

Article Processing Charges: A New Route to Open Access?

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Abstract: Article Processing Charges (APCs) have recently been studied as a means towards a sustainable Open Access (OA) environment for scholarly communications. However, APCs at any level represent a substantial economic barrier to the authors, institutions, funding agencies and governments that many of its advocates most wish to serve through OA initiatives.

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1. Introduction

Article Processing Charges (APCs) used as a means to offset publication expenses are not particularly new features on the scholarly communications landscape. A good summary of their usefulness is to be found on the publications page of the Public Library of Science (PLOS) web site:

*“To provide Open Access, PLOS uses a business model that includes Article Processing Charges (APCs) to offset expenses – including those of peer review management, journal production and online hosting and archiving. Authors, institutions or funders are charged this publication fee for each article published.”*²

Furthermore, APCs are increasingly adopted by funding agencies as eligible expenses in policies seeking to promote open access to publicly funded research outputs.³ They are, in fact, a generally accepted and acceptable way to unlock scholarly journal articles from behind subscription paywalls. It is well documented that recently subscription fees paid by libraries for academic journals have been increasing beyond the rate of inflation in North America and elsewhere (Whitehead 2016). APCs, on the other hand, are generally paid to publishers by the author(s), their parent institutions or granting agencies, with the expectation that subscription fees are either eliminated or at least substantially reduced as a result.

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2 <https://www.plos.org/publications/> (Accessed: March 12, 2016)

3 See for example Canada’s 2015 Tri-Agency Open Access Policy on Publications which includes as an eligible expense “Page charges for articles published, including costs associated with ensuring open access to the findings (e.g., costs of publishing in an open access journal or making a journal article open access).” Available at: <http://www.science.gc.ca/default.asp?lang=En&n=F6765465-1> (Accessed: March 12, 2016)

In the wake of the Finch Report (Finch 2012) and its subsequent implementation in the United Kingdom there are several research projects under way which seek to analyze the financial viability of providing open access more globally to academic journal literature. One idea is to replace many or all subscription fees with APCs. The present article – actually more of a thinkpiece than a scholarly contribution – offers a tentative response to this more recent phenomenon⁴.

2. Two Research Projects

Two research projects are particularly notable in this regard. The University of California, under the leadership of UC Davis and the California Digital Library and with support from the Andrew W. Mellon Foundation, is undertaking “Pay It Forward: Investigating a Sustainable Model of Open Access Article Processing Charges for Large North American Research Institutions.” The project includes partnerships with three major research libraries (Harvard University, Ohio State University and the University of British Columbia) as well as the Ten University of California campus libraries. The rationale for this project is articulated in the grant submission, available online:

*“The key question that the proposed project asks is whether a large-scale conversion to open access scholarly journal publishing funded via APCs would be viable and financially sustainable for large North American research-intensive institutions, whose faculty currently author a significant percentage of the world’s research.”*⁵

Similarly, a Max Planck Digital Library Open Access White Paper was published on April 28, 2015. The White Paper provides data to support the authors’ conclusion that:

“... a large-scale transformation of the underlying business model of scientific journals is possible at no financial risk. Our own data analysis shows that there is enough money already circulating in the global market – money that is currently spent on scientific journals in the subscription system and that could be redirected and re-invested into open access business models to pay for APCs” (Schimmer 2015).

The scope of these two major contributions to the scholarly communications debate are by no means identical. The quality and value of the data on which their findings are based need not be doubted. However, they are united in their focus on exploring APCs as a means towards a sustainable Open Access environment for scholarly communications. Both studies appear ready to indicate that large research libraries would realize a substantial economic gain on behalf of their parent institutions

⁴ Although the conclusions are my own, I would like to thank several individuals who helped me to arrive at them: Prof. Michael McNally; Kathleen Shearer; Janet Williamson; Prof. Heather Zwinger.

⁵ University of California Libraries (2014). Pay It Forward: Investigating a Sustainable Model of Open Access Article Processing Charges for Large North American Research Institutions. Available at: <http://icis.ucdavis.edu/wp-content/uploads/2014/06/UC-Pay-It-Forward-narrative-2014-FINAL.pdf> (Accessed: March 12, 2016)

if APCs replaced subscription costs as the principle underlying business model for scientific journals.⁶

3. APCs and Social Inequality

I believe these two studies – both of which may be regarded as ongoing – present longstanding advocates for OA such as myself with a new challenge. It seems to me that a business model for scholarly communications largely or entirely based on APCs, whether or not it is financially advantageous for research-intensive institutions, needs to be questioned: does it not represent a substantial economic barrier to the authors, institutions, funding agencies and governments we would most wish to serve through OA initiatives?

Such a question leads in many directions, one of which involves a reconsideration of the initial motivations behind the open access movement. Not surprisingly, the Wikipedia entry for Open Access offers an excellent summary of these and provides extensive references to Peter Suber's outstanding 2012 monograph on the topic (Suber 2012). The entry notes the technological and economic rationale for OA before stating that

“The OA movement is motivated by the problems of social inequality caused by restricting access to academic research, which favor large and wealthy institutions with the financial means to purchase access to many journals, as well as the economic challenges and perceived unsustainability of academic publishing.”⁷

It is this concept of social inequality that seems not to be sufficiently well addressed by business models for scholarly communications based on APCs. A system based on author payments continues to favor those authors affiliated with organizations that have the means to pay. Both philosophically and literally, no matter how low the charge, there will be authors, institutions, funding agencies and governments unable to afford the cost of APCs.

