Towards sustainable open access: A society publisher’s principles and pilots for transition

Malavika Legge

Director of Publishing, Biochemical Society & Portland Press, 90 High Holborn, London, WC1V 6LJ, UK
ORCID: 0000-0002-7265-2564
E-mail: malavika.legge@biochemistry.org

Key points
- New partnerships are needed to move away from paywalls and avoid article publishing charge-based publishing.
- It remains difficult for small societies to negotiate with consortia, and partnerships with other societies may be a route forward.
- Being open to different open access routes and using different pilots are key to learning which routes will be sustainable in the future.
- While the starting position for most ‘read and publish’ offerings is based on historical spend, this will need to be re-evaluated in the longer term.
- The lack of independent, universal reporting mechanisms and universally adopted persistent identifiers for institutions is a barrier to establishing agreements and one that needs a cost-effective solution.

INTRODUCTION

The Biochemical Society was established in 1911 during the early origins of molecular biology and, based on the number of members, is the largest UK-based, single discipline focused society within the biosciences. We are a charity existing to serve and advance the molecular biosciences. The Society carries out scientific meetings, gives out grants and awards, does policy and public engagement work, runs training events and courses, disseminates knowledge, has about 7,000 members, and offers its range of activities and programmes to the entire community of molecular bioscientists based all over the world.

The Society owns and publishes six journals plus one free-to-read magazine and also publishes a seventh journal that is co-owned with the Royal Society of Biology. This makes the Biochemical Society a self-publishing society, and we own our own publishing arm, Portland Press. All titles are published via Portland Press, the wholly owned subsidiary of the Society, and all surpluses made through publishing activities are returned to the Society in support of the Society’s programme of charitable and scientific activities.

Publishing remains one of the Society’s activities; bringing together bioscientists and disseminating knowledge (including via published articles) is part of the organization’s mission-driven work. Publishing also contributes >70% of the Society’s income, essentially funding its charitable and community-focussed work.

Being owned by the Biochemical Society means that Portland Press’ work and commercial strategies must be in harmony with the community of scientists that the Society serves and must stay true to the Society’s mission to advance the molecular biosciences. In this, we face something of a ‘paywall conundrum’, explored further in an article published in August 2019 in the Society’s magazine (Legge, 2019).

Acknowledging this, the Biochemical Society has been committed to open access (OA) for a long time. In 2012, the Society’s Bioscience Reports journal was flipped to full OA. This was a hard, ‘cliff-edge’ type of flip, where, overnight, substantially all articles needed to start yielding an article publishing charge (APC) to support Gold OA publication under a CC BY licence. Copyflow in this title plummeted to nearly zero as a result, and the journal struggled (both for copy and financially) for 5 years before turning a profit well into its sixth year from ‘the flip’.

At an overall portfolio level, the Portland Press journals owned by the Biochemical Society currently publish >50% of content on an OA basis; the percentage of OA content differs from title to title across the seven (two full OA and five hybrid OA) journals, with the average percentage of OA content in hybrid journals being about 20%.
Based on 2018 data, the geographical distribution of OA articles as a percentage of all OA articles (per APC orders, ranked by country of corresponding author) across the portfolio is as follows:

- 55% OA content from China
- 21% OA content from Europe – two thirds of European OA articles are authored by corresponding authors in the UK
- 6% OA content from the USA

In the subsequent section of this article, our operating principles for commencing a transition to OA publishing models are explained, with some examples of how we are living these principles included, and a brief look at questions that are still unanswered at this stage. These principles are derived from the Biochemical Society and Portland Press’ latest open scholarship position statement (referenced under principle 1 below) (Biochemical Society and Portland Press, 2019a). A large share of the thinking in these principles also reflects my personal views that were arrived at by reviewing internal data and distilling conversations had over the last year with internal colleagues, institutions, funders, Biochemical Society trustees/Committee members, and also colleagues based at other learned society publishers, many of whom are now organized into the relatively newly formed Society Publishers’ Coalition or SocPC.

