Beyond APC:
On the Need for Diamond Open Access Publication Platforms[1]

There are at least three reasons to pursue full Open Access in all scholarly communication. First, there is an ethical reason, namely the conviction that in principle knowledge should be shared and that the results of scientific research should therefore also be available to academic communities and the general public worldwide. Second, there is an internal motivation: transparency ensures that scientific research can be conducted more reliably and efficiently. Moreover, Open Access facilitates free use and reuse of research results and hence a greater scholarly and societal impact in a shorter time frame. Third, there is a reason of economic nature, as Open Access publications can help limit the costs of scholarly publication and thus reduce pressure on the budgets of academic institutions and their libraries, which has been experienced as a growing problem since the turn of the 21st century.[2]

The problem with Gold Open Access

There are different ways to realise Open Access, but the various approaches do not always address all of the reasons for choosing for Open Access. The primary example is the commercial implementation of Gold Open Access, where the author (or institution) is charged by the publisher for immediate Open Access. In this way, the old for-profit business model where one pays for the right to read scholarly literature (i.e. the traditional approach where libraries or individuals pay for journals and books) is exchanged for a new for-profit business model where one pays to publish (i.e. an author, the institution or the funder of the work pays the publisher to publish something Open Access).

This is also known as the 'APC' model: authors pay article processing charges (APCs), fees to publish their articles Open Access. This makes the work free to the reader, which indeed is in agreement with one of the major of the goals of Open Access, making the results of scientific research generally available to a wide audience worldwide, and creating a broader scientific and social impact in a shorter time frame. But this also creates a new barrier: while the general public can read the publications for free, only 'wealthy' or well-funded authors have the opportunity to publish their work Open Access. And it does not address the economic problem: scientific institutions now pay for publishing instead of reading, and when costs for publishing are charged profitably, as we see happening, then nothing has actually changed financially.[3]

The current predominance of Gold Open Access is sustained by the current dominant modes of research evaluation, as publication channels that are considered the most prestigious venues work according to this business model. Non-profit variants of Open Access are less prestigious in that regard and thus often ignored or undervalued in the evaluation of research and researchers – a problem to which universities and research funders now pay a lot of attention (e.g., DORA and Leiden Manifesto).[4] After all, people realise that if the principles of Open Science are to be adopted, then the evaluation system must be reformed, and we should move away from the use of impact factors and the obsession with legacy publishers. Researchers also face a Catch-22 problem: no matter how much quality or impact they offer, non-profit variants of Open Access will remain underutilised if they are primarily valued on the basis of venue, rather than content, and if they therefore are not considered as at least equivalent

to for-profit and traditional variants in research dossiers. But non-profit alternatives will not be valued if they simply do not exist or disappear quickly, due to underutilisation and lack of funding.

Diamond Open Access as an alternative

When implementing Plan S, it is important that we not lose sight of all the reasons for choosing Open Access. These reasons can be addressed by investing in sustainable non-profit forms of Open Access, and by encouraging publication on cost-neutral platforms (rather than for-profit venues), with the costs being borne by governments, universities or public and private funders rather than by individual researchers or their departments. This form of publication will then be free to readers and authors, as third parties (governments, universities, funders) cover the costs of publication. This business model is referred to as 'Diamond Open Access.'

In this way we cover all three reasons to strive for Open Access: no more reading or publication barriers (because it is free for both readers and authors), beneficial for science and scientists (because of Open Access), and economically interesting for scientific institutions and funders, who have to bear the publication costs, but only the actual costs and not the profit margins associated with the business model. Coalition S is also aware of this necessity, as demonstrated by the attention paid to 'transition beyond APC' and a recent study of various business models.[5] Parties that fund research will also favour Diamond Open Access, as in their perspective, the use and reuse of results is the main purpose of their funding. Donors of research funds want to make a difference in the real world, such as saving lives through health research.

More than just scientific journal articles

Another priority is that we should publish all products of research, not just scientific articles in the format as published by so-called 'legacy publishers.' We should also provide general Open Access to other forms of research output, such as monographs, reports, research protocols, intervention protocols, tests and questionnaires, software, data, and metadata. Innovative publication platforms could present promising opportunities, as they are not bound by the traditional format of the academic journal and the possibilities are literally endless for facilitating the publication, dissemination and preservation of scientific output. Digital Open Access publication platforms can also promote Open Education, by also publishing teaching materials. If publications of the various products of research are indexed in the same way as scientific articles, then publications and citations of these other products of research can also be counted in the same way, and thus be recognized and awarded in the evaluation of research and researchers.[6] A full list of desirable principles and requirements of Diamond Open Access publication platforms is given in Table 1.

