

# How transformative agreements are actually transforming the subscription system: a society publisher's perspective

Transformative agreements (TAs) are useful tools to accelerate the growth in open access (OA) for small publishers with limited resources, such as the three discussing the advantages and impact of TAs in this article. The Royal Society, the Microbiology Society and the Geological Society observe an uptake in OA output with the increase in demand for TAs. While TA models differ across publishers, successful and sustainable models are characterized by transparency in pricing and data, simplicity, equitability and above all a transformation objective of achieving full OA. Collaboration with institutions and consortia is key to realizing mutual goals and managing the agreement and implementation of complex arrangements with limited resources. The Royal Society, with over 320 institutions opted in, the Microbiology Society with over 250 and the Geological Society with over 40, are all mobilizing their resources and improving their systems to move away from paywall and subscription models.

## Keywords

transformative agreements; read and publish; open access; open science



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## Introduction

Transformative agreements (TAs) are useful tools to accelerate the growth in open access (OA) for small publishers with limited resources, such as the three discussing the advantages and impact of TAs in this article. The Royal Society, the Microbiology Society and the Geological Society observe an uptake in OA output with the increase in demand for TAs. While TA models differ across publishers, successful and sustainable models are characterized by transparency in pricing and data, simplicity, equitability and above all a transformation objective of achieving full OA. Collaboration with institutions and consortia is key to realizing mutual goals and managing the agreement and implementation

'Collaboration with institutions and consortia is key to realizing mutual goals and managing the agreement'

2 of complex arrangements with limited resources. The Royal Society, with over 320 institutions opted in, the Microbiology Society with over 250, and the Geological Society with over 40, are all mobilizing their resources and improving their systems to move away from paywall and subscription models.

OA is likely to be supported by a mixed model of article processing charges (APCs), TAs and potentially other transformative options for the time it takes for publishers to operate sustainably without subscriptions. From the researchers' point of view, TAs offer more opportunities for publishing OA; the more journals covered by their institutions' TAs, the greater the freedom of choice, removing the funding barriers APCs can present. The pace of this transformation varies across countries and fields, with the publishing output in some countries expected to be fully OA in due course.

The Royal Society, the Microbiology Society and the Geological Society are members of the Society Publishers' Coalition, a supportive network for like-minded society publishers navigating this transformation with priority given to sustainability and inclusivity. The members of the Coalition have come together to create and agree to the principles of its Unlimited Open Access framework.

Following his presentation at an Efficiency and Standards for Article Charges (ESAC) Community of Practice webinar in early 2022 on 'How are transformative agreements actually transforming the subscription system and enabling an open paradigm?',<sup>1</sup> Graham Anderson of The Royal Society was approached by *Insights* to describe the perspectives of society publishers. The Microbiology Society and the Geological Society have also provided their experience of how the subscription system is transforming as a result of TAs.

## The Royal Society

For those who may not be familiar with The Royal Society, we are a small, not-for-profit publisher of ten journals, dating from 1665. The Royal Society is the national science academy of the UK with the mission to recognize, promote and support excellence in science, and to encourage the development and use of science for the benefit of humanity.

We launched our TAs for the 2021 cycle and got over 170 institutions signed up. For 2022, we have increased the number to well over 320.<sup>2</sup> Our OA journey began in 2006 when the journals started offering OA as a hybrid model, and we then launched two gold OA journals in 2011 and 2014: *Open Biology* and *Royal Society Open Science*. The arrival of TAs has certainly made a positive impact on transforming the OA landscape and shifting the traditional subscription model as it offers researchers more choice and freedom to publish in journals without the barriers of individual APCs.

'Read & Publish (R&P) was the simplest and most transparent for The Royal Society'

We considered different TA models, such as Publish and Read and Subscribe to Open, but I felt that Read & Publish (R&P) was the simplest and most transparent for The Royal Society in terms of calculating the price and presenting the offer to institutions based on real data, and therefore the most sustainable for us. R&P also clearly identifies the cost of the different activities, which is helpful to all stakeholders during a transition. I wanted the model to work in all markets and for all institutional customers, large and small. We offer uncapped publishing in all ten journals; all article types are included, and institutions get access to all content.