In terms of setting out the wider learned society context, as covered in a blog from the SocPC in October 2019 (SocPC, 2019), it is worth noting that many society journals are actively engaged with open scholarship and transparency. Learned societies have launched or flipped over 1,000 OA journals (see https://cyber.harvard.edu/hoap/Societies_and_Open_Access_Research and also https://docs.google.com/spreadsheets/d/1A52hoXxXwvhQGpmVItz2zzcDRTTOZqEPdY_PHv9nY6kc/edit#gid=1), and some societies have been looking at models to enable full OA without charging authors for a few years now. The Royal Society of Chemistry’s Gold for Gold experiment (that ran to the end of 2016) and the Institute of Physics’ past collaborations with SCOAP3 and CERN (IOP, 2013) are good examples of learned societies’ willingness to experiment and trial new models. While funder and publisher policies and priorities around OA differ greatly across the globe, the thinking around transitioning to OA presented in this article is driven by internal strategic commitment to scope and commence a transition. The principles for commencing a transition to OA that appear below represent the perspective of a small (as defined by a portfolio of seven journals), self-publishing learned society in the STM sector. This article then goes on to explore how these principles have translated into live pilots for 2020, and lessons learned.

PRINCIPLES FOR COMMENCING A TRANSITION TO OA

Commitment to a transition strategy brings clarity and purpose

Considering several scenarios, the Portland Press Board of Directors specifically chose a transition to OA in June 2017 – more than a year before Plan S was announced. The Society then published its first Open Science policy in April 2018 (Biochemical Society, 2018).

The Society and Portland Press now share a joint commitment to transition to OA, judging this to be appropriate and useful to the molecular bioscience community of researchers; moreover, this goal is also judged to be possible for seven journals publishing in molecular biology and the life sciences, where funding for OA publication abounds. (How reasonable a transition to full and immediate OA might be for titles in other subject-areas is a separate topic that is not explored in this article.)

We are committed to scoping and making a transition to OA, and this trajectory is now written in to our strategy for 2019–2021 (Biochemical Society and Portland Press, 2019b). Arriving at this position gives us clarity and focus, equipping Trustees, journal Editors in Chief, Editorial Board members, and staff to work together with common purpose to assess the next steps and tackle the specifics of charting a way forward. During OA week in October 2019, the Society and Portland Press released a joint position statement on open scholarship (Biochemical Society and Portland Press, 2019a).

Learn by doing

We have taken the position of being willing to experiment and pilot different offerings in order to see how much of a transition we can affect for our journals in what we judge to be a fair and sustainable way for researchers, for institutions, and for the Biochemical Society. At our size and with our mission-driven purpose, following exactly in the footsteps of large commercial publishers (operating at a different scale) was not going to be a helpful way forward; while we have taken inspiration and learnings from existing ‘read and publish’ deals, we have also brought different thinking to sales offerings and have been willing to trial these so we can learn by doing.

Rewire current spending via institutions

Our goal is financial sustainability. We see sustainability as protecting our income and having enough income, year on year, to allow the Society to continue its charitable work, as well as generating enough income to invest in and continuously improve on and innovate with the services we offer the global research community. Approximately 75% of our income is reliant on subscriptions to and purchase of paywalled content. We are aiming to rewire the current subscription income in favour and support of OA publishing. As a first step, we see this ‘rewiring’ taking place by clubbing together reading/subscription and OA publishing (APC) spends into a single offering. This approach has much precedent and has been variously called ‘read and publish’, ‘publish and read’, striking ‘transformative agreements’ (see Efficiency and Standards in Article Charges [ESAC], n.d.), or ‘transformative arrangements’ (cOAlition S, 2019), as well as a transitional agreement’ (Jisc, personal communication, September 2019).
The initiative for ESAC broadly defines transformative agreements as ‘temporary and transitional’ contracts negotiated between institutions and publishers ‘that transform the business model underlying scholarly journals from subscription to open access’. In practice, however, there is variation in how individual funders, institutions, and publishers interpret (and the latter implement) such agreements.

For the remainder of this article, the term ‘transformative’, abbreviated to Tx, will be used specifically to describe the Biochemical Society and Portland Press ‘flavour’ of ‘read and publish’ pilot offerings that, save for a simultaneous and similar approach of the Microbiology Society, we do not believe has precedent and that we are piloting for 2020. Our Tx approach is a pilot programme commencing in 2020 that offers institutions access to paywalled content plus unlimited, APC-free OA publishing for affiliated corresponding authors at a single, fixed fee that will not change regardless of the number of OA articles published under the deal.

**Take individual APC invoices away from authors**

We strongly believe that the ability to publish should not be linked to an individual researcher’s ability to pay; in 2018, our journals had authors (both co-authors and corresponding authors) based in 60 different countries. Authors in different parts of the world have varying sources of funding for OA publishing; while we are seeking a transition to full OA publishing, we are keen on moving away from transactional APCs as the sole model of choice for transitioning to OA as this would increase the number of mandatory invoices landing in front of individual authors and researchers. A transition to OA and rewiring of subscription spending gives us the opportunity to move away from individual APCs.

