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## We need to rethink the way we identify diamond open access journals in quantitative science studies

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### Abstract

With the announcement of several new diamond open access (OA) related initiatives and the creation of the Global Summit on Diamond Open Access, diamond OA is now at the forefront of the OA movement. However, while working on our recent *Quantitative Science Studies* publication and datasets, we noticed that temporarily waiving article processing charges (APCs) was a commonly used strategy by big publishers for some of their journals. In the absence of an index of diamond journals, most studies have operationalized the identification of diamond journals as a subset of gold journals that do not charge an APC. While this is a pragmatic approach, we fear that it could undermine the value of the research in understanding what we believe is more commonly understood by diamond OA. This letter discusses the need for bibliometric research to apply more nuance in how it operationalizes diamond OA beyond the absence of APCs. We call on the publishing sector to be more transparent in the costs of publishing. Ultimately, we argue that transparency and a long-term commitment to no-APC publishing are necessary for diamond OA to succeed, and that the research community needs to apply this standard when seeking to understand the model.

**Keywords:** Open access publishing, Open access, Article processing charges, Diamond open access, Open science

Prior to being termed diamond open access (OA), a model of OA that did not charge readers or authors was already well-established as a norm in many parts of the world, notably in Latin America (Alperin & Fischman, 2015). In recent years, however, and with the announcement of several new diamond OA related initiatives such as the Action Plan for Diamond Open Access, the DIAMAS and CRAFT-OA projects, and the recent creation of the Global Summit on Diamond Open Access, it is clear that diamond OA is now at the forefront of the OA movement. Much of the excitement about diamond OA stems from a belief that it can potentially resolve the inequities inherent in an author-pays model based on article processing charges (APCs). Yet, despite this optimism, up until recently there was little data about the uptake, costs, labor force, and impact of diamond OA (Bosman et al., 2021).

It is no surprise, therefore, that a growing body of research seeks to understand this model (Becerril et al., 2021; Bosman et al., 2021; Khanna et al., 2022; Simard et al., 2022; Simard et al., 2023). In the absence of an index of diamond OA journals, most studies (including some of our own) have operationalized the identification of diamond OA journals as a subset of gold OA journals that do not charge an APC (at any given moment of analysis). While this is a pragmatic

approach, we fear that it could undermine the value of the research in understanding what we believe is more commonly understood by diamond OA. When we think of a diamond OA journal, we generally imagine a small, local, community-based and non-profit scholarly journal that relies on public funds and receives volunteer support from the academic community. For instance, at the recent 2nd Diamond Open Access Summit in Toluca, México (2023), experts have defined the seven facets of diamond OA as 1) equity, 2) knowledge as a public good, 3) community-driven, 4) diversity, 5) transitioning to diamond, 6) research assessment and recognition, and 7) multi-level co-operation (Saenen et al., 2024). As such, there is a need to operationalize diamond OA in quantitative science studies that reflects these facets.

While working on our recent QSS publication (Butler et al., 2023) and datasets (Butler et al., 2022, 2024a, 2024b), we observed that the *temporary* waiver of APCs was a commonly used strategy by the Big 5 for-profit publishers for some of their journals. For instance, more than half of Elsevier's gold OA articles over the 2015-2018 period were published in a journal that did not charge an APC, something that peer reviewer John Willinsky qualified as "uncharacteristic of the company", leading him to question their classification as diamond (Willinsky, 2023). We had initially labelled these articles as diamond, the operationalization that we seek to criticize, but decided to classify them as "no APC" instead. More generally, in our 2015-2018 dataset of APC list prices for the Big 5 academic publishers (Butler et al., 2022), we identified 155 journals (43,623 articles) which were listed as APCs=\$0 during *some* of the four-year period, 52 of which during the *entire* period. We manually verified some of these journals and have come across statements such as: "this journal is a peer reviewed, subsidized open access journal where the Taiwan Association of Obstetrics and Gynecology pays for the publishing costs incurred by the journal"<sup>1</sup>. This suggests an APC-like arrangement, where the society likely pays the publisher in lieu of author fees. Matching the 52 journals without an APC between 2015 and 2018 to price lists from 2019 to 2023 (Butler et al., 2024b), we found that over half had started charging an APC. For example, *Zoological Letters*<sup>2</sup> (2056-306X) a journal published by Springer Nature with publishing fees that were previously covered by the *Zoological Society of Japan*, introduced an APC of \$US 2,000 in 2020. The journal now (in 2024) charges authors \$US 2,190 per article. This poses the question: should journals such as *Zoological Letters* that temporarily waive APCs be classified as diamond OA? If the answer is no, what information other than the absence of APCs can be used to operationalize the identification of diamond OA journals?

