How libraries can support society publishers to accelerate their transition to full and immediate OA and Plan S

The relationship between libraries and society publishers has not previously been a close one. While transactions have in the past been mediated by third parties, larger commercial publishers or agents, there is now an opportunity for strategic new collaborations as societies seek to transition to open access (OA) and deploy business models compliant with Plan S. Wellcome, UK Research and Innovation (UKRI) and the Association of Learned and Professional Society Publishers (ALPSP) commissioned Information Power Ltd to undertake to support society publishers in accelerating their transition to OA in alignment with Plan S. Outcomes demonstrate support in principle from library consortia and their members to repurpose existing expenditure to help society publishers to successfully make a full transition to OA. Principles to inform the short- and medium-term development of OA transformative agreements have been co-developed by consortium representatives and publishers to inform development of an OA transformative agreement toolkit.

Keywords

Open access; learned society publishers; transformative agreements; OA; scholarly publishers; research information; journals

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Introduction

The relationship between libraries and society publishers has not previously been a close one. While transactions have been mediated by third parties, larger commercial publishers or subscription agents, there is now an opportunity for strategic new collaborations as learned societies seek to transition to open access (OA) and deploy business models compliant with Plan S. Wellcome, UK Research and Innovation (UKRI), and the Association of Learned and Professional Society Publishers (ALPSP) commissioned Information Power Limited to undertake a project in this space. It is called the Society Publishers Accelerating Open Access and Plan S (SPA-OPS) project.

For the project, we undertook interviews with funders, librarians and publishers and conducted a literature review. We surfaced a very wide array of transition strategies and business models in an online discussion document.[1] We surveyed library consortia and society publishers about these models and how to make them successful. We engaged with society publishers during workshops held in Europe, the UK and the US. We convened a workshop in which learned society publishers, library consortia and university presses co-developed a model offer and implementation framework for transformative agreements.

Is this work timely and important? Yes, we believe it is. Stakeholders are pushing for a change in business models to ensure research publications are openly available at the

time of publication. That in itself would be hard enough, but there is simultaneously real pressure from funders, libraries, research institutions, universities and some researchers for publishers to reduce the costs to academia of the publication system. At the same time, exciting possibilities are emerging for innovation in research services through the harnessing of technology such as artificial intelligence, big data and social media. The result is a rather heady mix of challenge and opportunity for all stakeholders in scholarly communications, not only publishers.

'exciting possibilities are emerging for innovation'

From its beginnings in the world of possibility and advocacy, OA has steadily moved into the realm of real-world practice. This shift started to take place at different times in many various parts of the world, in different subject areas, and this is manifestly a global movement. Funder policies have become a powerful driver of change. UNESCO tracks OA policies in 156 countries around the world.[2] Increasingly, there is a pattern of commitment to a worldwide transition to OA by a growing number of influential stakeholders in the research information landscape.

With publication of the Finch Report[3] in 2012, the UK embraced a policy framework aimed at a managed transition to OA. All routes to OA were in scope, additional funding was set aside by UK funding organizations and given to leading research organizations to support article processing charges (APCs) and/or OA infrastructure costs, and all stakeholders were actively engaged.

Implementation of the UK's national policy was co-ordinated and monitored by the UUK Open Access Coordination Group, formed by Universities UK (UUK) and chaired by Adam Tickell. The Group commissioned short reviews in 2015[4] and 2017[5] which described progress and new challenges that arose. They found:

- real progress toward the goal of increasing the percentage of UK outputs. The global proportion of articles accessible immediately on publication rose from 18% in 2014 to 25% in 2016, and the UK articles accessible immediately on publication rose from 20% to 37% during this same period
- hybrid journals were crucially important to the growth in immediate OA uptake. UK researchers chose to publish more than half their articles in 2016 in these titles, and the proportion of such articles published on immediate OA terms rose from 6% in 2012 to 28% in 2016
- there was also real and escalating concern at rising costs. Subscription costs continued to grow alongside the new APC costs and OA infrastructure costs. The magnitude of rising costs, particularly when concentrated with a small number of publishers, were of concern to funders who were a major source of support for APC expenditure. 'More than half the expenditure on APCs in 2016 went to the three major publishing groups, Elsevier, Springer Nature, and Wiley, with a particularly sharp rise for Elsevier since 2014.'