This is not to say that an APC model is, in general, invalid. We do have one (growing) full-OA journal that is currently supported by individual APC payments. However, our general thinking about APCs is that it is not the model of choice for facilitating a transition away from paywalls. We do not think it would be sustainable, equitable, or efficient if all OA publishing in the entire scholarly communications ecosystem were to be carried out under transactional APCs. Rather than proliferating invoices and transactions, we are seeking alternative, more researcher-friendly solutions for our transition path.

If OA needs to evolve beyond the APC (which we believe it must, especially in the case of transitioning hybrid titles and paywalled content), then the simplest first step, as we see it, is to harness payments and transactions already being made in order to support ongoing OA publishing.

**Support as much OA publishing as possible to drive the transition**

Our Tx pilots have already been agreed upon with two consortia and are offered to hundreds of individual subscribing institutions in their renewal cycle for 2020. Unlike most other transformative offerings that we are aware of, our Tx model will offer ‘all-inclusive’ read and publish, providing unlimited OA publishing, on an APC-free basis, alongside read access to all our currently hybrid journal titles with paywalled content.

The unlimited OA publishing without APCs extends to all journals in the portfolio: all five subscription/hybrid journals, as well as our two full-OA journals. Doing this upholds the previous ‘reduce APC invoices’ principle and gives us a mechanism to trial a model that, depending on uptake and success, could move us away not just from the legacy subscription model but also from article-level APCs in the full-OA titles that currently depend solely on APCs.

**Flip institutions to flip journals**

As a possible route to a sustainable transition, we posit that increased uptake of our Tx offerings will affect (or at least move us further towards) full OA. When most or enough content in our currently hybrid journals is published OA under a Tx deal, we will then be able to flip these journals to being fully OA. This leads to the question of what ‘most’ or ‘enough’ means. As we stand on the brink of pilot deals for 2020 (see next point), we cannot, at this moment, affix a specific percentage to this. What we do need in terms of being able to transition or flip titles in the future is sufficient uptake of the Tx offerings followed by suitable levels of publishing in the journals, which lead to ongoing support of the Tx offering for future years.

In other words, increasing uptake of our Tx offerings across institutions can become the mechanism that supports our ability to transition the Biochemical Society’s journals to full OA, but our ability to do this (and remain financially viable) rests on both uptake of the offering and subsequent value in the deal driven by publication in the journals from affiliated researchers.

In terms of what would happen in future years (i.e. as more OA content is published in the journals via affiliated researchers at participating institutions), the idea would be that our ‘read and publish’ offering transitions into a ‘publish and read’ offering where payments in the same transactions from participating institutions start to be weighted more heavily towards publishing, while the ‘read’ component of the payment is for a diminishing share of any paywalled content and legacy content.

At the point of a theoretical full flip, institutions will be paying for the ongoing ability of their researchers to publish OA in the journals. The thinking around the future of our Tx sales is far less developed as we are focusing on the immediate offering. We fully expect that the adoption of the initial pilots will lead us to evolve our approach and any next steps. One way or another, it is expected, however, that a fresh approach to pricing will need to emerge that is based on a shared understanding (between publishers, institutions, and researchers) of the value of independently peer reviewed publications.

**Stop being distracted by a deadline and start focusing on data**

For an organization that has already committed to making a sustainable transition for a more open future, the fixed timeline of
requiring compliant journals or platforms by a certain deadline (e.g. Plan S stated start time of January 2021 and deadlines of December 2024) can be something of a red herring. Research funding and national and regional political agendas differ across countries. We need to be able to serve researchers from Brazil to Japan and from China to Canada. Our approach, therefore, has been to stop being distracted by which policy start date to focus on or counting how many years we have for ‘compliant’ titles. This can be distracting to the mission of ascertaining what a sustainable transition looks like, and taking steps towards it.

In thinking about what we can do, initial actions include:

- Gathering together and analysing our subscription and APC data
- Conversing and co-developing offerings with institutions and consortia, because, if we are to rewire existing subscription spend, then we need to do this in partnership with subscribers. In doing this, we have the data and the specifics of what these institutions and their corresponding authors are spending (across reading and publishing) to use as a basis for conversations.

