

Challenging the Current Business Models in Academic Publishing: Accelerators and Obstacles to the Open Access Transition

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Challenging the Current Business Models in Academic Publishing: Accelerators and Obstacles to the Open Access Transition

WORKSHOP ORGANISED BY SCIENCE EUROPE WORKING GROUP ON OPEN ACCESS TO RESEARCH PUBLICATIONS



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Introduction

Bundles of journal subscriptions offered by publishers and acquired by libraries, the so-called ‘Big Deals’, are one of the dominant business models in academic publishing. They were introduced to answer the so-called serials crisis,¹ which occurred in the subscription model world about two decades ago. Nowadays, the logic and also the business structures behind ‘Big Deals’ are increasingly considered and employed to shape the transition from the subscription model into an open access publishing paradigm based on author processing charges (APC).

‘Big Deals’ are a highly-disputed business model as they have a number of disadvantages alongside their benefits. These need to be further analysed in detail and dealt with, before ‘Big Deals’ can be used as an instrument to implement and increase Open Access or – if evidence were to show that the disadvantages outweigh the advantages – dropped as an approach altogether.

The topic of ‘Big Deals’ was discussed at the workshop ‘Challenging the current business models in academic publishing – Accelerators and obstacles to the Open Access transition’, organised on 26 and 27 April 2017 by Science Europe in collaboration with the European University Association (EUA) and the Association of European Research Libraries (LIBER). The workshop was organised to trigger further expert discussions on the current business models and their alternatives, as a follow-up to the April 2016 Science Europe Briefing Paper on ‘Open Access Business Models and Current Trends in the Open Access Publishing System’.

Over the two-day workshop, more than 50 experts – including representatives from universities, libraries, publishers, research funding and performing organisations² – discussed the role of ‘Big Deals’ in the context of the transition to Open Access. The first day focused on ‘Big Deals’ themselves, while participants explored alternative business models on the second day.

Key Highlights

'Big Deals' present many disadvantages, in terms of transparency, implementation, and monitoring, but more importantly, they reinforce the status quo rather than the transition to Open Access. There is enough money in the scholarly communications system,³ but money locked into 'Big Deals' does not allow to support promising co-operative or collaborative alternative models. Integrating Open Access requirements in 'Big Deal' contracts can only be considered as a transitional measure.

The following recommendations were made:

- ▶ Part of the money for 'Big Deals' should be unlocked to support co-operative or collaborative publishing models and provide infrastructures with defined service requirements, as well as a focus on community building.
- ▶ Pros and cons of negotiating Open Access payment as part of a 'Big Deal' should be fully understood, and options to unbundle these 'Big Deals' should be considered.
- ▶ Transparency is crucial. Collaborative work via international initiatives to make costs transparent should be supported to establish an overview of the 'real' costs of Open Access publishing, and of the change required to the existing scholarly system.
- ▶ Funding towards APCs could be capped to a reasonable amount, in order not only to control costs, but also to incentivise authors to consider all publishing avenues, and for them to be more aware of the branding premium charged by certain journals.
- ▶ Research libraries should insist on rebates and no longer sign subscription deals that do not consider APC payments.
- ▶ Learned societies have a key role to play alongside funders to support the conversion of existing journals to Open Access, or to set up new Open Access journals, as they can lend their reputation to help build the journals' perceived value.
- ▶ Funders should find alternative funding models to enable them to support Open Access journals, through support mechanism other than APCs.
- ▶ Funders' and institutions' policies should be reviewed and make a proper use of 'carrots and sticks' to trigger a change in authors' behaviour and introduce reward systems. This would involve challenging the use of traditional metrics to assess the quality of research outputs, for example by signing the San Francisco Declaration on Research Assessment (DORA).⁴
- ▶ Additional evidence should be gathered on the impact of the cancellation of 'Big Deals' on researchers and students, as this could help 'first movers'⁵ better understand what content is needed and how to best provide access to it.
- ▶ Funders should be clearer on their expectations from journals and mandate that authors only submit manuscripts to publishers who disclose information about costs and prices, and meet agreed Service Level Agreements.⁶

Funders also have their role to play in defining APC price caps, service requirements including expectations and penalties, setting up financial mechanisms supporting co-operative or collaborative models, and building or redirecting existing infrastructures. Since research is an international enterprise, public and private research funders must overcome national borders and together provide sustainable funding instruments for alternative publication models, services, and infrastructure.

Part I – Setting the Scene

The first day of focused on current licensing models. The aim was to discuss and identify:

1. Which characteristics or features of current licensing practices, and in particular 'Big Deals', are likely to accelerate or hinder the transition to Open Access?
2. How to address the potential hindering issues to support a transition via licensing?
3. Are bundled licenses a tool or an obstacle for the transition to Open Access?

Background – Advantages and Disadvantages of 'Big Deals'

Advantages

- ▶ Some publishers, librarians, and researchers regard 'Big Deals' as the solution for the serials crisis. This crisis was characterised by annual cost increases of academic journals, which led to cancellations of journal subscriptions. This forced publishers to raise prices on the remaining journals to maintain their revenues. This in turn led to even more journal cancellations.
- ▶ Bundling journals into packages and licensing them under specific terms allowed publishers to stabilise sales, it also extended access to information to researchers (including journals from highly specialised fields of research that could rarely survive outside of journal bundles), and enabled librarians to plan their future spending, given fixed caps for future price increases. This, at least in theory, limited the 'cost spiral'.