In his independent review,[6] published in 2019, Adam Tickell recognized that the publishing industry did a great deal of work to implement most elements of the UK's national policy. Acknowledging prior publisher efforts in this way – for example their investment in the systems to convert their titles to hybrid OA and provision of free access in UK public libraries,[7] both recommendations of the Finch Group – should help unlock goodwill for the further transition to come.

There remains more to do, and in a different way than what has come before. It would be helpful for publishers to acknowledge that other stakeholders do not feel publishers delivered enough transparency or any price restraint. Rather than deploying hybrid journals to help drive a quick and orderly transition to full OA in a way perceived as fair and sustainable for all stakeholders, publishers added a new revenue stream (APCs) on top of existing subscription revenues, crafted options in such a way as to maximize both of these revenue streams, focused effort on increasing article market share and/or the total volume of articles published, and reserved the benefit of any efficiency gains for themselves.

As outlined in a Jisc review,[8] concern about price increases drives broader concerns about anything that reinforces the journal brand as a proxy for quality, journal articles as a primary unit of quality assessment, the existing market power and financial returns to publishers, and the subscription model through OA uptake in hybrid titles. This review recommended new strings be attached to the use of public funds for APCs, particularly in hybrid journals. The aim of these strings was to prioritize APC funding with publishers in ways that encouraged a full transition to OA and was accompanied by service-level agreements to actively support OA in practice and in ways practicable for research libraries, and to encourage more active engagement by funders in negotiations with publishers.

'to prioritize APC funding with publishers in ways that encouraged a full transition to OA'

This UK experience is mirrored around the world on all continents. Plan S, announced in September 2018, is the initiative of 'cOAlition S', a consortium of international funders and research agencies coordinated by Science Europe and supported by the European Commission and the European Research Council. It is anticipated that other research funders will formally adopt the Plan S principles over time. It seeks to move to a world where all research findings are made OA. The Plan is structured around ten principles which call for the establishment of an intellectual commons, requiring research funded by public grants to be immediately published in compliant OA journals or platforms. After a transition period, the funder signatories to Plan S will not fund APCs for hybrid OA journals unless the journal is part of a transformative agreement. The only way a researcher could publish in such a journal and comply with Plan S would be if the journal allowed them to deposit their accepted manuscript in a suitable repository at the time of publication, without embargo, under a CC-BY licence.

As the number of researchers covered by Plan S-compliant funding increases, it is likely, over time, to put pressure on the business models of many of those learned societies that derive most of their income from publishing activity. This is because Plan S-funded outputs already make up around 7% of global papers and are well cited and published in high-impact journals.[9]

'pressure on the business models of many of those learned societies that derive most of their income from publishing activity'

Main challenges faced by learned societies in the light of Plan S

Learned societies are organizations, mostly not-for-profit, that promote a scholarly discipline or group of disciplines. They are found in large numbers around the world[10] and their activities typically include accreditation, advocacy, conferences, education, influencing and training. Many produce academic journals, some of which are published independently, and many of which are published under contract by larger, more commercial publishers.

As one society publisher so eloquently put it, 'often society publishers have a small number of very prestigious journals – so a small output of high-quality articles that have gone through exacting and high-quality editorial and production services. There is no scale to the system, the costs are high (for the right reasons) and the publishing output is low. It is a source of great pride to societies that we run the "best" and most reputable journals in our field and it is not a coincidence that we do – we are closer to our communities than other publishers (or we should be). So, there is both a business and an emotional connection to society publications for our communities'.

Learned societies generally began their OA journey by publishing hybrid open-access journals, usually funded by payment of APCs. There are examples of these journals that have flipped from hybrid OA to full OA[11] and there are also more than 1,000 fully OA journals published by society publishers.

Successful OA and Plan S-compliant business models will be important, and challenging, for learned society publishers for many reasons. Some of these they face in common with other publishers, and some are more related to their mission, size and subject areas.

