



More transparency is required for article processing charges

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ABSTRACT

In this column, I argue for more transparency for APC (Article Processing Charges) payments, proposing that publishers supply this information on the article itself, as well as making it available in the metadata. In the same way that funders insist that any research articles arising from the research they fund is OA (Open Access), I propose that research funders should also make it a condition on publishers to be more open and transparent about the APC revenue that they receive for a given article.

Introduction

Scholarly communication has seen significant change in recent years, driven in part by the emergence of open access (OA) publishing. Under this model the author, or another stakeholder, pays to publish the article, the copyright is retained by the author but the article is made freely available to anybody who wants to read it. In comparison, under the traditional model, an article can be published at no cost to the author but the copyright is signed over to the publisher who then monetises the article by readers paying to download it or it being available to subscribers.

The origins of modern OA publishing can be traced to the policies of funding bodies, institutions, and governments, many of which mandate OA as a condition of the research they fund. OA has evolved into diverse models, including diamond (neither reader or author pays), gold (author pays and the article is immediately available) and green (no payment from the author but some version (e.g. the accepted version before being typeset) of the article can be freely circulated).

Open access is not without its problems, for example predatory publishers (Beall, 2017; Kendall, 2021) and selling authorships & paper mills (Else, 2023; Kendall & Teixeira da Silva, 2024; Sanderson, 2024) would not exist if it were not for OA. This is certainly true for predatory publishing. Perhaps selling authorships & paper mills would still exist but it is much easier for these practices to operate in an OA environment.

For legitimate journals, which publish under the OA model, the article processing charges (APCs) are shown on the journal's web site and are usually easy to locate. This is, perhaps, not so true for predatory journals. However, the web site only shows the current APC. There is not usually any historic information so the APC that was paid for

an article published (say) two years ago is not available. Even if we are only interested in the current APC, a (partial) fee waiver could have been given. This is typically offered to low-income countries, with different waivers being given depending on the country. It is usually (always?) unclear if the full APC was paid or whether a (partial) fee waiver was applied, even if fee waiver information is stated for a given country. We may be able to infer that a waiver was given, but we can never be certain. Moreover, given a list of authors, we have no way of knowing who paid the APC and this may affect the waiver that was applied.

A transformative agreement (TA) is a mechanism that moves a library, or consortium, away from subscription-based read only models, towards OA. TAs can encompass different types of contracts, including "Read and Publish" (bundles the costs of reading and publishing into a single cost) and "Publish and Read" (an emphasis on paying for publishing, with reading being free) (Bansode & Pujar, 2022).

TAs are designed to help institutions reduce their costs, enabling access to published articles, providing OA publishing at reduced rates (compared to the advertised APC) and to avoid "double dipping", where publishers get paid twice, once for subscription/download payments and also receiving APC revenue for OA articles.

Related work

Borrego (2023) presented a literature review of APCs. Articles published between 2000 and March 2023 were considered, extracting those articles from Scopus that had 'article processing charges', 'author fees' or 'publication fees' in the article title. After processing the results, 194 articles remained. It was found that although diamond open access

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(those that charge no fees) exists, most OA articles are published by commercial publishers who do charge a fee. There is evidence that the quantum of the APC is related to the perceived quality of the journal. Authors expressed reluctance about APCs, although this varies by country and discipline. The study suggested that fee waivers were limited and that there were concerns about the criteria to qualify for them.

Jahn (2025) looked at hybrid journals, which are those that publish both OA articles, as well as articles that remain behind a pay wall. Hybrid journals are typically transforming from subscription-based to fully OA. There has been growth in the number of OA articles in these journals, rising from 4.3% in 2018 to 15% in 2022 but Jahn noted that the majority of articles were still behind a pay wall. The hybrid journals provided open access to 742,369 (9.1%) articles of the 8,146,958 that were published.

Steinberg (2025) examined transformative agreements (TAs), focusing on Wiley. The study found that large publishers adopted a transformative approach for several reasons, including generating additional revenue from their existing customers and reducing administrative charges when compared to collecting APCs.

Butler et al. (2023) estimated the APC revenue of five open access publishers. Between 2015 and 2018 it was estimated that authors paid \$USD 1.06 billion, with the estimated revenue being apportioned as follows; Springer Nature (\$USD 589.7 million), Elsevier (\$USD 221.4 million), Wiley (\$USD 141.3 million), Taylor & Francis (\$USD 76.8 million) and Sage (\$USD 31.6 million).