Conversing with librarians and institutions has been near impossible for a publisher of our size until recently; although we have wanted to discuss offsetting models and prepay models with institutions since 2015, our small size was a significant disadvantage and pushed us to the bottom of most consortial and institution ‘priority queues’. The fact that we have, in 2019, been able to converse with consortia about possible Tx pilots is in large part thanks to involvement with the SPA-OPS project (Society Publishers Accelerating Open Access and Plan S, see Wise & Estelle, 2019). Our overt commitment to transition models and our willingness to pilot some offerings for 2020 that looked different from the existing read and publish/publish and read offerings have also helped open doors to having conversations with institutions about trialling something new.

**TRANSLATING PRINCIPLES INTO PILOTS**

Considered together, the thinking described in these seven principles have led to us running two types of pilots for 2020.

**Tx (optional) renewals**

In our first pilot, we are offering all existing institutional subscribers a Tx option in the renewal cycle. Here, we are giving every institutional subscriber that is NOT within a consortium the option – if they want – as part of their renewal to take a Tx read and publish option and flip outputs from corresponding authors via unlimited APC-free OA.

Whether renewing through agents or directly with us, the option is being offered to some 700 institutions. We have been working with subscription agents to do this and are happy to be wholeheartedly supported by Ebsco for these pilot offerings being surfaced in the renewals process. Corporations and government facilities aside, any institution that is not subscribing via a consortium has the option to renew their subscription to read our paywalled content and have corresponding authors publish an unlimited amount of OA articles without APCs. We are working with agents to help offer the Tx options to existing subscribers. Figure 1 illustrates this approach, providing further details.

This Tx renewals pilot approach outlined in Fig. 1 faces all current subscribers that are not:

- Corporate organizations
- Subscribing through consortia
  - other approaches are being actively considered for and with consortia
- One of our highest-spending or frequently publishing institutions
  - these institutions are receiving bespoke pricing that takes into account the higher levels of publishing activity.

**Tx agreements at the consortia level**

Our involvement in the SPA-OPS project and direct conversations with Jisc have made it possible for us to be negotiating consortia-level Tx pilot agreements. In this approach, total spend on APCs and subscriptions is bundled together and forms the basis for pricing a Tx offering (per institution) that gives corresponding authors the ability to publish on an unlimited, APC-free OA basis in all journals: two full OA and five hybrid titles. As of November 2019, we have a 3-year transformative agreement signed with the Consortium of Australian University Libraries (CAUL) and a 2-year transition pilot agreed with Jisc.

Owing to the unlimited OA ‘all you can publish’ supported by our pilots, all institutions taking up one of our Tx offerings stand to ‘flip’ or convert all published outputs in our journal to full OA. For example, for every OA article published by a UK-affiliated corresponding author in 2019, we published another article from a different UK-based corresponding author behind a paywall. The Jisc pilot could transform that and could double the number of UK-authored OA articles published in Portland Press journals over the next 2 years in a manner that sees APC-free OA publishing become the norm for UK-affiliated researchers.

**LESSONS LEARNED**

**Workflows and persistent identifiers matter**

The Biochemical Society carries out activities to serve molecular bioscientists, and it is important to remain guided by this in sculpting APC-free workflows that work reliably. This involves using persistent IDs and committing to getting the workflows right. It is no good negotiating a Tx deal based on frictionless, APC-free OA but then not being either willing or able to deliver the frictionless workflow needed to support the offering.
We currently work with and use both Ringgold numbers and ORCIDs and will be relying on these identifiers to help shape our workflows. We work with the Copyright Clearance Centre’s RightsLink Author platform, and this has provided access to reliable persistent metadata on APC spends and published OA articles where charges have been waived.

Seek input and converse with like-minded colleagues

In January 2019, we joined a group of like-minded society publishers seeking a sustainable transition to OA that have come together to form the relatively new Society Publishers’ Coalition (SocPC, www.socpc.org/). Starting out with a handful of societies, this coalition now has 45 members publishing over 200 journals and over 30,000 articles per year. The SocPC is a practically minded ‘doing’ group that has a tightly defined mission around seeking a sustainable transition to open scholarship. Like-minded societies have banded together under the SocPC to share information and help each other map out a sustainable transition path. This has provided a fantastic hotbed of ideas and a great support system. One other society self-publisher within the group – the Microbiology Society – has a similar approach to transitioning as laid out in the above principles and, during the autumn of 2019, has signed agreements with Jisc and other consortia based on combining historical reading and publishing spends to facilitate both access to and APC-free OA publishing in its journals for a single, fixed fee. The Microbiology Society has also offered subscribing institutions ‘Publish and Read’ options at a standard uplift versus regular subscriptions in the renewal cycle for 2020 (see www.microbiologyresearch.org/publish-and-read). Their detailed report on transforming society publishing from the Microbiology Society is recommended reading (Mellins-Cohen & Redvers-Mutton, 2019).