Funding for APCs is a key concern for many publishers as they contemplate a transition to OA. For journals to flip to OA, budgets must also flip. A challenge for many publishers – notably in humanities, social sciences and in subject areas with authors who are clinicians or practitioners – is that authors are often not in receipt of grants to fund their research. So, in these areas, the availability of money to pay for APCs is severely limited.

If a transition to OA results in a decrease in publishing revenues, this will impact some learned society publishers disproportionately. Many rely on their publishing activities not just to cover the publishing costs themselves, but to generate revenue for other activities they undertake, such as hosting meetings, conferences, and awarding fellowships and other grants. While some society publishers have reserves or diversified funding streams, this is certainly not true for all.

'a decrease in publishing revenues … will impact some learned society publishers disproportionately'

Increasingly, questions are being asked about the extent to which funders and libraries can or should subsidize society activities via payments to journals, particularly where there are profit margins of more, sometimes much more, than 25%.[12] While there is wide support for the mission of these societies, there are other ways in which these activities might be funded, including direct donations.

The 2017 UUK monitoring report[13] looked closely at learned societies, concluding that while the financial health of UK learned societies 'remained sound in aggregate, margins from publishing declined in the period 2011–2015' and that 'revenues rose by almost 20% between 2011 and 2015; but rising costs put their margins under pressure'. At that time, societies were already seeking to diversify their income streams in response to the 'broader economic climate (which has seen cost pressures grow while revenues stagnate); political developments, including Brexit; and potential decisions on university and research funding'.

'working to creatively repurpose existing subscription revenue streams for immediate OA'

The very good news is that by working to creatively repurpose existing subscription revenue streams for immediate OA, publishers – even in disciplines such as humanities and social sciences – can fully transition to immediate OA. For those that are not very far along in the transition to OA, it should be possible to avoid some costly cul-de-sacs or to leapfrog ahead. Other opportunities offered by a full transition to immediate OA include:

- increased visibility for both society and subject area
- new alliances with funders, libraries, societies, universities and other stakeholders in the scholarly communication landscape
- collaborations and partnerships with a range of organizations closely aligned to a society's mission and able to support its objectives
- better support for early career researchers and new forms of scholarship
- strategic alignment with the future open scholarly communication landscape.

'Society publishers are well placed to drive scholar-centric change'

Essential to scholarly communication is that innovation is closely informed by researchers and their changing needs. Society publishers are well placed to drive scholar-centric change, confident in their extremely close and trusted position within their communities.

How learned society publishers can adapt and thrive under Plan S

A significant finding from our study was that only a small proportion of all the models we assessed involved APCs. There are numerous other business models, many of which are more promising, and all aligned with Plan S. Whilst the APC is the best-known route to delivering OA journals, we believe this approach has become over-conflated with OA itself. If

society publishers are realistically going to make an open transition, then they cannot simply add a new APC revenue stream; they need to transform their existing revenue streams to support OA publishing.

From the vast array of different approaches and business models we identified, seven categories emerged, which could feasibly be used alone or in combination, and we encourage readers to explore our discussion document[14] for further details of each of these models.

1. ***Transformative models***
   These approaches, five of which operate in the market today, repurpose existing institutional spend with publishers to open content. They are supported by both libraries and publishers and are the most promising transition model because libraries and library consortia provide the lion's share of funding in the current publishing landscape. Examples include 'read and publish' agreements, 'publish and read' agreements, SCOAP3 and 'subscribe to open'.
2. ***Co-operative infrastructure and funding models***
   These are close, strategic partnerships between libraries and publishers to jointly fund and provide open content and its supporting infrastructure. These models are deployed highly successfully in humanities and social science publishing.
3. ***Immediate sharing with CC BY licence***
   It is possible to continue to operate journals fully funded by the subscription model and still make the content immediately available OA and in alignment with Plan S. This green OA approach is dependent on either final published journal articles or author-accepted manuscripts being shared with a CC BY licence at the time of publication. A growing number of publishers, including society publishers, have successfully done this without experiencing lost revenue or other negative impacts.[15]
4. ***Article transaction models***
   Author payments such as APCs and submission fees can work perfectly well in titles where authors are well funded and support such payments.
5. ***Open publishing platforms***
   Pioneered by F1000, first adopted by funders, and now being embraced by publishers, in this approach authors publish their articles, which are then openly peer reviewed. Articles that are judged to be important and impactful can be specially curated and showcased. Societies adopting this model could, for example, provide peer review and/or curation services. Funding for these services could be obtained through any of the OA business models we have identified, although author fees are most common at present.
6. ***Other revenue models***
   There is a wide array of other business models that can work for individual publishers or titles, including advertising, crowdfunding, freemium, subsidies and syndication.
7. ***Cost reduction***
   There are also some well-established tricks of the trade that remain viable, whether combining journals to increase article numbers and make efficiency gains, collaborating with others (e.g. other societies, OA-only publishers, larger publishers) on shared infrastructure and services, moving online only, or outsourcing.