Disadvantages

- ▶ 'Big Deals' have locked in a significant part of libraries' budgets with a small group of major publishers. The remaining funding available for smaller and new providers has steadily decreased. This enhances the financial scope of some publishers to acquire competitors and strengthens their market position. The consequence is an increased market concentration that leaves libraries with no choice but to extend their 'Big Deals' and accept price increases dictated by large publishing houses.⁷ If the market trend of the last years continues, in the next ten years, two or three commercial giants will exploit not only publications but the entire academic workflow, from research data management tools and services, tools to analyse research data (such as through text and data mining), and tools used in research evaluation, all the way to tools to disseminate results and engage society beyond the scientific world.
- ▶ This dominance of a few large publishers is reinforced by the 'non-disclosure clause' that is often included in 'Big Deal' contracts. Recent studies could not find a correlation between the price paid for the 'Big Deal' and the characteristics of institutions (such as size and budget): "Some institutions have been quite successful in bargaining for lower prices, whereas others may not have been aware that better bargains can be reached. Perhaps this variation explains publishers' desire to keep contract terms confidential."⁸
- ▶ 'Big Deals' have forced libraries to spend an increasing proportion of their acquisition budget on journals. Consequently, little money is left to purchase monographs – which has been particularly detrimental for the dissemination of outcomes from Humanities and Social Sciences researchers. Electronic books also tend to be sold in large bundles, which impact libraries' collection policies and lock in large portions of their acquisition budgets.

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- ▶ Whilst access to a larger number of articles is often mentioned as a benefit of 'Big Deals', the reality is that many journals sold to libraries in these bundles are rarely or never used by scholars, neither as readers, nor as authors.
 - ▶ The recent study 'Pay It Forward'⁹ by the University of California Libraries claims that for a cost-effective OA transition: "[...] author-controlled discretionary funds that incentivise authors to act as informed consumers of publishing services are necessary to introduce both real competition and pricing pressures into the journal publishing system." If that is correct, 'Big Deals', which now often incorporate APC payment arrangements, would hinder progress to achieve this attitude change.

Watching your Cards in the 'Big Deal'

Ted Bergstrom from the University of California, Santa Barbara (US), set the scene with his keynote speech 'Watching Your Cards in the Big Deal'. Bergstrom was part of a project that collected data for bundled contracts, which showed the following:

- Even with discounts for bundled content, commercial publishers' prices per citation or per article are much higher than those of non-profits.
- Actual discounts are about a third of what publishers claim. He referred to a typical bundle contract in a real case, which was presented as a 30% discount over the price of individual journal subscriptions. However, many of the journals in the package were very low-citation or little-used journals. Therefore, compared to individual prices for journals considered relevant, the discount amounted to 9% in reality.
- There are striking differences in the prices paid by similar universities. Limited budgets lend bargaining power, and whilst 'Big Deals' offer serious discounts to smaller colleges and masters' institutions, the discount is small for large research universities.

When comparing APC figures between various publishers,¹⁰ it appears that commercial publishers' prices are four times higher than those of non-profit publishers. According to Bergstrom, APCs can be profitable at \$1,000. So why are the costs of large for-profit publishers' subscription journals so high? Bergstrom said that these costs include marketing and contracting costs, legal protection, salaries of executives, lobbying, and obsolescent technology.

Why is switching so difficult? Bergstrom highlighted an issue of monopoly power in subscriptions, related to the issue of copyright. He wondered whether competition would bring Open Access prices down, as normally competitive forces should work more strongly. However, researchers are more likely to publish in prestigious journals that ask for high APCs than in less prestigious journals with lower costs. This phenomenon causes 'prestige monopolies' that cannot easily be dismissed because new journals that charge reasonable prices need time to build their reputation. Bergstrom sees an opportunity for established professional societies to improve this situation by lending their established reputation to new Open Access journals.

Furthermore, using game theory, Bergstrom described the 'Big Deals' system as leading to suboptimal outcomes due to failure to co-operate on the side of research institutions. His conclusion was that everyone would be better off if no one subscribed and everyone supported Open Access publications.

To change the current system, Bergstrom made several suggestions for universities and governments:

- ▶ **Place caps** of \$1,000–\$1,500 on payments toward APCs. If authors want to publish at a higher price, they can do so with their own money. He predicted that by doing so, most journals would set APCs close to these caps.

- ▶ **Large universities should cancel ‘Big Deals’**, subscribe only to the most cost-effective offerings of large publishers and gradually reduce these subscriptions. This would reintroduce competitive pressure on ‘a la carte’ prices, which would make ‘Big Deals’ less attractive to all libraries.
- ▶ If ‘Big Deals’ are maintained:
 - Universities and governments should **insist on green Open Access**, while negotiating rebates of ‘Big Deal’ contracts. These contracts should explicitly recognise the authors’ right to post final versions of their papers in publicly available archives and make it obligatory and easy for faculties to deposit papers.
 - Universities should **insist on rebates**: their ‘Big Deal’ contracts should specify that contract payments will be reduced by the amount of money they spend on subsidising Open Access content in journals contained in that deal.
- ▶ University provosts and funding agencies could agree to **reduce their allocation of funding to journal subscriptions** by a fixed percentage (such as 15%) per year and move these funds to supporting Open Access. (Timing might account for expirations of existing contracts.) This would put libraries in a strong bargaining position to reduce ‘Big Deal’ prices.
- ▶ Funders and universities could **encourage professional societies to start new Open Access journals** and/or convert existing subscription journals to Open Access.
- ▶ To reduce APCs for top journals, **submission fees could be implemented**.¹¹ This fee revenue would cover handling costs for rejections and discourage frivolous submissions, and allow APCs to be reduced.