FIGURE 1  Transformative renewals offered to individual institutional subscribers as a pilot for 2020.
Another type of read and publish approach from a different self-publishing learned society has been in existence for over a year. The International Water Association has had live ‘Read and Publish’ deals with several (predominantly European) institutions that offer a similar balance of OA with read rights; see https://iwaponline.com/pages/institutional_agreements

Some learned society publishers within the SocPC are also actively assessing whether a combined approach to striking transformative deals is possible. The thinking is that this could yield results at scale and may be more effective than individual negotiations between each small society publisher and libraries/consortia. This approach is an ongoing topic of discussion for many of those that are self-/independently publishing learned societies within the SocPC.

Be open to different routes to sustainable OA

While our starting position for Tx agreements and making a transition is based on historical (total) spend on subscriptions and APCs, we are piloting these approaches for 2020 and are open to adjusting based on where things stand a year from now. As the next section of this article explores, our pilots will not be, and are not, expected at this stage to provide good answers for all aspects of open scholarship. Nor do our Tx offerings fully involve all areas of the research community. We are therefore open to other approaches, be they additional or alternative.

We expect that our models, which are pilots, will need to evolve, and we support a re-evaluation of the basis for pricing ‘read and publish’ or ‘publish and read’ offerings over the longer term. We seek to co-develop principles around such pricing through collaboration with institutions, as well as funders and other learned societies.

A completely alternative approach to transitioning that we are closely following is the subscribe-to-open (S2O) approach from Annual Reviews (see Crow, Gallagher, & Naim, 2019, and www.annualreviews.org/page/subscriptions/subscribe-to-open). The S2O approach involves harnessing the existing renewals cycle for the fully commissioned Annual Reviews journals where subscribers are offered a 5% discount to subscribe to the ‘open’ model, meaning that, if a certain threshold number of institutions take up the S2O offering, then all content in the subsequent volume of the journal will be published OA. We view this as a very creative and interesting model. Indeed, a possible future option for Portland Press might be to explore the possibility of an S2O-inspired approach either for all our journals or for the fully commissioned subset of Portland Press journals.

The Biochemical and Microbiology Societies’ pilot transformative offerings have based pricing for 2020 on (or near) institutions’ historical spends on subscription plus APCs. Some different thinking around pricing of transformative ‘read and publish’ offerings comes from the Association of Computing Machinery (ACM), based in the USA, that announced its new ‘ACM Open’ model in October 2019. The ACM’s model is a tier-based system that uses average article publication ranges to determine which tier an institution is placed in, and once placed into that tier, the institution will pay the set tier price that does not change during the term of the agreement (see www.acm.org/publications/openaccess).

Considering the technological opportunities to evolve traditional publishing, we also find the concept of open platforms, such as those powered by F1000, to be interesting. Wellcome Open Research (https://wellcomeopenresearch.org/browse/articles) is an early example of this approach, while a more recently launched example in the social sciences is Emerald Open Research (https://emeraldoipenresearch.com/). (Open Platforms were described as one of several transition models in the SPA-OPS report, Wise & Estelle, 2019.) In this model, content is rapidly vetted and posted online (without peer review); the peer review process follows, and in the case of the Wellcome platform and F1000Research, PubMed indexing of the content only takes place after the content has been deemed to have completed and passed peer review with adequate revisions. The financial sustainability challenge with this model, however, is how it can be monetized in any way other than individual article payments to sustain the editorial and ethics checks and support peer review.

LEARNING, CAVEATS, AND UNANSWERED QUESTIONS

There is no uniform or standardized system in place to rewire subscription spending across the globe; yes, funder support and pro-OA/pro-transformative institutions and consortia exist here and there, but not everywhere... at least not yet.