What we learned from the survey of library consortia

In parallel to surveying learned society publishers about the models outlined above, we also surveyed library consortia about their interest in working with society publishers to support transition to OA. A questionnaire was distributed via the International Coalition of Library Consortia, and replies were received from 26 consortia located in Austria, Canada, Germany, Greece, Jordan, Norway, Qatar, Slovakia, Republic of Korea, Romania, Slovakia, the USA and the UK.

Of respondents, 91% agree or strongly agree that they look forward to working with learned society publishers to develop new models. There were supporting comments that indicated consortia saw this engagement as a strategic opportunity to co-create future models that would work for libraries and publishers.

When asked if the consortium would 'participate in new initiatives that redirect funds currently used to pay subscriptions to make journals open access to users all over the world', more than 75% of respondents indicated this was very likely or likely (Figure 1).

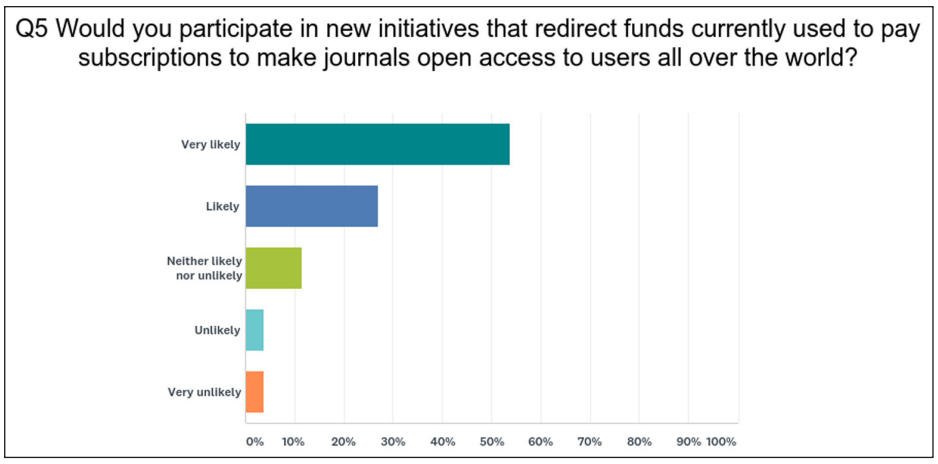

Figure 1. Responses from consortia to the question on whether they would 'participate in new initiatives that redirect funds currently used to pay subscriptions to make journals open access to users all over the world'

We also asked about how likely they were to engage in approaches that increased OA for the world, that resulted in authors not having to pay APCs and/or that developed new platforms and services that enabled learned society publishers to reduce costs (Figure 2).

