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Subscribe to Open

Modeling an open access transformation

The introduction of Plan S, an initiative for open access launched by a group of primarily European national funding agencies and two foundations in late 2018, prompted discussion about how publishers will transition to full open access.¹ Many current open access models involve article processing charge (APC) payments. Here we describe an alternative model, Subscribe to Open (S2O).

In 2015, Max Planck Digital Library published a paper arguing that enough money exists in the global scholarly communication system to enable a “flip” to an entirely open access paradigm.² The following year, the “Pay It Forward” study explored the idea of a full flip to a publishing-fee driven system.³ It found that for research-intensive institutions in North America, library budgets are insufficient to cover the costs of publishing. The study also posited grant funding could cover the difference between estimated publishing costs and the library’s budget, in which case, authors using grant dollars to pay for publishing would “act as informed consumers of publishing services.”⁴

However, as Shaun Yon-Seng Khoo summarizes from recent analyses of publication rates and APCs, APC price inflation is not controlled through market competition, because authors tend to base their decisions on where to publish by prestige of the scholarly journal title, not price.⁵

We are librarians at a large, research-intensive university. Our library budget is not sufficient to support a publishing model in which APCs are paid for all articles, and we question the sustainability of such a model

given the rate at which average APCs are increasing. Additionally, Plan S’s introduction raised concerns about how scholarly societies, especially those from disciplines whose researchers tend to have limited research funding, can transition to full open access on Plan S’s timeline.

A 2019 report describes seven types of “transformative models” for making this transition.⁶ There are advantages and disadvantages to all of these. We find one of the models, S2O, particularly attractive and developed a simple model to better understand it. Exploring the S2O model in depth will help librarians understand publisher offers and prepare librarians to collaborate with publishers on transitioning to open access models.

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S2O has several key features, including:

- “Subscription-like” payments are used to make all newly published content immediately open access.
- Authors are not charged APCs or other fees.
- Incentives encourage subscribers (or a critical mass of subscribers) to participate.
- Subscriber participation can be assumed because only with participation can the model succeed. If too many subscribers cancel, the

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journal(s) revert to subscription-based, closed access.

- Yearly renewal processes are similar to a regular subscription and fit into existing workflows.
- Publishers with multiple titles can implement the transition in phases.

Ellen Finnie describes AR's S2O model as having both a carrot and a stick:

The carrot is a 5% discount on the Subscribe to Open titles [for the 2020 offer]. The stick is that if we lose subscribers the project becomes untenable and the journals will remain gated. Thus, the choice for institutions that require ongoing access is between subscribing to open or, if they choose not to, subscribing to a gated version of journal at a higher price.⁷

This model is different from a purely voluntary donation model in that all, or nearly all, current subscribers must agree to continue making a subscription-like payment or the material does not become open.⁸ Raym Crow, Richard Gallagher, and Kamran Naim recently published details on AR's perspective on S2O.⁹ Berghahn Journals announced a new S2O model for 2020 for 13 journals. Their implementation includes a 5% price increase for those journals, however subscribing to the entire 13-journal open access collection negates the increase.

Benefits

There are several benefits to the S2O model:

- *S2O addresses the challenges of collective action in most non-APC-driven models.* Many collective funding models suffer from the “prisoner’s dilemma” and concerns about “free riders.” In S2O, the journal is only opened if enough subscribers agree to participate.¹⁰
- *The pricing model allows for broad participation in transitioning to open access.* High publishing institutions (which may face unmanageable cost increases in a pay-to-publish model) and low publishing institu-

tions (which have no incentive to continue subscribing when reading becomes free) can both support the transition financially.

- *No additional administrative costs for tracking APCs arise.* Libraries and publishers can use the current workflows and systems in place, making the model easier to manage than an APC-driven model.¹¹
- *S2O is an equitable model.* Researchers who cannot pay APCs can publish in open access journals, resulting in a more diverse scholarly publication landscape.
- *Increased access to high-quality research to a worldwide audience.* AR reported dramatic usage increase for their pilot title, expanding its reach to researchers from 57 to 137 countries.¹²

Challenges

No model for transitioning to open access is free from risk. Indeed, collective action in scholarly communication will be difficult to coordinate because of the many parties involved and the real financial challenges for both subscribers and publishers. We recognize several potential challenges:

- Publishers will need to set hard deadlines by which participation commitments are required.
- Journals will revert to a subscription model if too many subscribers cancel. What would happen to cOAlition S-funded researchers who have already submitted articles for publication is unclear.
- Libraries often cancel journal subscriptions due to flat or declining budgets. Withdrawing from S2O agreements would have an effect beyond a single institution.
- For publishers with large, expensive packages, S2O could replace one type of “big deal” with a different, perhaps bigger, deal.
- Publishers relying on APC revenue (in addition to their subscription income) may be unable to create reasonable S2O price points.