We are piloting Publish and Read with Max Planck Digital Library and a shared funding model with California Digital Library so that we can gain experience of other models, but our standard offering is R&P. Most of the institutions signed up to R&P in 2021 increased the amount of OA articles they published with us in 2021 compared to the previous year – this is a promising start.

It feels as though the Covid-19 pandemic has accelerated the interest in transformative agreements; by this, I mean that I can see a change in the conversations we were having in

3 late 2020 compared to discussions for the 2022 cycle. Institutions are more familiar with the concept and the different models on offer and are actively requesting R&P information. Libraries want to support not-for-profit publishers alongside their agreements with the usual commercial publishers.

In some respects, the pandemic has allowed us to speak to more people virtually, and decisions have been made faster. I am in a position where I speak to consortia and institutions around the world, so I get to hear a variety of viewpoints and opinions. Not all markets or customers are ready to move to TAs yet, so we are mindful that we will be offering different models for some time, but we are very much leading with TAs as the primary offer.

The Royal Society already had a price transparency mechanism<sup>3</sup> in place to illustrate how we do not charge twice for the same content through a subscription fee and an open access charge. This was acknowledged by cOAlition S, an advocacy organization bringing together funders with a common goal of making immediate open access a reality, and we share all the supporting information, such as the paid APCs data from an institution, so that they can see how the R&P offer is constructed. Through our transparent pricing mechanism, our subscription list prices can go up or down each year as they are calculated based on the change in the number of non-OA articles over a three-year period; this will be the same for reading fees in R&P deals.

'Not all markets or customers are ready to move to TAs yet'

Data is of course key, and with this in mind, we sought to improve our systems and workflows to support our transition. We are actively supporting the OA Switchboard,<sup>4</sup> which connects institutions with their research output, and we are working with CCC/Rightslink for Scientific Communications<sup>5</sup> for our open access article processing charge invoicing. Our aim is that the process will be seamless and touch free for researchers and institutions. The OA Switchboard offers real-time reporting for users, and The Royal Society has committed to reporting twice a year for any agreements.

'Our aim is that the process will be seamless and touch free for researchers and institutions'

For researchers at participating R&P institutions, if the eligibility criteria are met then the system should do the rest. In many cases, eligibility is based on submission date, but this can vary for different publishers and agreements. We do have a human check in place so if a researcher has not made use of a deal, we will let them know and make their research OA retrospectively.

### What's next?

Last year we registered our four main research journals as transformative journals (TJs),<sup>6</sup> meaning that there is a clear pathway for these journals to flip to gold OA once they meet the 75% OA threshold set by cOAlition S. Registering as a TJ is a clear public commitment to an annual increase of the OA output to exceed the flip threshold.

2021 was our first full year of TAs, and when we reached the significant landmark that over half of all our published articles were OA (53%). TAs were a key driver in reaching this milestone and, as we have more institutions on board for 2022, this number will grow even higher.

'All but one of our hybrid journals increased the proportion of OA articles in 2021'

We publish all this information on our website so you can see how each journal is progressing.<sup>7</sup> All but one of our hybrid journals increased the proportion of OA articles in 2021, in most cases by a significant amount (see Figure 1).

Journal Title	2020	2021
Proceedings A	16.5%	27.3%
Proceedings B	28.2%	41.9%
Interface	27.7%	48.7%
Biology Letters	24.3%	24.9%
Interface Focus	27.9%	59.7%
Notes and Records	13.5%	10.3%
Philosophical Transactions A	18.9%	28.2%
Philosophical Transactions B	24.8%	33.9%

Figure 1. Open access content for each journal as a percentage for 2020 and 2021.

### Is the subscription system transforming?

I feel that TAs are transforming the way we publish at The Royal Society as open access is now at the forefront of everything we do:

- we are increasing the institutions signed up to our R&P
- our OA output has significantly increased in the last 12 months
- we continue to be open and transparent in our pricing and with our data
- our model is simple, sustainable and equitable
- we are an active member of the Society Publishers' Coalition, a supportive network for like-minded society publishers navigating this transformation
- we are improving systems and workflows to support seamless OA publishing
- we now have a clear pathway for flipping four of our research journals to gold OA.