Expert Presentations and Discussions: Pros and Cons of ‘Big Deals’

Moderated by **Kristiina Hormia-Poutanen**, President of LIBER and Director of National Library of Finland, a panel of experts shared their views and addressed pros and cons of ‘Big Deals’ with different perspectives.

The Perspective from ‘Big Deal’ Negotiators

Liam Earney from the Joint Information Systems Committee (JISC) shared his analysis of ‘Big Deals’ and the transition to Open Access. As an opening challenge, he stated that ‘Big Deals’ are so unpopular that merely associating them with Open Access, makes Open Access look bad. Earney discussed some lessons from the experience JISC gained from ‘Big Deals’. He mentioned the following reasons to be sceptical:

- **APCs in hybrid journals tend to cost more** than APCs in pure gold journals. These journals also have higher costs of administration compared to pure gold and green Open Access ones. Hybrid journals expose publishers to criticism, as institutions perceive that they are paying twice, once through subscriptions and then again when paying for APCs, often labelled as ‘double-dipping’.
- **‘Big Deals’ reinforce the status quo**. Data from JISC show that the costs of Open Access have increased over the period that ‘Big Deals’ have been in place. If an Open Access model is meant to replace the subscription model, why does expenditure on both APCs and subscriptions continue to rise so inexorably? APCs are a very profitable additional revenue stream for publishers and the same publishers who dominate the subscription journals market dominate the Open Access market as well.

- There is a **need for transparency** regarding the financial aspects of Open Access and offsetting deals. 'Big Deals' are **complicated in their implementation**. Value for money with 'Big Deals' is **hard to monitor**, particularly as it is difficult to collect accurate cost and usage data.

As to why many large-scale subscribers decide to enter into 'Big Deal' negotiations despite the obvious disadvantages, Earney mentioned the current primacy of the 'Big Deal'. Subscription output continues to grow (Open Access output is not the only source of content) and hybrid Open Access in the UK is still very popular (70% of Open Access is hybrid in the UK). In addition, 'Big Deals' are part of a system that makes use of the existing efficient institutional and consortium relations, with the accountability of central negotiation teams.

Earney identified several critical questions to be asked when evaluating offsetting deals: Do they contribute to a transition to Open Access? Are they affordable? Do they support efficient administration? Are they transparent? Is a 'Big Deal' that includes Open Access qualitatively better than a traditional one?

He concluded with some recommendations for those negotiating 'Big Deals' with publishers:

- ▶ Recognise that we are not tied into Open Access 'Big Deals'.
- ▶ Include Service Level Agreements (SLAs) in subscription deals (including 'Big Deals'), which clearly define expectations and penalties.
- ▶ Set conditions around the use of funds, such as price, transparency, and so on.

Robert van der Vooren, Association of Universities in the Netherlands (VSNU), presented the Dutch approach to Open Access. The Dutch government set its target at 100% Open Access publication by 2020 by pursuing the gold route. Going for gold requires a properly thought-out and well-organised negotiation, he stressed, involving a large set of negotiators around the table.

From his perspective, 'Big Deals' serve as a vehicle for Open Access negotiations. 'Big Deals' run for three to five years, and their renewal is an important opportunity to discuss not just the extension of those licences with publishers, but also the transition of journals to Open Access. According to Van der Vooren, a market transformation from subscription to Open Access saves money. There is enough money in the public research system that can be redirected to fund the transition, he said, referring to data presented in a 2015 White Paper by the Max Planck Digital Library.¹²

So far, Dutch universities have mainly focused on the process of negotiating Open Access deals with the big publishers.¹³

Transparency is key: information about the subscription and access deals negotiated in the Netherlands is made publicly available on a dedicated website,¹⁴ where costs of subscription agreements per university per publisher are available for the period 2010–2015. 'Big Deal' contracts are increasingly also made publicly available,¹⁵ with 8 agreements out of 10 now available online.

The evaluation of the negotiated deals and monitoring of their implementation are also part of the Dutch strategy. In this respect, tools have been set up and information about the practical implications for researchers is shared online.¹⁶

The Perspective from Community-based Publishers

Emma Wilson, Royal Society of Chemistry (RSC), presented the opportunities and challenges in Open Access Publishing in Chemistry. She gave the perspective from a smaller-society publisher, the Royal Society of Chemistry (RSC), and touched upon the complexity and diversity of the landscape.

All RSC journals operate hybrid models and one subscription journal is currently transitioning into an Open Access journal with APCs. RSC is developing sustainable Open Access transformation models, and has set up a 'read & publish' licence.

In the case of a 'global flip',¹⁷ in which funding currently used to pay for subscriptions would be redirected toward transforming existing journals into APC-based Open Access journals, there would be winners and losers. China, for example, as a country that produces more research outputs than it consumes, would be expected to pay more for APCs than it currently does for subscriptions.

From the RSC community point of view, Open Access is complicated and complex to navigate, with no co-ordinated or common viewpoint on where the road should lead. Worldwide, there are more than 725 Open Access policies, 59% of which are mandatory. They also differ in terms of the preferred approach (gold or green route), and in terms of the level at which the policies are issued and applied including institutional policies (for example universities), national policies and funders' policies.