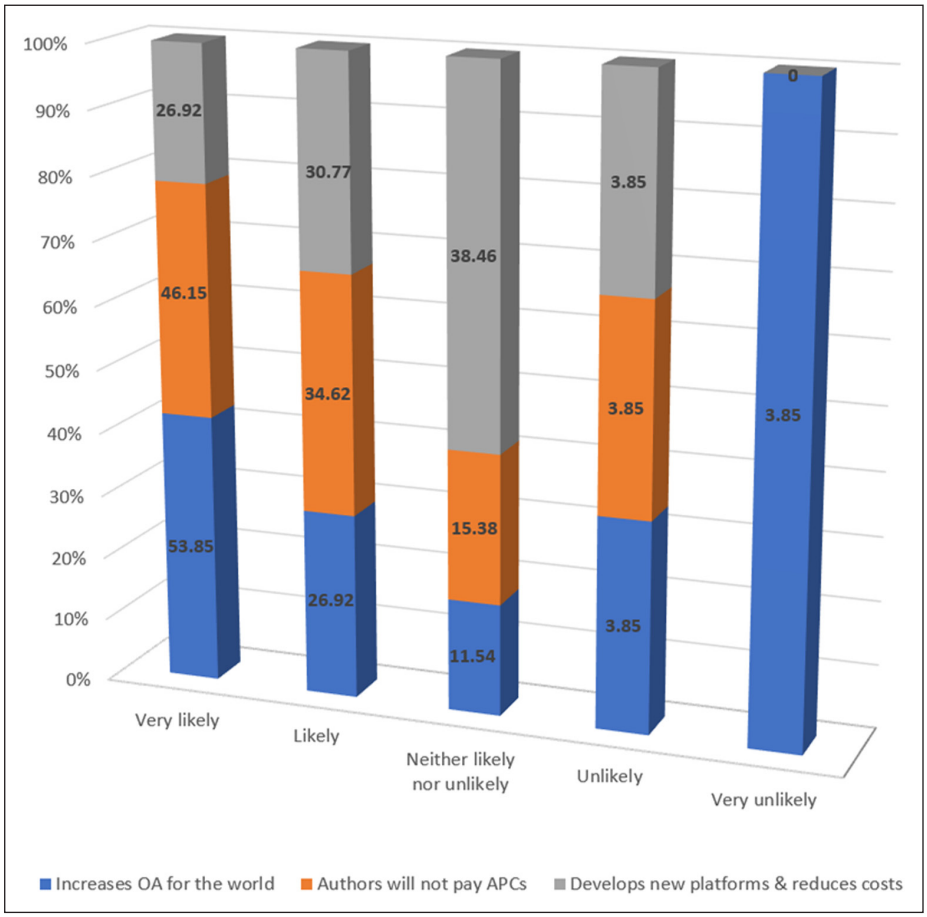

Figure 2. Responses from consortia helped us to understand their objectives in working with learned society publishers. Increasing OA content and enabling authors not to pay APCs were two key drivers

It is probably helpful to unpack the data in this graph just a little bit. The respondent from one consortium was rather negative about OA generally, and all three of the options presented. The other 25 respondents were positive about OA generally. Their responses to the three options are rather interesting. There was strong support for embracing approaches that mean authors will not have to pay APCs. The response about developing infrastructure received a somewhat more neutral response, and supporting comments suggest this is for at least two reasons. One respondent felt the goal of infrastructure development should be to improve services, and particularly metadata provision and discovery, rather than saving money. Another respondent expressed concern at what appears to be a proliferation of infrastructure projects, questioning whether more are needed and if this approach is sustainable.

We asked respondents to rank the most important criteria when developing new models to support learned society publishers, and the results are listed below.

1. Transparency of model (5.48)
2. No increase in the total cost of reading and publishing (5.22)
3. Generates more open access publishing (4.86)
4. Robust metadata with online identifiers (4.00)
5. Helps to maintain current cost distribution across member libraries (3.48)
6. Complete absence of APC invoices (2.91).

It is rather powerful that containing costs and developing more transparent models are even more important drivers than increasing OA for our consortial respondents. There are strategic opportunities here to really address long-standing library concerns about prices, and to build trust and strengthen relationships between libraries and publishers by engaging to co-create new models.

'containing costs and developing more transparent models are even more important drivers than increasing OA'

We used an agreement scale to understand how different models fit with the mission of the consortium, and how easy they were perceived to be to communicate and administer. In summary, there was not great enthusiasm for prepayment or freemium models as their highest scores (6) were on ease of communication. SCOAP3 scored highly on ease of communication (17) and administration (8), perhaps because this model has been around the longest and is most familiar, but SCOAP3 scored less strongly on fit with mission (5), perhaps because of the narrow subject focus. Publish and read models scored most highly on fit with mission (12) and being easy to communicate (16) and administer (8). The comments in response to the publish and read question demonstrated that the scores would have been even higher had we asked generically about transformative agreements including read and publish models. Comments indicated that the key point for consortia is to repurpose current spend to advance OA publishing, that there is value to both authors and readers in doing so, and as a result pricing based exclusively on publication output may be too restrictive.