There is more information on R&P on our website.<sup>8</sup>

### The Microbiology Society's transformative milestones

Microbiology Society journals publish high-quality research papers, topical review articles and a host of other important research outputs. We are a not-for-profit publisher, and we support and invest in the microbiology community to the benefit of everyone. Our focus at the Society has always been publishing for the community – where the income generated from our journals is returned to support activities which benefit all.

5 In its 75<sup>th</sup> year, we prepare for the Society's founding journal, *Microbiology*, to become fully OA in 2023. We look back on two years of unprecedented progress and look forward to charting the milestones as our publishing programme becomes predominantly OA, shifting from our reliance on subscriptions.

### OA growth

In 2021, 43% of all articles published across the portfolio were made immediately OA (Figure 2); we have seen significant year-on-year growth (38% more in 2021 than 2020) in the proportion of OA publishing in our journals, putting us on track to exceed an important benchmark – to publish more OA articles than paywalled in 2022.

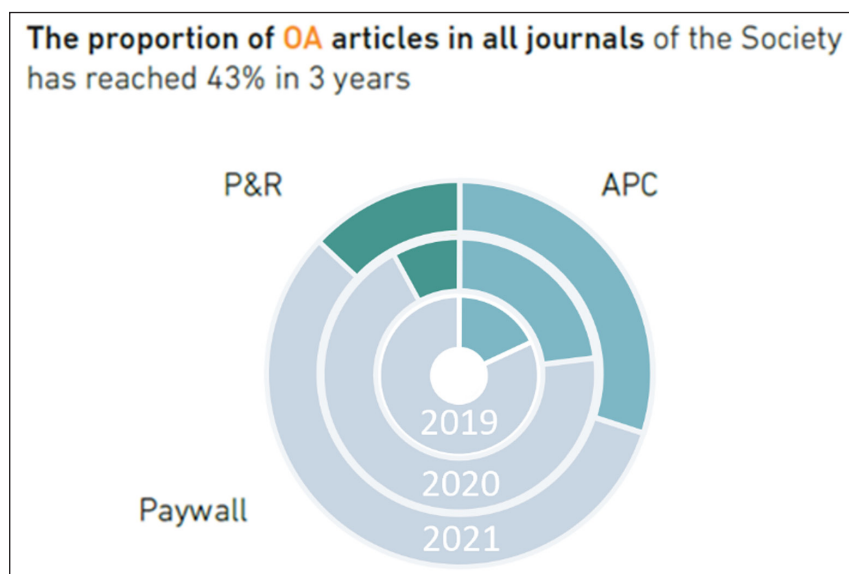


Figure 2. Growth in OA publishing in Microbiology Society journals 2019–2021

### The success of the Society's Publish and Read model

The expansion of Publish and Read (P&R) since 2020 has been a driving force of OA growth. In 2022, the Society has, for a second year, doubled the number of institutions benefiting from this model (Figure 3), achieving two of our key objectives. Firstly, an ever-increasing number of authors benefit from fee-free OA publishing. Secondly, driving OA publishing away from a currently APC-dominated model with the associated barriers it presents to authors who struggle to raise the funds themselves; a burden which disproportionately affects early career researchers.

'The expansion of Publish and Read ... has been a driving force of OA growth'