These examples highlight that relying on a \$0 APC as a sole proxy for diamond OA masks a range of practices which do not adequately address the inequities of the APC model. In other words, this approach, while practical, lumps together the use of (temporary) APC waivers as a marketing strategy, as well as different arrangements that leave price controls in the hands of publishers and not, as many who advocate for diamond OA hope, in the hands of the scholarly community. Therefore, we propose classifying no-APC journals into at least two categories: 1) non-profit journals that do not charge APCs because their costs of publishing are covered by

<sup>1</sup><https://www.sciencedirect.com/journal/taiwanese-journal-of-obstetrics-and-gynecology/publish/open-access-options>

<sup>2</sup> <https://zoologicalletters.biomedcentral.com/>

another source of revenue such as a learned society<sup>3</sup>, and 2), for-profit journals that temporarily do not charge APCs for various reasons (e.g., promotion, the COVID-19 pandemic, agreements with learned societies, etc.). In other words, many of these seemingly equitable OA journals might still charge fees that significantly exceed production costs and therefore primarily sustain a profitable business model rather than promoting equity and diversity in academic publishing.

The purpose of this letter is two-fold. Firstly, we would like to call for more cautiousness when doing research on diamond OA and APCs. Over the past 25 years, we have witnessed various for-profit actors managing to maintain if not strengthen their dominance over the publishing market through the creation of author fees, which have shifted financial barriers from readers to authors (Ellers et al., 2017; Fontúrbel & Vizentin-Bugoni, 2021; Klebel & Ross-Hellauer, 2023; Mekonnen et al., 2021; Peterson et al., 2013; Santidrián Tomillo et al., 2022). We cannot afford to repeat a similar mistake with diamond OA and let for-profit publishers take advantage of a model that we consider to be the most *equitable* approach to OA. A deeper reflection into what constitutes diamond OA (e.g., for-profit vs non-profit) and how to operationalize it in quantitative analyses would eliminate ambiguity that can be used against its core values and facets (i.e., inclusive, community-based, equitable, diverse, etc.). Instantiating clarity of the definition of diamond OA in widely used databases and tools such as OpenAlex, Unpaywall, and the Directory of Open Access Journals (DOAJ) could be helpful. A good first step into this direction is the Diamond OA Standard (DOAS)<sup>4</sup>, a technical guide and a benchmarking resource recently introduced by DIAMAS, which combines guidelines with a self-assessment tool based on the seven quality standards outlined above.

Secondly, we want to call attention to the need for more transparency in the costs for publishing, by both funders and publishers, whether for-profit or non-profit, as already proposed by the Fair Open Access Alliance (FOAA) framework (Wallace, 2020). The Public Library of Science (PLOS) is transparent about how their “publication fees are used to support journal activities and operational costs” after participating in Plan S’ Price & Service Transparency Framework pilot in 2020 (PLOS, 2023). Similarly, QSS also provides a breakdown of publishing costs financed through the author-pays model<sup>5</sup>. Unfortunately, such transparency practices are far from being the norm.

While we believe that studies that estimate APC spend are crucial to make evidence-based decisions about investments in academic publishing, the creation and curation of the datasets was an incredibly time-intensive effort and leads to estimates rather than actual fees paid. This has been criticized by the very publishers that are in the position to reveal actual revenues for OA (Ansedé, 2023). We therefore urge publishers to be transparent about costs and fees that would allow for more accurate approaches.

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<sup>3</sup> This would comply with the Diamond OA Summit facets.

<sup>4</sup> <https://diamasproject.eu/introducing-doas-the-benchmark-for-diamond-open-access-quality/>

<sup>5</sup> <https://direct.mit.edu/journals/pages/open-access#qss>

To encourage diamond OA as an equitable and sustainable OA publishing model for the academic community, we must be mindful of how we discuss and study it. Making a distinction between true diamond journals and those that temporarily waive APCs will be especially important to avoid co-opting the model and to ensure that OA is not exploited once again as a means to generate profits.

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