We also used an agreement scale to explore whether it would be easier for consortia to support small learned society publishers if they were to collaborate with each other. Of respondents, 30% strongly agreed and 42% agreed, and there was some concern from some consortia about expanding their work to include the long tail or small and medium publishers. The solution suggested by some respondents is that these publishers should conform to the established practice of the consortium so that this challenge could be managed. Small and medium independent publishers have little experience of working with consortia and often sell to libraries via agents. There are practical concerns from their side as well. Shared approaches that can work for many publishers and many consortia are likely to be essential in order to achieve scale.

What we learned from the survey of society publishers and our publisher workshops

Transformative agreements of all flavours emerged as the group of business models that would be of most interest to many society publishers, if some practical challenges could be overcome. This is because this transition approach is not reliant on authors having access to APC funds – many do not and will not – and because it produces a steady and predictable revenue stream in just the same way that traditional subscriptions have done.

Gaining access to library consortia was a major practical concern, and results from our survey of consortia should provide some welcome reassurance on this point. A number of additional practical challenges were identified. Society publishers:

- desire clarity about what a compliant transformative agreement looks like and a checklist for how to enter into one. What are the clauses in such an agreement? What does the publisher need to calculate or communicate or negotiate?
- want confidence that their chosen approach to transformative OA agreements would resonate with libraries, and that they would gain traction in the market
- need opportunities to learn about transformative agreements and to refine/reject their pitches quickly in order to align with Plan S deadlines. Pilots in 2019 would be desirable in order to have 2020 to run through an entire renewal cycle before Plan S implementation begins in earnest
- are curious about rebalancing approaches that consortia might take and how any changes will be phased in as this might inform their own pricing models and approach to transformative agreements.

To begin to address these points, we convened a project workshop and invited international library consortium representatives, society publishers and university presses. The objective of the workshop was for participants to work together to co-develop principles for, and elements of, a toolkit for OA transformative agreements.

In this workshop it was recognized that any form of subscription agreement/payment can be transformed to facilitate OA publishing. This might include subscription agreements between:

- publisher and individual academic institutions
- publisher and a consortium (whether national or regional)
- publisher and non-academic institutions (e.g. corporations and governments)
- publisher and individual subscribers
- a collective or group of publishers and any of the above.

'transformative agreements can be struck by any type of publisher'

It was noted that transformative agreements can be struck by any type of publisher. This approach can be used successfully by small and medium publishers or by large publishers. It can be used by OA-only publishers for sustainability as well as by hybrid publishers in transition. It can be used by commercial publishers and not-for-profit publishers. Subscription spend of all types can be repurposed to support OA publishing and this approach need not only be focused on hybrid journal titles in their transition to full OA.

'Subscription spend of all types can be repurposed to support OA publishing'

Workshop discussions focused on central agreements between publisher and consortium, but it was acknowledged that very similar agreements could be used between publisher and institution. Arrangements with aggregators and agents will also need to be transformed in support of striking more OA transformational agreements direct with institutions.

What principles might be used in transformative agreements?

We brainstormed what potential factors could be used to agree a price for a model agreement and discussed the strengths and weaknesses of each from the perspective of different types of stakeholders. And then we had some coffee and discussed this issue again. We tackled it a third time after lunch. This was not an easy discussion – it can be easier to communicate what is not wanted rather than what is – but all participants engaged in a lively and thoughtful way and the urgency brought by Plan S was hugely constructive to focus minds and find pragmatic ways forward.

We considered a wide range of potential factors, and in the end opted for pragmatism. Stakeholders wish to accelerate the transition to OA. Society publishers need to experiment and revise their OA transformative models quickly if they are to communicate by the end of 2020 when they will fully transition and align with Plan S. Libraries and publishers must therefore work together in a very fast, practical way in the short term while starting a broader strategic discussion about pricing and other factors that could be put in place to ensure the system is more equitable and sustainable for all going forward.