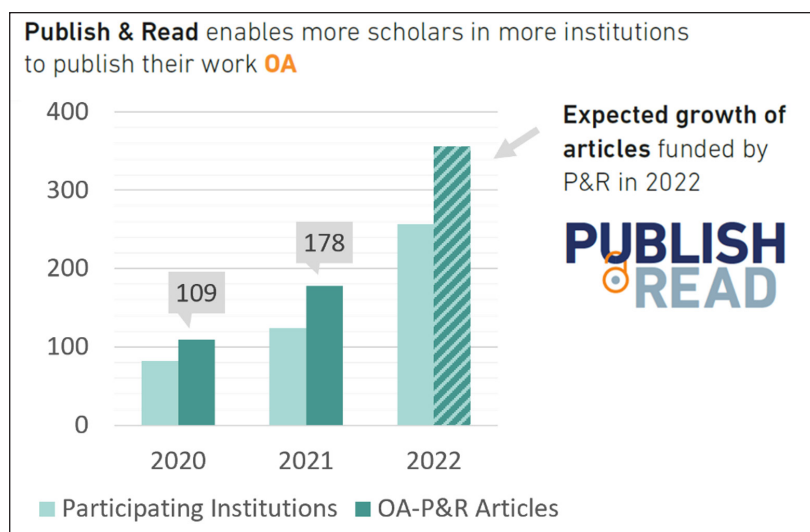


Figure 3. Expected growth in OA articles funded by Publish and Read (P&R) agreements in Microbiology Society journals in 2022

6 As shown in Figure 4, the UK's published output in Society journals has shifted over the last six years from paywalled publishing, which now represent the minority of articles, towards OA publishing. While APC funding remains the main route to OA across the portfolio (see Figure 2), institutionally funded TA options, which for us are achieved via P&R agreements, have grown exponentially in territories where a national consortium has lent their support, as with Jisc in the UK, illustrated in Figure 4. With TAs comes the benefit of greater author inclusivity, particularly for early career researchers who have less access to funding.

'With TAs comes the benefit of greater author inclusivity'

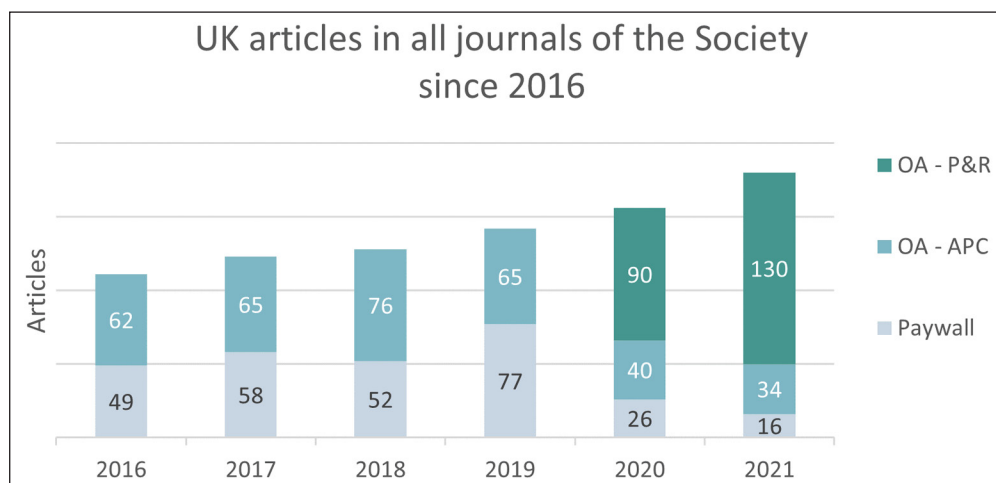


Figure 4: The shift from paywalled to OA publishing from 2016 to 2021

As TA models developed by publishers differ, the common measure of ultimate transformation would be full substitution of subscription (access-based) revenue and transition from restricted access to full OA. The Microbiology Society has ambitions to progressively flip its journals, with revenues earned through P&R agreements in time morphing to Pure Publish (with the pay to 'Read' aspect removed, institutions' pre-payment is solely for their researchers to publish in fully OA journals), together with pay-as-you-go APCs. In other words, OA is likely to be supported by a mixed model of APCs, TAs and potentially other transformative options for the time it takes for journals to operate sustainably without subscriptions.

'The Microbiology Society has ambitions to progressively flip its journals'

We are keen to continue transforming at pace, expanding P&R to more countries with the help of national consortia, as well as directly to individual institutions. To learn more about OA with the Society, please see our website.<sup>9</sup>

## The Geological Society

The Geological Society is the UK's national geoscience society and has been a small global publisher since 1811. We currently publish seven journals and five key book series independently; the majority of this content is on our online platform, the *Lyell Collection*,<sup>10</sup> and many are published in partnership with other international Earth Science organizations.