Innovative Diamond Open Access publication platforms

With Diamond Open Access, authors do not pay to publish and readers do not pay to read. When considering Diamond Open Access publication platforms, we must address the following issues.

1. At which level would it be best to organize such a platform (university, national, international)?

2. If we choose for a non-profit approach, and therefore cover only the actual costs of publication, which will be cheaper in the long run, we still need a pre-investment for designing, setting-up and launching such a platform.
3. When these publication platforms are considered 'public utility functions', then public investment in platforms may be a reasonable option.
4. The problem of scholarly communication being a truly *international* endeavour, which contrasts with the necessity of investments by *national* funders, may be addressed by using a large number of national (or university) publication platforms that are linked to each other.

The *Report on the Open Access Journal Funding Initiative*[7] of the Austrian Science Fund identified four challenges that are relevant for enterprises such as building such a publication platform:

1. the need for long-term investment;
2. a delegation of tasks, for example to ensure that technical and administrative support for publication in Open Access is not delegated to the individual researchers;
3. economies of scale, i.e. the need to set up technical and administrative support for a sufficiently large infrastructure;
4. the importance of national and international consortia, in part to ensure the efficient distribution of costs and risks.

Notes

[1] Memorandum by Frank Miedema (Utrecht University), Demmy Verbeke (KU Leuven), Jeroen Sondervan (Utrecht University), Saskia Woutersen-Windhouwer (Leiden University), Frans Oort (University of Amsterdam); 7 December 2020. E-mail address of the corresponding author: f.j.oort@uva.nl. DOI: https://doi.org/10.5281/zenodo.4758335

[2] See also: D. J. Schmidle – B. Via (2004), 'Physician Heal Thyself: The Library and Information Science Serials Crisis', DOI: https://doi.org/10.1353/pla.2004.0036

[3] D. Verbeke (2019), '*Niet alle goud blinkt*: profit versus non-profit Open Access' (2019), DOI: http://dx.doi.org/10.17613/dnk8-h030.

[4] https://sfdora.org; http://www.leidenmanifesto.org

[5] https://operas.hypotheses.org/4141

[6] Woutersen-Windhouwer, S., Méndez Rodríguez, E., Sondervan, J. and Oort, F.J. (2020), 'University Journals. Consolidating institutional repositories in a digital, free, open access publication platform for *all* scholarly output', DOI: http://doi.org/10.18352/lq.10323.

[7] F. Reckling, K. Rieck, E. Scherag (2018), *Report on the FWF Open Access Journal Funding Initiative*, The Austrain Science Fund. DOI: https://doi.org/10.5281/zenodo.1433993

Table 1: Desiderata for Diamond Open Access Publication Platforms

1. The platform is owned and controlled by the institutions, preferably building on existing institutional infrastructures.
2. All products of research can be published (reports, (meta)data, software, protocols, etc.).
3. All materials are subject to appropriate internal or external quality control before publication and open peer review after publication.
4. Publishing and accessing publications are free (diamond open access business model).
5. Authors or their institutions retain copyright to their publications.
6. Publications, (meta)data, and other products of researchers will be shared under appropriate licenses.[1]
7. Published materials remain at institutional repositories, whereas tools and services for indexing, dissemination and exchange are managed at inter-institutional (international) level.[2]
8. The platform is generic, but research products are organized by institution, by discipline, by type of research product, and possibly by measures of quality assurance.
9. The platform has long-term preservation and guarantees permanent access; all publications have persistent identifiers, preferably a DOI.
10. Indexing and dissemination is the same for all types of research products, and all content will be offered to bibliographic services (originally for journals only), in order to enable and promote compliance with new recognition and rewards frameworks (e.g., DORA).
11. The platform should be a member of Committee on Publication Ethics (COPE), and strive for registration at DOAJ, Sherpa Romeo and similar services.

Notes: (1) e.g., CC0, Creative Commons Attribution license (CC BY). Initiatives such as Open Abstracts (I4OA) and Initiative for Open Citations (I4OC) are supported; (2) E.g., distributed architectures that connect services with resources in repositories, such as the overlay model proposed by COAR (https://www.coar-repositories.org/topic/repositories-and-publishing/).