According to feedback received by RSC from subscribers, editors and authors, one size does not fit all, and some prefer green Open Access to the APC-based approach. As closing observations, Wilson noted that the complexity is likely to continue, and that the global community does not have "one voice" on Open Access.

The Perspective from Open Access Publishers

Xenia Van Edig from Copernicus, addressed the potential and risks of 'Big Deals'. Copernicus is a medium-sized Open Access publisher. It started in 1994 with a subscription-based journal, flipped to Open Access in the 2000s and has since launched other Open Access journals with learned societies (such as the European Geophysical Society). In 2016, it published 8,998 papers and counted 37 peer-reviewed Open Access journals and 18 access-reviewed scientific discussion forums. The Copernicus experience proves that flipping the business model and transforming journals to Open Access is possible, and that launching Open Access journals can be successful. Copernicus' finance model is mainly based on APCs, but it also receives institutional support and community fees. Waivers are available but actually never used. It uses central settlement schemes (institutional agreements and prepayments).

As benefits of 'Big Deals', Van Edig highlighted that there are currently no available alternatives to 'Big Deals' in order to get access to the literature, and that 'Big Deals' do have the advantage of increasing the number of gold Open Access articles.

She also highlighted some clear disadvantages: the support of the hybrid business model remains very expensive for authors and makes it difficult to easily identify which publications are Open Access and which ones are not. 'Big Deals' provide no incentive for big publishers to change to an Open Access business model, as it allows them to offer some Open Access content without changing their business model. It also maintains large publishers' quasi-monopoly position, leaving out the smaller publishers.

'Big Deal' Open Access offsetting deals also trigger questions: do they represent more costs for research-intensive institutions? Do they generate a load of 'free riders' with research intensive-organisations bearing the brunt of the cost? What about smaller institutions, and smaller countries; is the offsetting model available to them, and is it sustainable? What about developments outside of Europe?

Van Edig concluded that 'Big Deal' offsetting deals have recently gathered momentum, but they should **pose a threat for other Open Access business models**. There are APC models for pure Open Access publishers, but also non-APC models, and there should be mechanisms available to support the diversity of the publishing models. To overcome entire budgets being poured into 'Big Deals', she suggested negotiating lump-sum payments with pure Open Access publishers, which could be based on the number of articles of a given institution in the previous year, and would provide some sustainability for institutions and Open Access publishers.

Panel Discussion

Three key topics emerged from the ensuing panel discussion with the audience, as moderated by Kristiina Hormia-Poutanen:

1. 'Big Deals' and transparency

- The size and complexity of 'Big Deals' make transparency a challenge. In order to ensure proper management of public funds there is a need to disclose the details of 'Big Deals' and monitor their implementation.
- There is currently an institutional drive toward increased cost transparency, and initiatives to encourage this, such as the call by Science Europe to use the OpenAPC Platform.^{18,19} Most publishers currently restrict access to information related to business decisions, as there is huge commercial value in knowing the costs your competitors charge.
- It is likely that future business models around scholarly communication will be based on the provision of services rather than on access control. In such a business model, services will be modular; the content or the product will be made up of different services provided by different providers, and there will be different prices for different service levels.
- Funders can request that authors publish only with publishers that disclose information about costs and prices, and meet agreed SLAs.

2. How to move beyond 'Big Deals' and minimise disadvantages for 'first movers'

- The original purpose of the 'Big Deals' offsetting deals was to reduce costs. This goal was not reached, since the costs have remained more or less the same. The next step to be considered is the unbundling of 'Big Deals' in order to establish individual APC prices for each journal because an Open Access market system should be based on differentiated pricing (i.e. a stratification of APCs). This approach was described during the 13th Berlin Open Access conference on 21 and 22 March 2017.²⁰ In addition, research libraries have to be prepared to cancel subscriptions.
- It will be very important to have reported experience from researchers and students on the fallout of cancelled deals. This could help 'first movers' better understand what content is actually needed and how researchers and students get access to it.

3. The 'post-transition period'

- 'Big Deals' are viewed as transitional measures, but what will come after them is still unclear. The lack alternatives partly explains the prevalence of the 'Big Deal' model despite its disadvantages.
- So far, neither the existing business models nor green Open Access have disrupted the current publishing system. As long as publishers can carry on charging exorbitantly high prices for articles, and consumers are willing to pay those costs, a change in the system will be difficult to make. There needs to be more competition in the system, to disrupt the market and to start seeing prices drop.
- Funder policies matter and proper use of 'carrots and sticks' can trigger a change in authors' behaviour. There is huge inertia in the scholarly publishing system, because of the way publishing behaviour is rewarded in terms of career progression and grants in today's research world. Changing the rewards and incentives of the existing system would have a huge influence on the publishing system.

- The future, after the transition, will not be publisher-centric but researcher- and author-centric.
- Offsetting or Open Access deals have so far mostly been agreed with large publishers, because researchers publish with them more often than with smaller publishers. However, it is important to not only make 'Big Deals' with large publishers, but also with small publishers to keep them attractive for authors.



Part II – Future Outlook

Discussions on the second way offered participants an opportunity to learn more about alternative publishing models that can help accelerate the transition to Open Access.

Interpreting the Shadows on the Elephant in the Room

In his keynote speech, **Cameron Neylon**, from Curtin University (Australia), challenged the assumption that the debate relates to an economic question.