Kendall (2024) extended this study, looking at the same five publishers, along with three others (MDPI, Frontiers and PLOS). The period of study was also extended, covering 2015 to 2023. The estimated OA revenue of each publisher was; Elsevier (\$USD 1384 million), Frontiers (\$USD 1211 million), Springer Nature (\$USD 1179 million), Wiley (\$USD 505 million), MDPI (\$USD 500 million), PLOS (\$USD 328 million), Sage (\$USD 160 million), and Taylor & Francis (\$USD 154 million). This estimated the OA revenue between 2015 and 2023 at \$USD 5.421 billion for these eight publishers. An erratum to Kendall (2024) (in press) has revised the OA revenue from \$USD 5.421 billion to \$USD 6.583 billion.

Both Butler et al. (2023) and Kendall (2024) acknowledge that their revenue estimates were conservative and are likely to be under estimates.

Haustein et al. (2024) estimated that the global expenditure on APCs between 2019 and 2023 was \$USD 8.349 billion. In 2023, the top three publishers, by APC revenue, were MDPI (\$USD 861.6 million), Elsevier (\$USD 582.8 million) and Springer Nature (\$USD 546.6 million). Haustein et al. (2024, p. 1) noted “Our approach addresses major limitations in previous efforts to estimate APCs paid and offers much needed insight into an otherwise opaque aspect of the business of scholarly publishing. We call upon publishers to be more transparent about OA fees”. This very much aligns with the narrative of this article. They further noted that estimating APC revenue is resource intensive, especially when time frames are extended and the number of publishers included in the study increases.

Teixeira da Silva (2020) has made similar calls to the proposals set out below.

Call for (more) transparency

This section recommends practical steps that publishers could (should) adopt to improve the transparency around APCs.

Recommendations

1. **Mandate from research funders:** In the same way that research funders mandate that the research it funds should be published OA, they should also mandate that the publishers should be more open and transparent by following the recommendations given here.

2. **Declare the APC Payment:** Each published OA article should include a clear statement that specifies:

- The standard APC rate in force at the time of publication.
- The actual amount paid (if different from the standard APC).
- The name(s), affiliation(s) and countries of the author(s) that paid the APC.
- The source of the APC funds (e.g. the researcher funder, project ID).

3. **Shared Payments:** Where APCs are co-funded by multiple authors or institutions, this should be disclosed, including the amount contributed by each author/institution.

4. **Waivers and Discounts:** Publishers should indicate whether a waiver or discount was applied, stating the amount that was actually paid by the author(s). Additionally, the publishers should disclose the standard APC rate, as a point of reference, even when a waiver/discount was provided.

5. **Transformative Agreements:** For articles covered under transformative agreements, it may not be feasible to provide a specific APC that was paid. However, publishers should:

- State that the article was published via a transformative agreement.
- Specify the author(s), institutional affiliation(s) and country who are benefiting from the agreement.
- Where possible, name the agreement and provide a persistent identifier or URL to the agreement documentation. If this is not possible, state the reason why.

6. **Metadata:** The information above, as well as being printed on the article, should also be provided in the article's metadata to allow easier access and subsequent analysis. If metadata is not provided, those wishing to access the data are faced with extracting it from the article's PDF, which is impractical and will severely limit the ability to analyse the data.

Benefits

These proposed transparency measures offer several benefits:

- **Policy and Funding Insights:** Research funders are able to track how APC budgets are being allocated and to evaluate value-for-money and return on their investment.
- **Data-Driven Decisions:** Bibliometric and economic analysis of APCs across countries, institutions, disciplines and authors would be possible. When combined with other data, even deeper analysis would be possible.
- **Equity Monitoring:** Tracking of waiver distributions is possible, helping to assess whether support for authors in resource-limited environments is effective and equitable. Other analysis may also be possible such as analysing by discipline, gender and career stage (e.g. Ph.D. students, early career researchers etc.)
- **Institutional Benchmarking:** Provides universities with evidence to benchmark APC expenditure and negotiate better publishing agreements.
- **Enhanced Public Accountability:** Increases trust in research by making public expenditure more visible.