'OA publication widens dissemination and allows researchers and practitioners globally to utilize findings'

Publishing is an important part of the Society's mission to advance and share knowledge of planet Earth and beyond for the benefit of humanity, and the surplus generated is a significant source of funding for the Society's charitable activities. Geoscience and geoscientists have a crucial role to play in addressing global challenges such as climate change, energy transition and natural hazards, so the publication of this research OA is hugely advantageous. OA publication widens dissemination and allows researchers and practitioners globally to utilize findings. Ensuring that a transition to OA is sustainable for the Geological Society and globally equitable is the challenge.

## OA at the Geological Society

The proportion of OA content published in the Geological Society's portfolio has been traditionally fairly low at around 12%. It is, unfairly, joked that the discipline moves at geological timescales, but it is true that practices are often adopted by other areas such as the life sciences before adoption by the Earth science community. Despite this, and countering that assertion, the Geological Society has been a long-time supporter of the San Francisco Declaration on Research Assessment (DORA) and presents journal metrics transparently and in context. Similarly, we have an openly available transparent pricing mechanism, based on that of The Royal Society, that ensures subscription income is not received for articles for which we have received an APC.

In 2021, we launched the Society's first fully open access journal, *Earth Science, Systems and Society* and had our first year of transformative read and publish agreements, with 25 institutions signing up across two consortia: Jisc in the UK and CAUL in Australia and New Zealand. Our agreements incorporate read access to the entire *Lyell Collection* (14 journal and book sites) and uncapped publishing of all article types across all actively published hybrid journals and books titles, based on submission year. The price is linked to average historical publishing output and offers a significant discount upon combined subscription and APC prices. This limits the risk to each party to the agreement if publication output changes significantly. We adhere to the Society Publishers' Coalition Unlimited Open Access principles in Figure 5.



**Unlimited Open Access**

<b>Publishers / Society Publishers that are:</b>
<ul style="list-style-type: none"> <li>• Not for profit and mission driven</li> <li>• Actively transitioning away from legacy subscription models and/or piloting transformative approaches</li> </ul>
<b>Agreements:</b>
<ul style="list-style-type: none"> <li>• Offer unlimited OA for all eligible publications <i>plus</i> read access to paywall content</li> <li>• Any paper eligible under the deal from a corresponding author at a participating institution is included</li> <li>• Authors and readers are notified of institutional participation to facilitate OA</li> <li>• Meta-data driven annual reporting for librarians</li> <li>• Creative Commons licensing</li> <li>• No NDAs – terms are transparent and publicly available (e.g. agreements deposited on ESAC)</li> </ul>

*This is one of several routes to sustainable OA in use by SocPC members.*

Figure 5. The principles that members of the Society Publishers' Coalition have worked together to align on when offering transformative agreements.

User experience is important and a key benefit of an uncapped TA as administrative hurdles to publication are removed. We have developed workflows that ensure eligible submitting authors are identified and informed that they can publish under a TA early on. To aid librarians and research support staff, we have invested in a partnership with OaMetric<sup>11</sup> to route our APC invoices to the correct member of staff and automate approvals. Data quality and credibility relating to publication output and historical spend have really come to the fore in negotiating and reporting on the success of agreements, and we commit to regular updates to institutions. With limited resources and staffing, this has been a challenge but is critical to ensuring agreements are designed appropriately and are having the desired effect.

## What's next

In 2022, we have increased the uptake of our TAs across the Jisc and CAUL consortia and also have agreements with the ZB MED consortium in Germany and institutions in Ireland, the Netherlands and Sweden. There are currently over 40 institutions signed up, and we hope more to come.

8 Whilst the uptake of our agreements has increased, we still lag behind our Society Publishers' Coalition counterparts in volume of TAs and OA output, as highlighted in this article. Size could be a factor; the Microbiology Society and The Royal Society publish at least two or three times as much content as we do. It could be the discipline and there being fewer institutions with relevant departments.