> 'The most practical short-term approach is for OA transformative agreements to be cost neutral and … based on current spend'

The most practical short-term approach is for OA transformative agreements to be cost neutral and therefore based on current spend. This might include both current subscription spend and current APC spend. Some consortium representatives flagged that they would need to discuss this principle further with library members who feel strongly that only current subscription spend should be considered when striking transformative agreements. There was strong consensus, however, that current spend was not a desirable or sustainable basis on which to price OA transformative agreements going forward.

> 'current spend was not a desirable or sustainable basis on which to price OA transformative agreements going forward'

If the contract is with a consortium, the price should be based on aggregated spend by institutions, but the consortium should be free to allocate this total amount to its members in the way it chooses.

It is highly desirable that there should be no cap on the number of articles published by corresponding authors affiliated to a participating organization. OA transformative agreements should not be based on estimated publishing volumes, but rather actual author behaviour (e.g. actual article numbers from the preceding year or years). This allows for change as author choices may change over time.

In future, pricing should migrate to something more suitable than current spend, but it was accepted that this requires broader discussion and consensus building and that all parties will need time to budget for change. There was a strong sense from the library consortia that none wishes to put more money into the current system for transformative agreements unless library spend decreases somewhere else in the system, and there is currently no confidence or transparency that this is happening.

> 'An equitable approach to future pricing is needed, one that …recognizes that value is provided to authors, readers, institutions and society'

An equitable approach to future pricing is needed, one that does not push systemic costs only to the shoulders of research-intensive universities and instead recognizes that value is provided to authors, readers, institutions and society. Institutions that benefit are not only research-intensive universities but also teaching-intensive ones and organizations in the charitable, government and private sectors.

Future pricing approaches would ideally be transparent, equitable around the world, and linked to impact of services on authors, readers, institutions, and society. And it is desirable to craft a system where all can contribute, and free-riders are minimized.

Factors to support more equitable division of global systemic costs amongst players might include:

- national research and development expenditure (e.g. UNESCO data on science, technology, and innovation by country[16]) and the percentage of total global research and development spend that this represents
- Total Gross National Income and Gross National Income per capita[17]
- Research4Life eligibility criteria[18] for least developed countries.

Impact metrics will continue to evolve but might, in the short to medium term, be based on proxies such as:

- ***for authors*** – citations, media coverage, time from acceptance to publication
- ***for readers*** – citations, number of students/teachers/researchers, online engagement, rejection rates, relevance to subjects taught on campus, steps to maximize usage
- ***for institutions*** – numbers of articles published by corresponding authors affiliated with institution, number of readers served (i.e. researcher, students, teachers), number of submitted vs. accepted articles, relevance of portfolio/title to strengths of institution, wider service provision (e.g. continuing professional development courses, events, bursaries, etc.) subsidized by journal prices
- ***for society*** – public engagement with and understanding of science, public confidence in research and researchers and research institutions.

Based on these principles, key elements were identified for a model transformative agreement to be published openly for anyone who would like to use it. These elements are:

- the short-term pricing approach is to be cost neutral
- a mutual commitment to work on shared approaches for future pricing that are transparent, equitable around the world, and linked to impact of services on authors, readers, institutions and society
- current content to be open in perpetuity
- archival content to be free for all in the institution or consortium to access and read. Ideally, archival content would also be made OA, but it was recognized that it may be impossible to retrospectively convert the licences for this content to open licences
- post-termination access to be provided if/when agreement ends
- an explicit statement that the agreement is a mechanism for transition with the aim for the publisher to shift to full OA over time
- authors to retain copyright, and the default licence to be used for their OA publications is CC-BY 4.0. [NB: CC-BY-SA 40 is also acceptable under Plan S, and CC-BY-ND 4.0 may be agreed on an exceptional basis by cOAlition S funders. Third-party content included in a publication, for example images or graphics, are often included under a separate form of licence and this should be clearly labelled.]
- a description of the services that the publisher provides in exchange for the fee paid
- adherence to the mandatory cOAlition S requirements for publication venues related to quality and technical aspects including use of persistent identifiers, deposit in a long-term digital preservation or archiving programme such as CLOCKSS or Portico, high-quality metadata available under a CC0 licence (including author name and affiliation plus funder and grant identifier), and machine-readable information on the OA status and licence embedded in the article
- a commitment to work together to evaluate the agreement and how it is working
- standard legal terms and conditions (e.g. of warranties, jurisdiction) of one of the parties' standard model licence (if there is one)

- ideally, a two- to three-year agreement so the parties have time to learn and evolve together
- details of the agreement, including services provided, pricing models and terms, to be made publicly available online via (amongst others) the Efficiency and Standards for Article Charges (ESAC) Repository.

