

## THE NEXT WAVE OF OA:

10 PREDICTIONS  
*for* 2016

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## THE STORY SO FAR

September 2015 saw the release of a major study focused on the transition to Open Access (OA). Working with colleagues from the Research Information Network, the University of Sheffield and Elsevier, our aim was to gather authoritative indicators of key factors influencing the transition to OA in the UK and globally.

Our work found that fully two-thirds of the world's journals now offer an OA option, with the largest proportion following the hybrid model. Meanwhile, subscription-only journals fell between 2012 and 2014, mainly due to growing pressure from research funders who want publishers to meet new OA reporting requirements.

In practice, the limited availability of funding combined with the slow pace of change within the research community means that take-up of OA options falls far short of its potential. Nevertheless, take-up of immediate OA options has grown steadily from 14% of total articles in 2012 to 17% in 2014. When posting of manuscripts ('green OA') in accordance with publisher policies is also taken into account, 25% of the world's scholarly articles are now openly available within 12 months of publishing and 27% within 24 months.

However we choose to define it, the proportion of OA articles is rising fast and cannot be ignored. Where do we go from here? Based on the results of our work and wider trends within scholarly communications, I am highlighting 10 developments that I believe will gain prominence in 2016.

## 1

## FUNDERS RATCHETING UP THE PRESSURE

Funders and policy makers are setting increasingly ambitious goals for opening up the results of publicly-funded research. In the US, the true impact of federal funders' public access mandates will become clearer in 2016 as they move from an implementation phase into operational reality. The European Commission has set a goal for 60% of European publicly-funded research articles to be available under OA this year, with national governments in the UK, France, Sweden, and Denmark all targeting 100% OA no later than 2025. The Netherlands, which assumed the presidency of the Council of the European Union in January, has signalled its commitment to putting Open Science on the agenda for European policymakers at the highest level. Achieving these targets will require the adoption of increasingly stringent monitoring processes — with the Dutch government even threatening to introduce a statutory obligation to provide open access if interim targets are not achieved<sup>1</sup>. At the same time we will see a progressive shift away from advocacy and communications efforts towards sanctions against authors and institutions who fail to comply.

## 2

## DEVELOPMENT OF AN OPEN SCHOLARLY INFRASTRUCTURE

Making articles available through OA at scale relies on an open, interconnected infrastructure which is built on sustainable principles and standards. Funders, policy makers and institutions are all taking a growing interest in the development and ownership of the infrastructure that supports scholarly communications. The central role of publishers and vendors in supporting scholarly communications will therefore come under increasing scrutiny. In response they will need to become ever more integrated with and embedded in the broader information landscape, capitalizing on the potential offered by application program interfaces (APIs) and emerging standards.

## 3

## EXPERIMENTATION WITH PRICING MODELS

Data released by UK funders such as Research Councils UK<sup>2</sup> and the Wellcome Trust<sup>3</sup> indicate that article processing charges (APCs) are stabilizing around an average of \$2,500 across all disciplines, and \$3,000 in the medical and life sciences. There remains variation between publishers, but there has been little or no growth in average APC prices over the last couple of years. With the European Commission recently announcing an APC cap of 2,000 Euros (c. \$2,200) in a new post-grant OA pilot, funders are clearly signalling their desire to maintain prices at or below current levels for APCs, and well below the economic value of most articles in subscription journals. As a result, we can expect to see publishers seeking innovative ways to drive revenue growth whilst minimizing administrative costs, including offering more products and services to authors such as reprints and language polishing within the workflow. Offsetting arrangements such as Springer Compact<sup>4</sup> are growing in popularity, and memberships and deposit deals will require sophisticated tools and robust processes from both institutions and publishers. The aim should be to present a seamless experience which simplifies the complexity from the perspective of the author and which allows institutions to manage APCs and subscriptions together. We can also expect to see more radical initiatives along the lines of Thieme's 'pay-what-you-want' OA journal<sup>5</sup> and Emerald Publishing Group's Green OA, Zero Embargo trial<sup>6</sup>.

## 4

## PURSUING ECONOMIES OF SCALE

A relatively flat overall market, in addition to downward pressure on APCs, means we are likely to see more publishers seeking economies of scale in order to reduce their cost per article. While another deal like the one which created Springer Nature looks unlikely, further consolidation in the market seems inevitable. Changes in the research information landscape are also on the cards, with Thomson Reuters 'exploring strategic options' for its IP and Science group<sup>7</sup>. Meanwhile, academic social networks such as Academia.edu and ResearchGate are attaining ever-growing importance as mechanisms for researchers to share their published outputs. All this will present fresh challenges for small and society publishers, many of which jealously guard their independence, but who could face an uphill struggle to maintain their market position. Our study found that UK learned societies currently generate revenues of over £300m (c. \$500m) from publishing, and many are critically dependent on their publishing surpluses to support their charitable activities. Societies typically offer highly-selective journals, and so are concerned about the poor economics of gold OA, and the potential for green OA to put pressure on their subscription, reprint and rights models. In response, the outsourcing of activities to third-party vendors could become an increasingly popular defensive strategy, allowing smaller publishers to offer a comparable author experience to the big players, without breaking the bank.

## 5

**INCREASED ENGAGEMENT BETWEEN FUNDERS AND PUBLISHERS**

There is growing recognition of the need for pragmatic solutions to support delivery of OA at scale, requiring different stakeholders to work together. In particular, research funders and policy makers will need to work more closely with the publishing community to drive forward the OA agenda. Science Europe, which comprises 50 major public research organisations in Europe, issued a set of principles early in 2015 aimed at setting minimum standards for OA publishing services provided by scholarly publishers. For their part, publishers are already responding to US funder requirements for greater accountability and transparency through initiatives such as CHORUS, which now monitors over 200,000 articles for public-access status, reuse licenses, and archiving arrangements<sup>8</sup>. Going forward, publishers are likely to push for greater alignment of funder policies, potentially in machine-readable form, and a more evidence-based approach to OA policy-making, particularly in relation to embargo periods.