It could also be our approach; with limited resources we have had to prioritize initiating conversations with consortia and institutions in strategic areas, i.e. those with strong OA mandates or high publishing output. This is not because we do not want agreements outside of those areas but because we cannot afford to enter complex and protracted negotiations where there may be a lower potential for success. This is likely to be a situation very familiar to librarians who wish to support society publishers but also need to get the big agreements across the line first.

'The increase in agreements for 2022 has been a result of direct engagement of staff'

A key lesson we have learnt is that it is not enough to rely on institutions signing up simply through consortia and their communications. The increase in agreements for 2022 has been a result of direct engagement of staff from editorial, sales and marketing with librarians, research support staff and researchers to drive demand. This contact has been positive and has helped us to better understand issues so that we can shape our future models.

Recognizing that it may not be realistic to find an agreement within the region of existing spend for some high-output institutions, we have successfully applied for transformative journal status for our four largest hybrid journals. We commit to increasing the proportion of content published OA year on year in these titles and hope to gain further data to demonstrate the value of TAs to institutions not yet signed up.

### Is the subscription system transforming?

Since our TAs are based on submission year and were introduced for 2021, we have limited data as articles continue to progress through the peer-review process. A concern the Geological Society had, shared by many institutions, is that an uncapped TA may lead to an unsustainable increase in submissions. The data so far, in Figure 6, suggests this is not the case and TAs have simply supported an institution's usual output to become fully OA – although this does of course fluctuate year on year. This supports the assertion that authors publish in the journal they deem to be most appropriate, and TAs are a useful mechanism for ensuring that freedom of choice continues.

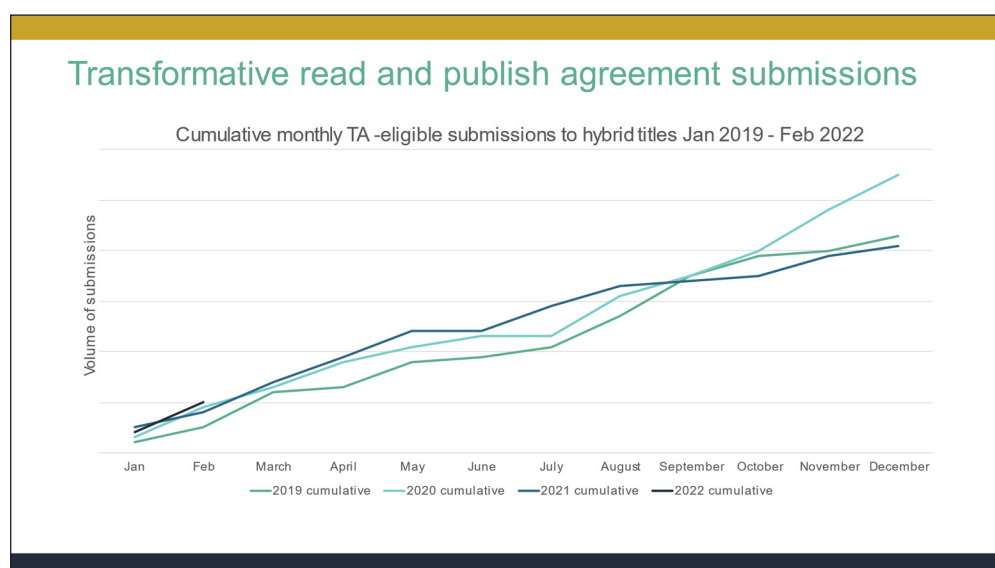


Figure 6. Cumulative submissions to the Geological Society's hybrid titles from corresponding authors in institutions signed up to TAs during 2021 and 2022, compared to those during 2019 and 2020, when there was no TA



9 In journals with submissions from predominantly academe, the rate of increase in OA content is steadily growing and the expansion of TAs will support this. It is slower in those with a more industry focus and we do expect to be operating a mixed model for some time to allow for this, for those who only read and those without the means or desire for a TA. Despite this, the subscription system is steadily transforming, and we fully expect there to be some countries whose output is fully OA in due course. There is fuller detail on our website.<sup>12</sup>

#### Abbreviations and Acronyms

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

#### Competing interests

The authors have declared no competing interests.

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