There is no independent, universal reporting mechanism, nor is there a universally adopted persistent identifier for institutions, in order to support APC-free publishing workflows. The Copyright Clearance Center’s RightsLink platform does have robust and persistent metadata that generates helpful reporting around articles published (or OA articles that could be published) under a transformative offer (http://go.copyright.com/rightslinkforoa). Although used and highly valued by Portland Press, and although dashboard reporting for institutions is a feature of the offering, the RightsLink platform is not a universally used system, and it remains a pay-for solution that adds significant cost. Crossref is working on the Research Organization Registry or ROR (Gould & Hendricks, 2019), and this may be based on the (currently) freely available Grid.ac resource from Digital Science (www.grid.ac/downloads). The OA switchboard (https://oaips.org/oa-switchboard/) is another potential tool that, once built, might be able to connect published articles/publishers with institutions. However, other than RightsLink, none of these options currently meet the brief of being an independent reporting solution that both institutions and the publisher can refer to when evaluating a transformative/read-and-publish OR publish-and-read offering.

At the present moment, the Tx route gets us some steps forward. However, companies and corporations (both large and small), teaching-intensive institutions, and independent researchers are some of those left out of the approaches, and this is not a good
answer for subscription access and frictionless OA publishing for these members of the scientific community.

The principles listed above have deliberately not touched on matters beyond OA that pertain to the wider question of open scholarship. Hence, matters including open data, research metrics, innovation, and citizen science are not covered. Data deposition and pointing to (together with availability of) datasets is an important area that needs resource and investment to be able to make a transition towards open scholarship.

The future is hazy; we do not know what take up of our offers we will see. With an offering of unlimited, APC-free OA publishing, we are equally unaware of what our 2020 pilots will mean for journal copy in terms of submitted and published articles. It is a very changeable world, and we also do not know what the availability of funding from institutions or research funders will look like 2 or 3 years from now. From discussions with library-consortia representatives in a SPA-OPS workshop held earlier this year, we predict that rewiring for a sustainable OA future will need a fresh, collaborative approach to pricing based on a re-evaluation and shared understanding of what it is a publisher offers today and should offer for the future.

Risks in this sort of an amorphous future abound. However, we see little to be gained from a staying entrenched in a system rooted solely in subscriptions to paywalled content that is impractical in today’s digital world and unsustainable for research institutions and researchers. The Biochemical Society and its wholly owned publisher, Portland Press, are seeking ways to help shape, co-develop, and be part of building a sustainable and more open future.

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REFERENCES

Biochemical Society. (2018, April). Biochemical Society position statement on Open Science. Retrieved from https://biochemistry.blob.core.windows.net/public/2019/04/Open-Science-position-Statement.pdf

Biochemical Society and Portland Press. (2019a). Open Scholarship position statement from the Biochemical Society and Portland Press. Retrieved from https://biochemistry.blob.core.windows.net/public/2019/10/Open-Scholarship-Position-Statement-October-Dated.pdf

Biochemical Society and Portland Press. (2019b, July). Strategy 2019–2021. Retrieved from https://biochemistry.blob.core.windows.net/public/2019/07/Biochemical-Society-Strategy-2019.pdf

cOAiliation S. (2019). Plan S revised implementation guidelines. Retrieved from www.coalition-s.org/principles-and-implementation/

Crow, R., Gallagher, R., & Naim, K. (2019). Subscribe to open: A practical approach for converting subscription journals to open access. Learned Publishing. https://doi.org/10.1002/leap.1262

Efficiency and Standards in Article Charges (n.d.). ESAC transformative agreements. Retrieved from https://esac-initiative.org/about/transformative-agreements/

Gould, M., & Hendricks, G. (2019, 10 February). ROR announces the first Org ID prototype. Crossref Weblog [Web log post]. Retrieved from www.crossref.org/blog/ror-announces-the-first-org-id-prototype/

IOP. (2013, 5 December). IOP collaboration with CERN for publications to join SCOAP3 [Web log post]. Retrieved from https://ioppublishing.org/news/iop-publishing-signs-contracts-with-cern/

Legge, M. (2019). A refreshed agenda and the ‘open’ road. The Biochemist, 41(4), 54–57. https://doi.org/10.1042/BIO04104054

Mellins-Cohen, T., & Redvers-Mutton, G. (2019). Transformation: The future of society publishing. Insights UKSG journal. Retrieved from https://zenodo.org/record/3406178#.XZcpYm5FyUl

SoPC. (2019, 14 October). Why do society journals matter? Society Publishers coalition [Web log post]. Retrieved from www.socpc.org/post/so-why-do-society-journals-matter

Wise, A., & Estelle, L. (2019). Society Publishers Accelerating Open access and Plan S (SPA-OPS) project. Figshare. Retrieved from https://wellcome.figshare.com/collections/Society_Publishers_Accelerating_Open_access_and_Plan_S_SPA-OPS_project/4561397/2