Neylon pointed out that the issue with a scholarly communication system taken over by private publishers, is that it turns a public good (knowledge) it into a private one. Knowledge is a ‘club good’, exclusive and excludable, and we are investing in the process to make it more public, in other words, the process to move it towards becoming a ‘public good’. The question is: How public and excludable do we want the knowledge to be? How do we sustain making it a ‘public’ activity? How do we sustain the ‘club’? What does research get back from making knowledge a public good (resources, infrastructures, ability to apply for grants, and so on)?

A key question is how do those who seek access negotiate collectively as a group? Neylon referred to Olson’s theory²¹ that collective (public-like) goods are difficult for large groups to provision; small groups can work together, whilst large groups will fail except under specific circumstances. The size of the group is critical, Neylon underlined. Referring to Ostrom,²² he stressed the role of institutions for collective actions, where institutions are defined as “the prescriptions that humans used to organise all forms of repetitive and structured interaction.” Culture is a very important institution in this respect. Culture can be seen as a characteristic of the group that sustains it. Science is a very successful culture that has sustained the production of knowledge for the last 300 years.

The issue is not financial or economical, but political and cultural. True scientific knowledge was first created by a group in a club, and became useful when it was circulated outside the club group.

Neylon does not consider the scholarly communications system as a functional market and does not believe that a better alternative to ‘Big Deals’ will emerge through competition, as ‘prestige’ remains an crucial factor.

According to Neylon, we have gotten trapped in a public/private economy, but the good news is that **communities can solve these problems for themselves**. To help and encourage this, there needs to be a group of the right size, the ability to work together, the creation of the right hierarchies, and an ecosystem (technologies, infrastructures, and so on) to bring things together at the right scale. To do so, his recommendations are:

- ▶ Focus on community building
- ▶ Support collective models
- ▶ Define service requirements
- ▶ Build infrastructures
- ▶ Refute the false assumption that price is related to prestige

In short, the aim is, in the words of Neylon, to **“build sustainable communities in an environment where public-making is good for those communities.”**

Experts' Presentations and Discussions: Alternative Models

Following Cameron Neylon's introduction, the audience was invited to explore various alternative Open Access publishing models. The session was moderated by **Inge Van Nieuwerburgh**, representing Ghent University and EUA.

Funder-driven publishing platforms

Hannah Hope from the Wellcome Trust presented its Open Research publishing platform. The Wellcome Trust²³ has developed this platform, where their funded researchers can rapidly publish all their research results. The overall objectives are to improve the way research is communicated, thus making the process faster and more transparent; make it easier for researchers to provide information that supports research reproducibility; expand the range of scientific content that is publishable; increase diversity in the publishing market; and, help to 'shift the needle' and inform new policies on researcher assessment.

It is based on a post-publication open peer-review model, and peer-review reports are also published. Full papers are indexed in 'Europe PubMed Central' and 'PubMed Central' as soon the peer review has been successfully completed. It brings several benefits to the authors: fast (articles published within a week); inclusive (can publish all your research outputs); open (fulfils Wellcome's Open Access and data sharing requirements); reproducible (data published alongside article); transparent (open, author-driven, peer review); and easy (costs are met directly by Wellcome).

The platform was launched in November 2016 and the key challenges at that time lied in whether researchers would use it, and whether this would attract different kind of publications from different research areas. Both expectations were reached. Other funders are planning to establish their own platforms, such as the Bill & Melinda Gates Foundation (Gates Open Research), and the European Commission has also expressed interest. What are the next challenges? According to a recent survey of authors, the speed of publishing and the ability to publish different type of articles, including negative results and reproducibility studies, are important features of the platform, more than the open peer review. A future challenge will also be the implementation of an appropriate credit taxonomy²⁴ to enable better recognition of all actors involved in a research project.

Hope also addressed the issue of preprints, considered to be a rapid means of communicating research, and an opportunity to collect feedback on research prior to submission to peer review. Preprints provide a more accurate picture of a researcher's portfolio of work in a timely manner. All existing preprint servers are Open Access (even if the licence is not always CC-BY). The Wellcome Trust has a policy to encourage the use of preprints by life scientists: it permits the citation of preprints within a grant application and end of grant reports, and also provides guidance to reviewers on reviewing preprints. The central preprint service is being scoped under the leadership of ASAPbio,²⁵ which will provide a source for future innovation in scholarly communication.

Knowledge Unlatched: Making Open Access work in the Humanities and Social Sciences

Max Mosterd presented the model of Knowledge Unlatched (KU).²⁶ Its Select funding model²⁷ provides an alternative way to fund the publishing of books and monographs in Open Access. The model has attracted global support at a time of severe pressure on libraries' book purchasing budgets, with most institutions involved, including 70 publishers, located in the United Kingdom and the United States. \$3 Million has been raised and 450 books have been made Open Access. The model works, but some challenges remain:

- Challenge 1: Usage data in Open Access. Open Access challenges the traditional acquisition analysis. Libraries are pressured to invest in the 'right' content. KU combines institutional and geo-localisation usage, numbers helps to show the economic value for Open Access books.
- Challenge 2: Double dipping. Risks identified are: the risk of paying twice for the same content, a lack of transparency between stakeholders, conflicts between the vendor systems and approval

plans. The aim of KU is to support libraries to efficiently shift their budget without duplication. KU provides skeleton Machine Readable Cataloguing (MARC) records. It is important that the library community continue to raise their voice.

- Challenge 3: Differential pricing. The growth of content in KU Select led to an increase in the required contribution per library, and it is not easy for libraries to free up the required funds in such a short timeframe. Three modifications were then introduced: 1. the introduction of differential pricing in the US, 2. limiting the package size for 2017, 3. closer collaboration with consortia.