## 6

**CONVERGENCE ON STANDARD IDENTIFIERS**

As gaps and deficiencies in current datasets are exposed, the drive to adopt common identifiers to support publishing workflows will continue to gather momentum. ORCID is rapidly gaining currency with research funders and institutions, with national consortia agreements recently announced or proposed in Italy, the UK and Australia, among others. Publishers are also recognizing the benefits it can offer, with a number recently announcing that they will require ORCID iDs for their authors from 2016 onwards<sup>9</sup>. The desire from funders to monitor levels of compliance with their OA policies will mean FundREF also becomes increasingly indispensable. Publishers which have yet to put in place steps to capture these and other identifiers at the point of submission will need to move rapidly to do so.

## 7

**CONNECTIVITY WITH INSTITUTIONAL SYSTEMS**

Demand from institutions for publishers and their vendors to pass metadata, acceptance notifications and even manuscripts through to them automatically will continue to grow this year. Many librarians and research managers are now expected to monitor levels of OA publishing for both internal and external reporting purposes, and are exploring opportunities to capture this information more effectively in their internal systems. This will open up the possibility of extending publishing workflows right through to institutions' current research information systems, thereby joining up the workflows of author and librarian, and eliminating the manual (and potentially error-prone) data entry that is taking place today.

## 8

**ROOTING OUT BAD PRACTICE**

A recent survey by Nature Publishing Group and Palgrave Macmillan found that a concern about perceptions of the quality of OA publications is still the leading factor in authors choosing not to publish OA<sup>10</sup>. Addressing these concerns will remain a priority for the OA publishing community, and we can expect to see increasing convergence around the revised set of 'Principles of Transparency and Best Practice in Scholarly Publishing' agreed by a number of industry bodies in 2015<sup>11</sup>.

At the same time, subscription publishers must grapple with the high levels of illicit article postings by authors; our own study found that that some 10% of the world's scholarly articles are posted online in contravention of the relevant journal policies. Publishers will need to work increasingly closely with social sharing networks to find sustainable ways to enable article-sharing, building on the outcomes of an STM consultation on the topic in 2015<sup>12</sup>.

## 9

## OPENING UP THE PUBLISHING PROCESS

We can expect to see the principle of openness increasingly applied not only to articles, but to the publishing process itself. New initiatives will seek to open up the 'black box' of peer review, through greater transparency in reviewer identities, and increased interactions between editors, reviewers and authors. Metrics-based approaches to assessing the scholarly value and impact of research will grow ever more sophisticated but remain contentious. Authors will expect increasingly sophisticated and user-friendly systems to support manuscript tracking and payment-processing. All of this will increase the pressure on vendors and publishers to offer joined-up systems and processes.

## 10

## FROM OA TO OPEN DATA

As OA becomes increasingly embedded in normal publication practice, funders and policy makers are now turning their attention to the need to make research data openly available. We can expect to see funder mandates progressively extended to include OA to data as well as the article itself, while journal publishers are also placing more stringent expectations on their authors to make supporting data freely available. The complexity and heterogeneity of the research data landscape, not to mention the understandable reluctance of authors to share data they have spent years developing and which they plan to further develop into articles and products, means this will be a slow transition with many false starts along the way. The direction of travel is clear; researchers will need to learn new techniques for curating and archiving their data while new and costly infrastructure will need to evolve.

## RIDING THE NEXT WAVE

The furor that surrounded the 'transforming idea' of OA a few years ago has died down. We are all adjusting to a 'new normal' where OA is an integral part of the scholarly communications landscape. The challenge now is one of integration and practice, as the consequences of OA ripple through the business models and infrastructure that underpin scholarly communications. Riding this next wave of change will require increased collaboration between all of the stakeholders involved in academic publishing. For publishers and vendors, meeting demands for standardisation and information-sharing without compromising their flexibility to pursue new business opportunities is surely the key to success in an OA future.

<sup>1</sup> <https://www.government.nl/documents/reports/2014/12/08/2025-vision-for-science-choices-for-the-future>

<sup>2</sup> <http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/Openaccessreport.pdf>

<sup>3</sup> <http://blog.wellcome.ac.uk/2015/03/03/the-reckoning-an-analysis-of-wellcome-trust-OA-spend-2013-14/>

<sup>4</sup> <https://www.springer.com/gp/open-access/springer-open-choice/springer-compact>

<sup>5</sup> [http://www.researchinformation.info/news/news\\_story.php?news\\_id=1923](http://www.researchinformation.info/news/news_story.php?news_id=1923)

<sup>6</sup> <http://www.emeraldgroupublishing.com/about/news/story.htm?id=6249>

<sup>7</sup> <http://thomsonreuters.com/en/press-releases/2015/november/explore-strategic-options-ip-science-business.html>

<sup>8</sup> [www.chorusaccess.org/](http://www.chorusaccess.org/)

<sup>9</sup> <http://orcid.org/blog/2016/01/07/publishers-start-requiring-orcid-ids>

<sup>10</sup> <http://blogs.nature.com/ofschemesandmemes/2015/08/13/what-do-author-insights-tell-us>

<sup>11</sup> <http://oaspa.org/principles-of-transparency-and-best-practice-in-scholarly-publishing-2/>

<sup>12</sup> <http://www.stm-assoc.org/stm-consultations/scn-consultation-2015/>