This is not an original insight: in a seminal article by Peterson, Emmett and Greenberg in the *Journal of Librarianship and Scholarly Communication*, the authors note that *“Lurking behind the joy of “the reader gets free access” are subtle assumptions and ethical dilemmas that arise on the author side of the equation. Averting new inequities as the OA movement gathers momentum is critical”* (Peterson 2013).

These inequities will be seen and experienced differently by different groups. Red flags have already been raised in relation to scholars working in Humanities disciplines by one of the initial Co-Directors of the Open Library of Humanities (Eve 2014). But in truth the problem is even larger: political scientists may legitimately argue that OA models proposing APCs form part of an unintended neocolonialism – or should that be neoimperialism? – in which first world publicly and privately funded research smothers the work of academic researchers in developing nations as well as the *bona fide* research of other excluded or underprivileged communities, at home and abroad. Such an outcome would perpetuate and even reinforce an already well-

⁶ This foreseeable economic gain is not based solely on an analysis of current variable costs compared to the new model. Both studies also contain valuable assessments of potential financial implications for research institutions in the future.

⁷ https://en.wikipedia.org/wiki/Open_access#CITEREFSuber2012 (Accessed: March 12, 2016)

documented system of discrimination by which important groups are denied the privilege of seeing their research disseminated through generally accepted vehicles of scholarly communication.

APCs do address many of the financial concerns that have been used by OA advocates ever since the movement was founded. Sadly, however, it seems to me that they provide a route to satisfying the terms of foundational documents such as the Berlin Declaration on Open Access⁸ and the Budapest Open Access Initiative⁹ without solving the more knotty problem posed by the concept of social inequality. Thanks to the internet, I think most of us would agree that there is no longer any technological justification for this. I have heard the financial argument that if APCs were adopted in place of subscription costs then research institutions would save so much that they could collectively repurpose a portion of the savings to address any inequities in the new system. Unfortunately, in addition to being vulnerable to all kinds of ethical pitfalls, there is insufficient evidence of this rebalancing effort in the current subscription-based environment, where it would seem to be equally valid. Stronger arguments may be based on the very real danger that without APCs we are left with an untenable *status quo*. There is no easy answer to this, but one way to develop a response is by briefly considering a theoretical framework for understanding APCs in relation to disruption theory.

4. APCs and Innovation

Disruptive innovation is a much-discussed business term coined by Harvard Business School Professor Clayton M. Christensen:

*“Disruptive innovation ... describes a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors.”*¹⁰

Since introducing the concept some 20 years ago, Prof. Christensen and his followers have had to spend more and more time distinguishing disruptive innovation from other forms of market change (Christensen 2015). Although postsecondary education has frequently been a target of the theory, it has not to my knowledge been applied to OA. In my opinion, however, OA was originally developed as a proposal that would lead to exactly the kind of disruptive innovation described by Christensen’s theory, i.e., allowing new market entrants – specifically OA journal publishers – to displace their established, subscription-based rivals. An OA world based on APCs, by contrast, appears instead to meet Christensen’s definition of a *sustaining* innovation:

*“Disruption theory differentiates disruptive innovations from what are called ‘sustaining innovations.’ The latter make good products better in the eyes of an incumbent’s existing customers: the fifth blade in a razor, the clearer TV picture, better mobile phone reception. These improvements can be incremental advances or major breakthroughs, but they all enable firms to sell more products to their most profitable customers.”*¹¹

⁸ <http://openaccess.mpg.de/Berlin-Declaration> (Accessed: March 12, 2016)

⁹ <http://www.budapestopenaccessinitiative.org/read> (Accessed: March 12, 2016)

¹⁰ <http://www.claytonchristensen.com/key-concepts/> (Accessed: March 12, 2016)

¹¹ Ibid, 47-8

Setting aside the many obvious differences between academic and commercial business, it does seem possible to assert that an open access world based on APCs would make the journal article look better in the eyes of existing customers by providing more value for money. However, like all sustaining innovations, it might also maintain a kind of exclusive *status quo* for both market incumbents and their customers.

5. Conclusion

If the widespread and largescale adoption of APCs does not provide an optimal route to an OA environment for scholarly communications, because it fails to address the issue of social inequality, then what is the better path? empowering the voices of those who are currently disenfranchised: the research- oriented authors, institutions, funding agencies and governments who already face economic barriers, whether to research access or dissemination, but whom we would like to include in our more equitable – and therefore more productive – future. Given the heterogeneity of these disenfranchised groups it seems obvious there will be no single solution. Forums open to diverse international and multidisciplinary perspectives such as Elpub might well provide good starting points.

It also seems obvious, at least to this author, that such a question cannot be answered without questioning the long term future of the academic journal. After all, last year was declared to be the 350th anniversary of its birth, marked by the publication of the first volumes of the *Philosophical Transactions* (London, 1665) and *Le Journal des savants* (Paris, 1665)¹². Such an anniversary surely provided an excellent opportunity to reflect on the value of perpetuating the dominance of the academic journal: a first world product intended for a first world audience. This opportunity seems to have been largely missed. Yet the question remains: designed to use a particular 17th century technology to solve a particular 17th century problem, does history in the modern period justify the academic journal's – and journal publisher's – continued hegemony in the world of scholarly communications?

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¹² For an excellent overview of the growth and present state of the scholarly journal industry, see Larivière V, Haustein S, Mongeon P. (2015) 'The Oligopoly of Academic Publishers in the Digital Era.' PLOS ONE 10(6): e0127502. doi: 10.1371/journal.pone.0127502

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