Data needed to inform development of a transformative OA agreement

At the most basic level, what is needed to form the offer for a transformative agreement in the short term is:

- information about current subscription spend
- a reasonable estimate of article outputs by corresponding authors affiliated with each institution in the consortium
- information about current APC spend if available. If not available, then the number of paid OA articles from each institution per year might be multiplied by an average APC figure
- any data needed to return to the starting position should the OA transformative agreement be deemed unsuccessful.

If the agreement is with a consortium, the publisher is asked to provide a spreadsheet showing which of the member institutions subscribe, and how many authors in each institution publish a) paid OA, b) free OA, or c) subscription, ideally with a three-year history but at least for the preceding year.

There was some discussion of how to minimize free-riders in a landscape of increasing numbers of transformative agreements. It was recognized that there is potential for free-riders at many levels: country, institution, or individual.

It was also recognized that growing a shared sense that pricing should be equitable and transparent, and building trust between stakeholders, will be helpful as we move forward.

There is a need for both the public and private sectors to support OA publishing costs going forward. For example, commercial organizations that employ authors should fund publication costs for their researcher employees but should also recognize that their readers benefit from the availability of more OA content. Libraries and consortia might have roles to play in engaging here, for example by reaching out to commercial organizations partnering with their institutions about a shared approach to funding OA publishing. It would also be helpful to engage government departments which fund research and employ researchers.

'Society publisher trustees … need to be confident their activities are viable'

Publishers will need to reflect on how OA transformative agreements fit into their transition plans. Society publisher trustees, for example, need to be confident their activities are viable. They do not necessarily need to know that 100% of their revenue will transform, but they need to be absolutely confident that enough of it will. Will publishers therefore ask all subscribers to commit to open at the same time, and then approach them again to seek annual recommitment (as in the 'Subscribe to Open' model from *Annual Reviews*)? Will existing subscribers receive some form of modest discount to incentivize them to begin, or benefit from lower costs in future as additional supporters come on board, or will they need to wait and see based on further discussion around fair pricing principles for the longer term?

Journals with a great deal of secondary income (e.g. from advertising or copyright licensing) may need to secure more than 100% of current subscription spend through transformative agreements before being able to transition journals fully to OA.

Conclusion

As our research shows, most consortia look forward to working with learned society publishers to develop new models which will make journals OA to users all over the world. Most consortia are also willing to participate in new initiatives that redirect funds currently used to pay subscriptions to make journals OA. Our research also shows that transformative agreements are a promising mechanism for doing this. Their advantage is threefold:

- they enable immediate repurposing of current subscription payments to support OA
- they need not be tied to old pricing methods, and provide a foundation for transition to transparent pricing metrics as they evolve
- the distribution of the payments across member libraries remains in the control of the consortium.

'transformative agreements are a promising mechanism'

While some consortia, such as Jisc in the UK, are already engaged in working directly with learned society publishers on transformative agreements, most consortia have little, if any, experience of working with them. In some cases, this is because some learned society publishers partner with larger publishers. However, the ones we have focused on in our study are the independent learned society publishers who market and sell their journals directly or via agents, usually to individual libraries rather than consortia.

Independent learned publishers and consortia both tend to be small organizations with limited resources, unable to work in a bespoke way with each other. Bespoke agreements, anyway, would not foster the transparency which is such an important criterion in developing new models. This is why in September 2019 we will be launching a standardized toolkit which can be used by consortia, learned publishers, or their agents to quickly negotiate transformative agreements.

Data accessibility statement
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Abbreviations and Acronyms
A list of the abbreviations and acronyms used in this and other *Insights* articles can be accessed here – click on the URL below and then select the 'full list of industry A&As' link: http://www.uksg.org/publications#aa

Competing Interests
Both authors are directors at Information Power Ltd, the company invited to conduct this project for ALPSP.

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