How S2O could work for a publisher

To explore the S2O model in more depth, we consider the hypothetical Publisher X.

Publisher X will launch their new S2O program in 2021 by transitioning three of their ten subscription journals to open access. For financial viability, this transition requires participation from nearly all current subscribers. To ensure success, Publisher X offers a small discount on the three journals as an incentive for current subscribers. Subscribers also retain access to the backfile, and the publisher will supply subscribers with COUNTER-compliant usage reports. Publisher X can offset the decrease in publishing income through adjustments in other areas of operation or consider the reduction an investment in the open access movement that was necessary to meet requirements placed on authors by their funding agencies (e.g., Plan S).

If participation commitment levels are reached by October 1, 2020, articles published in 2021 in the three journals would be free to read and not charge APCs. Subscribing institutions receive their regular, annual invoice with a discount applied for the S2O journals. Journals not included in the S2O program are not discounted.

Assuming success in 2021, Publisher X can expand the program to another three journals in year two and the remaining journals in year three. Commitments from subscribers are due by October 1 of the previous year. If Publisher X does not reach its required commitment level, the journals' subscription prices are not discounted.

Models

In Table 1,¹³ we model a 5% discount and allow for 3% inflationary increase per year. The publisher loses 1.5% of its income in the first year, 3% of the original the second year, and 5% of the original income once all journals are open access. The phased implementation provides Publisher X time to adjust their internal business model to cover the modest decrease in publishing income.

S2O is attractive even if Publisher X cannot offer a discount. Flat pricing or modest (inflationary) price increases may be sufficiently attractive, particularly for publishers with low subscription prices. As noted earlier, in their

S2O model, Berghahn Journals asks for a 5% *price increase*, which is a \$12.20 increase per title on average.

Not all subscribers may agree to the new model. Martin Eve has described a 90/3 arrangement, where if 90% of a journal's subscribers agree to a S2O model, the journal flips and participating institutions receive a 3% discount from their current subscription rate.¹⁴ We model this in Table 2.¹⁵ To simplify, we have assumed that a complete journal package flips at once.

Depending on the publisher's pricing structure and which institutions commit to the model, the publisher may have to adjust to a decrease in income from 4% to 24%. It becomes apparent that libraries with the highest current subscription prices (Tier 3) will need to agree to participate for S2O to succeed. However, the Tier 3 subscribers may be institutions with high publishing rates and an incentive to participate because of S2O cost savings compared to moving to a purely APC-driven model.

Discussion

We find S2O to be a promising alternative to APC-based models for its flexibility, simplicity, and requirement for participation from current subscribers. The essential idea behind S2O is one libraries already have experience with. Although arXiv¹⁶ and SCOAP¹⁷ are not S2O models, they follow a similar concept.

S2O addresses many of the problems of moving to a fully APC-based model. In an APC-based model, high-publishing institutions' costs would increase dramatically, and institutions with low-to-no publishing (including corporate subscribers that are high consumers but publish at low rates) would cancel their subscriptions when most of the content can be read for free.

S2O is less complex for subscribing institutions than many other models because the library makes one payment. This removes the need for institutions and publishers to establish or build out APC payment workflows. Additionally, it is based on a traditional subscription-like payment, instead of donations (not all

libraries can “donate” to publishing projects). The model is flexible in its implementation, and publishers with multiple publications can flip all journals at once or take a phased approach (as AR and Berghahn Journals are both doing).

S2O will not work for all publishers. The model will be successful for publishers whose subscription prices are close to their publishing costs, have small price increases year to year, have lower costs in general, and currently have little reliance on APC revenue. Additionally, publishers with fewer variations in subscription rates (based on institution size or other factors) will be able to move to a S2O model that accepts 10% attrition in subscribers more easily.

Conclusion

We have been interested in supporting the transition to open access, particularly for smaller, nonprofit publishers, and have followed recent developments closely. In reflecting on various open access models, we recognize a system in which all publications are funded through APCs will not work for every institution or publisher. We consider S2O a promising transformative model and encourage librarians and publishers to consider S2O as a viable option to transitioning to open access.

Notes

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17. Visit <https://scoop3.org/>. 