Conclusion

Article processing charges are often funded by public money, whether through government agencies, research councils or directly through universities (for those which are funded by governments). Another source of APCs is via students' fees, particularly international students (who may be funded by their own government). Publishers

have a responsibility to be transparent about where the APCs they received originated from, so that there is an audit trail of how these funds are being spent. This is important so that those who supply the APC funds (typically tax payers and international students) know how their funds are being spent. Transparency enables stakeholders, including libraries, funding bodies, governments, universities and researchers to analyse this data, assisting in making more informed decisions.

Publishers may be resistance to these changes, perhaps arguing the administration would be too much of a burden, commercially confidential information would have to be disclosed, it has to answer to its shareholders, that it is taking transparency too far etc. Universities have been obligated to make a lot of its research OA to respect the conditions of being awarded the research funds, or if they want to return given research articles to national ranking mechanisms. They may have had similar concerns as listed above when these conditions were imposed, but they were compelled to comply. Given the significant amounts of public funds involved (billions of dollars), the general public not only has a right to read the research articles it has funded, but they also have a right to know how much it paid for that article to be published, and who paid the APC.

Research funders are increasingly mandating that the articles that arise from the research it funds should be published OA. Those same funders should further insist that publishers provide details of the APCs that they receive for each article.

Declaration of competing interest

The author maintains a web site

- (<https://predatory-publishing.com/>)
.... as well as several social media accounts.
- X (https://x.com/fake_journals)
- LinkedIn (<https://www.linkedin.com/company/103288284/>)
- Bluesky (<https://bsky.app/profile/grahamkendall.bsky.social>).

These do not represent a conflict of interest.

References

- Bansode, S., & Pujar, S. (2022). Open access and transformative agreements: A study. *Annals of Library and Information Studies*, 69(1), 59–65. <http://dx.doi.org/10.56042/alis.v69i1.57094>.
- Beall, J. (2017). What I learned from predatory publishers. *Biochemia Medica*, 27(2), 273–278. <http://dx.doi.org/10.11613/BM.2017.029>.
- Borrego, Á. (2023). Article processing charges for open access journal publishing: A review. *Learned Publishing*, 36(3), 359–378. <http://dx.doi.org/10.1002/leap.1558>.
- Butler, L. A., Matthias, L., Simard, M. A., Mongeon, P., & Haustein, S. (2023). The oligopoly's shift to open access: How the big five academic publishers profit from article processing charges. *Quantitative Science Studies*, 4(4), 778–799. http://dx.doi.org/10.1162/qss_a_00272.
- Else, H. (2023). Multimillion-dollar trade in paper authorships alarms publishers. *Nature*, 613(7945), 617–618. <http://dx.doi.org/10.1038/d41586-023-00062-9>.
- Haustein, S., Schares, E., Alperin, J. P., Hare, M., Butler, L. A., & Schönfelder, N. (2024). Estimating global article processing charges paid to six publishers for open access between 2019 and 2023. <http://dx.doi.org/10.48550/arXiv.2407.16551>, arXiv.
- Jahn, N. (2025). How open are hybrid journals included in transformative agreements? *Quantitative Science Studies*, 6, 242–262. http://dx.doi.org/10.1162/qss_a_00348.
- Kendall, G. (2021). Beall's legacy in the battle against predatory publishers. *Learned Publishing*, 34(3), 379–388. <http://dx.doi.org/10.1002/leap.1374>.
- Kendall, G. (2024). Are open access fees a good use of tax payers money? *Quantitative Science Studies*, 5(1), 264–270. http://dx.doi.org/10.1162/qss_c_00305.
- Kendall, G., & Teixeira da Silva, J. A. (2024). Risks of abuse of large language models, like ChatGPT, in scientific publishing: Authorship, predatory publishing, and paper mills. *Learned Publishing*, 37(1), 55–62. <http://dx.doi.org/10.1002/leap.1578>.
- Sanderson, K. (2024). Science's fake-paper problem: high-profile effort will tackle paper mills. *Nature*, 626(7997), 17–18. <http://dx.doi.org/10.1038/d41586-024-00159-9>.
- Teixeira da Silva, J. A. (2020). Three new suggested guidelines for increased transparency regarding open access article processing charges (APCs). *Epistēmēs Metron Logos*, 4(4), 4–7. <http://dx.doi.org/10.12681/eml.24208>.
- Steinberg, R. (2025). The business of transformative agreements. *The Journal of Academic Librarianship*, 51(2), Article 103020. <http://dx.doi.org/10.1016/j.acalib.2025.103020>.