For the future, KU's ambition is to be a marketplace for Open Access. To do so, the aim is to open up the platform to new Open Access initiatives, and enhance international library fundraising and administration via KU (adding 20 journals, joining the OAPEN library membership). Mosterd concluded that collaboration with libraries is key to make Open Access work in the Humanities and Social Sciences.

A Transition to Fair Open Access: LingOA, MathOA, PsychOA and the Open Library of Humanities

Saskia C.J. de Vries gave examples of flipping journals to be fully Open Access. De Vries presented the FAIR Open Access model as a bottom-up business model for the transition to Fair Open Access. This model brings together editors of existing journals and libraries to collaborate on negotiating the terms for the transformation to Open Access. It puts the needs of their community before pure economic profit. These collaborations have been successful in obtaining better terms than what was obtained in the negotiations on Open Access offsetting 'Big Deals' so far. Publisher requirements have been defined to comply with the FAIR Open Access model: the title of the journal is owned by the editorial board or by a learned society; authors retain copyright and a CC-BY licence; authors do not pay for APCs (which are paid by funding agencies and library consortia such as the Open Library of Humanities); all articles are published in full Open Access; and, APCs are low (under €1,000), transparent, and proportionate to the services provided by the publisher.

There are two stages for flipping journals that have been tested with LingOA: a three-year transition, supported by funding agencies and universities, where the publisher has to comply with set conditions; and, a follow up stage of three years, giving time to journals to re-establish their impact factors and indices, during which APCs are paid by library consortia. The model is discipline-based, and has worked well for linguistics. The aim is to extend the new model to two other disciplines, mathematics and psychology. Extending the model requires transition funds from university consortia and funding agencies, but also to expand the Open Library of Humanities (OLH) library consortium model beyond the Humanities. The role of the OLH is key, as a non-profit, academic-led Open Access publisher for the Social Sciences and Humanities, in facilitating existing subscription journals to flip to Open Access.

De Vries concluded that the LingOA economic model represents a tested roadmap for flipping subscription journals to FAIR Open Access. It is a sustainable model: investments in the funding for the transition is temporary and long-term savings are substantial. The role of library consortia such as OLH is key and allow library funds to be redirected from subscription to Open Access.

Open Access and Beyond: SciPost

Jean-Sébastien Caux of the University of Amsterdam presented his researcher-led Open Access initiative SciPost. He recalled how as a researcher, he had always experienced difficulties with the scholarly publication system. Whilst there have been many Open Access declarations, from the Budapest Declaration (2002) to the Amsterdam Call for Action (2016), which he acknowledged are very good, they are not enough, they are too slow, and they leave out the concrete implementation of new systems with integrated policy positions and incentives. Caux flagged a few key points of concern for scientists: the accessibility of published material, the quality of the final product, the usefulness of the refereeing process, the freedom to author science honestly, and the form of impact assessment (i.e. the impact of the impact factor). The current system is a cause of frustration, with paywalls and financial transactions, the refereeing which is not always constructive or useful (due to

lack of editorial and referee expertise and the use of non-scientific criteria), and the fact that the journal title is often perceived to play a more important role than the content of the article in the assessment of the quality of a researcher's outputs.

In parallel to his work as a researcher, Caux has launched his own publishing platform. SciPost is a complete scientific publishing portal, run by active scientists, that enables the publication of journals, commentaries, and links to theses. The service is organised around two key principles: openness and quality. Open Access is free for readers and authors, decoupling the scientific and financial issues. It aims also to modernise the refereeing procedure (giving more credit to the referee and streamlining post-publication feedback), and to reform the impact assessment. SciPost works as a non-profit foundation, with an advisory board, an editorial college, and an executive – all working on a volunteer basis.

Caux expressed some doubts on the suitability of the APC model. Publication is an ill-defined unit, and is incompatible with future forms of publishing: in case of multiple authors, it is unclear who should pay. It also creates an incentive for journals to “publish to cash in,” creating conflicts of editorial and financial interests. In his view, “opening up” the market will create more luxury goods, as researchers are ready to pay “insane” amounts for publications if their jobs and grants depend on it. He argued that there are smarter ways to enable scholarly communication to evolve, for example by supporting the development of co-operative models. ArXiv and the OLH were models he found inspiring.

SciPost has a Supporting Partners Board, with (inter)national funding agencies, universities, libraries, government, foundations, and benefactors. The current estimate is to produce a paper for an average of €300, on top of which comes a lot of work by volunteers. SciPost has two immediate challenges: to increase awareness and acceptance from scientists, which is going very well with the young generation of scientists; and, to gather concrete support from stakeholders to ensure its future sustainability. As a final point, Caux emphasised that the Open Access battle is essentially a fight against metrics, evaluation systems, and methods.

Panel Discussion

Three key topics emerged from the panel discussion which was moderated by **Inge Van Nieuwerburgh**.

