather, they are essentially a new subscription with a small number of open access publications. Furthermore, such contracts are frequently sold in large packages that include the vast majority of a publisher's journals, even if some of those journals are not relevant to the subscribing institution. This results in a significant portion of the library budget being allocated to these contracts, which in turn leads to a lack of budgetary resources for smaller publishers.

Diamond Open Access: The Diamond Open Access model is a cost-free system for both authors and readers. To whom does the financial burden fall? This depends upon the specific business model that is being employed. In the "strict" Diamond model, academic institutions assume responsibility for managing the journals and providing funding for technical and editorial staff. While there are some notable examples of success within specific subject areas, the majority of journals are either too niche or lack sufficient relevance to justify the costs involved. It is not common practice for scientific institutions to engage in the industrial production of scientific literature, and workflows are not optimised. They still have a lot to learn. Other models focus on the financing of academic journals as a collective initiative. This approach appears to offer considerable promise; however, it is not clear whether the current practice of relying on voluntary payments from research institutes is a sustainable solution. It is notable that many of the current payment models have been derived from subscription-based models, rather than being designed to facilitate innovative and sustainable flows of funding.

It is evident that the previously mentioned models possess both advantageous and disadvantageous characteristics. One might be forgiven for wondering why not combine them. A model should comprise the following elements:

- Facilitate prompt communication with preprints at the time of article sub-

mission

- Ensure the cost of publishing an article is equitable
- The financial responsibility for publishing should be shouldered by libraries or the academic community, with the goal of making scholarly publishing free for all researchers
- Provide libraries with a predictable expenses on a yearly basis
- Adopt as a global standard, with implementation in the majority of countries

As far as I am aware, there is at least one consortium that broadly meets the aforementioned criteria. The [SCOAP³-consortia](#) allows or requires preprints to be submitted to [arXiv](#). At least in Germany, costs are fixed for a period of several years based on the number of publications in the previous couple of years. Libraries or research institutions are responsible for funding the consortia, and authors are not required to pay. Additionally, the consortium is active in numerous countries across the globe, including Asia. High-energy physics shows that scientists, publishers and research institutes can reach mutually beneficial agreements to ensure research is published in an open access format. In order to implement analogous models across all scientific disciplines, it is necessary to engage in a process of rethinking involving all relevant stakeholders, including publishers, libraries, and scientists.

The process of opening up not just the publication but also the publication process itself, that is to say, mainly the quality assurance (editorial decisions and peer review), the scientific discussion with reviews and comments, and the provision of all information regarding the research process itself, that is to say, the so-called research data, software, and so forth, represents a significant step in the direction of open science. However, it is not always possible to reach the final goal by taking the most direct route. Instead, it may be necessary to experiment with different approaches, discarding those that are unsuccessful and combining the most effective elements of the various alternatives to create a new, improved path. This process may require some time, but it is likely to result in a solution that meets the desired outcome.