1. Challenges for the collaborative/co-operative models

- The scientific community and its behaviour drive the change. Therefore the discussion should shift away from the issue of market incentives and talk about culture: we need institutions to enact a new culture that supports and rewards the open dissemination of research results.
- Each of the models presented are co-operative or collective in some sense and community-based (researchers, funders, consortia, and so on). These models, and those driving them, must stay focused on controlling costs. There is a need for more co-ordination between such initiatives. The challenge is to create an environment where these different collective models can meet, and together have a market. To do so, technology is critical, but the capital available to support technological experimentation is insufficient.
- New funding instruments should be made available by research funding organisations to support innovation in scholarly communication.
- Maintaining the diversity of players in the market is key. However, the notion of ‘everything new is good’ should be challenged. Do we always want to reinvent the wheel? Or do we want the wheel to run more smoothly?
- Metrics and incentives play a key role in the publishing system. Some participants challenged this statement, however, and asked if we needed metrics at all. Some also noted that the

impact factor and H-index are here to stay, as they are part of the tradition, even though no one thinks about their validity anymore and just uses them as shortcuts. It is important to connect the discussion on Open Access with the use of metrics as a proxy to measure the quality of research. There needs to be a wider culture change in this regard.

2. Disruptive models

- It is necessary to question whether offsetting deals should still be supported in the context of the serious criticisms raised, including on their effect on costs to publish and access knowledge globally. Entirely flipping subscriptions to OA is also perceived as unsustainable, particularly for research-intensive universities. More evidence should be gathered on the unintended consequences of these models, as well as on the feasibility of alternative publishing models that are less disruptive. Both kind of models should be supported to challenge the current publication system and to complete the transition to Open Access.
- There is a growing consensus that there is enough money in the scholarly communication system, but that it is locked in subscriptions, including 'Big Deals'. Hence, reliable data on the costs of those deals is necessary to assess the economic opportunity for new initiatives enabling the transition to Open Access.

3. The future role of Open Access publishing platforms

- The development of an Open Access publishing platform at EU level for research funded by EU Framework Programmes, received the support of participants, including from the League of European Research Universities (LERU).
- Discussions on publishing platforms also takes place in the Open Science Policy Platform,²⁸ where the European Commission announced they were considering the implementation of a specific Open Access publication platform.



Closing remarks

In a closing statement, **Jos Engelen** from Dutch National Institute for Subatomic Physics (NIKHEF) and the University of Amsterdam, former Chairman of Netherlands Organisation for Scientific Research (NWO) and former Member of the Science Europe Governing Board, concluded that “several viable models were presented at this meeting, including ‘from scratch’ initiatives such as SciPost, and ‘flipping’ existing journals like LingOA. In fact, offsetting ‘Big Deals’ with the established publishers may be interpreted as a first step towards ‘flipping’ or in any case ‘converting’ existing journals.”

The transition to Open Access is currently slow (“roughly 85% of new research is published in journals that are still locked behind mounting paywalls”²⁹) due to the entanglement of the traditional scholarly publishing system and the scientific (publicly funded) research system. “As long as our research assessment procedures lean on ‘reputations’ of journals and on ‘impact factors’, we will never succeed in imposing our will – and that of our governments – in achieving a speedy transition to Open Access publishing”, Engelen stressed.

For him, ‘Big Deals’ do not represent a promising road to gold Open Access. He made some final recommendations:

- ▶ Stop unproductive (public) discussions about ‘research budget’ versus ‘library budget’ to pay for Open Access, and put everything in one ‘scholarly communication budget’.
- ▶ Get rid of ‘Big Deals’ and make ‘à la carte’ deals.
- ▶ Help new Open Access initiatives and support those that are promising. He referred specifically to the co-operative models such as the Open Library of Humanities, LingOA, SciPost, Copernicus, and so on.
- ▶ Create coalitions with influential organisations like the Wellcome Trust, and do not reinvent the wheel.
- ▶ Work on the implementation of new credit methodologies to support the culture change and reward open ways of working.

In his final words, Engelen stated: “the Open Access community should learn to make one front and speak with one voice. Accept that several gold Open Access models can co-exist! Do not wait for a perfect solution and start by implementing perfectly adequate ones.”

Notes and References

1. See http://www.unc.edu/scholcomdig/whitepapers/panitch-michalak.html#_ftn6
2. Details on and presentations from the workshop:
<http://www.scienceeurope.org/events/2017-04-26-workshop-big-deals/>
3. Schimmer, R., Geschuhn, K. K., & Vogler, A. (2015). Disrupting the subscription journals' business model for the necessary large-scale transformation to open access. doi:10.17617/1.3:
<http://hdl.handle.net/11858/00-001M-0000-0026-C274-7>
4. <http://www.ascb.org/dora/>
5. A first mover is an individual or company who first makes inroads into a new market. Typically, an advantage is gained over competitors because the first mover earns profits early on:
<http://www.businessdictionary.com/definition/first-mover.html>
6. See Science Europe's Principles on Open Access Publisher Services (2015): <http://scieur.org/opennew>
7. See Larivière V, Haustein S, Mongeon P (2015) The Oligopoly of Academic Publishers in the Digital Era. PLoS ONE10(6): e0127502. <https://doi.org/10.1371/journal.pone.0127502>
8. See Theodore C. Bergstrom, Paul N. Courant, R. Preston McAfee, and Michael A. Williams. Evaluating big deal journal bundles PNAS 2014 111 (26) 9425-9430; doi:10.1073/pnas.1403006111
9. University of California Libraries. Pay It Forward: Investigating a Sustainable Model of Open Access Article Processing Charges for Large North American Research Institutions. June 30, 2016, Revised July 18, 2016:
http://icis.ucdavis.edu/wp-content/uploads/2016/07/UC-Pay-It-Forward-Final-Report.rev_.7.18.16.pdf
10. According to Ted Bergstrom's figures:
 - PLOS1: average costs of \$1,500 per article and still able to make profits
 - PLOS medicine: average costs at \$2,900
 - Hindawi: charges between \$500 and \$2,000 per article and is a profitable company
 - Elsevier: median for APCs is at \$3,000
11. Prestigious journals reject most of the articles submitted (usual acceptance rate of 1 out of 6, and sometimes 1 out of 20). Economic journals often charge \$200–\$300 submission fees
12. Schimmer et al. (2015): Disrupting the subscription journals' business model for the necessary large-scale transformation to OA. A Max Planck Digital Library OA Policy White Paper

13. Springer, Elsevier, Wiley, American Chemical Society, Taylor&Francis, Sage, Oxford University Press, Kluwer
14. <http://www.openaccess.nl>
15. http://www.vsnu.nl/en_GB/public-access-request
16. <http://www.openaccess.nl/en/node/675>
17. <https://oa2020.org/> and Archambaud et al. (2017): Global Flip & Other Studies Workgroup Report. Open Scholarship Initiative Proceedings, Volume 2, 2017, issn: 2473-6236. doi: <http://dx.doi.org/10.13021/G8osi.1.2017.1934>
18. <https://www.intact-project.org/openapc/>
19. <http://scieur.org/open-apc>
20. https://oa2020.org/wp-content/uploads/pdfs/B13_Kai_Geschuhn.pdf
21. Mancur Olson (1971), The Logic of Collective action: Public Goods and the Theory of Groups
22. E.Ostrom (1990), Governing the Commons: the Evolution of Institutions for Collective Action
23. Wellcome Trust has had an Open Access policy since 2006, allowing both green and gold routes. It is applicable to book chapters and monographs, as well as to journal articles. The compliance rate is currently 80% for journal articles. The Wellcome Trust is a partner of the Charity Open Access Fund, which provides funds to 36 institutions in the UK for APCs, for a total value of £7.3 million in 2015–2016. The median APC for Open Access Journals is £1,397, and £2,125 for hybrid journals
24. See for example the CRediT initiative (<http://docs.casrai.org/CRediT>) which has been implemented by several publishers, such as PloS, eLife and F1000 Research. See Brand et al., Beyond authorship: attribution, contribution, collaboration, and credit, Learned Publishing, 28: 151–155 doi:10.1087/20150211
25. <http://asapbio.org/>
26. <http://www.knowledgeunlatched.org/>
27. The KU Select funding model works as follows: 1. Publishers submit titles to KU, 2. KU's library title selection committee selects titles, 3. KU sends out information to libraries, 4. Libraries pledge and send orders to KU, 5. KU sends orders to publishers and collects money from libraries, 6. KU pays publishers, 7. Books are unlatched
28. <https://ec.europa.eu/research/openscience/index.cfm?pg=open-science-policy-platform>
29. OA2020 executive summary

Annex

26 and 27 April 2017 // Hotel Radisson Blu Astrid, Antwerp

Wednesday 26 April

13.30–13.40 Welcome
Georg Botz, Max Planck Society, Germany

13.40–14.20 Keynote Speech: 'Watching Your Cards in the Big Deal'
Ted Bergstrom, University of California, Santa Barbara

Questions & Answers

Session 1 **Setting the Scene**

Moderator **Kristiina Hormia-Poutanen**, President of LIBER and Director of NLF
Which characteristics/features of current licensing practices, in particular 'big deals', are likely to accelerate or hinder the transition to open access? How to address the potential hindering issues to support a transition via licensing? Are bundled licenses a tool or an obstacle for the transition to open access?

14.20–16.00 **Expert Presentations**
The Perspective from 'Big Deals' Negotiators
Liam Earney, JISC, and **Robert van der Vooren**, VSNU

The Perspective from Community-based Publishers
Emma Wilson, Royal Society of Chemistry

The Perspective from Open Access Publishers
Xenia van Edig, Copernicus

16.00–17.30 Panel Discussion with Experts and Audience

17.30–17.45 Wrap-up
Kristiina Hormia-Poutanen

26 and 27 April 2017 // Hotel Radisson Blu Astrid, Antwerp**Thursday 27 April**

09.00–09.40 Keynote Speech ‘Interpreting the Shadows on the Elephant in the Room – Why Economics Analogies Are So Bad for Planning Scholarly Communications’
Cameron Neylon, Curtin University

Questions & Answers

Session 2 Future Outlook**Moderator**

Inge Van Nieuwerburgh, Coordinator scholarly communication at Ghent University and member of the EUA Expert Group ‘Science 2.0/ Open Science’
*replacing **Jean-Pierre Finance**, Chair of the European University Association Expert Group ‘Science 2.0/ Open Science’, and former President of the University of Lorraine, Nancy*
What other models help accelerate the transition?

09.40–11.20 Expert Presentations

Funder-driven publishing platforms

Hannah Hope, Wellcome Trust

Knowledge Unlatched: Making Open Access work in the Humanities and Social Sciences

Max Mosterd, Knowledge Unlatched

A Transition to Fair Open Access: LingOA, MathOA, PsychOA and the Open Library of Humanities

Saskia C.J. de Vries, Open Library of Humanities and LinguOA

Open Access and Beyond: SciPost

Jean-Sébastien Caux, SciPost

11.20–12.40 Panel Discussion with Experts and Audience

12.40–12.50 Wrap-up

Inge Van Nieuwerburgh

12.50–13.10 Conclusion

Jos Engelen, Former Chairman of the Netherlands Organisation for Scientific Research (NWO)

13.10

End of Workshop

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