Ghanaian research challenges

Interview: Andrew Barker, UKSG

The rise and rise of FAIR data

Preprints in a post-pandemic age

Rebellion targets 'gross profiteering'

But publishers say ebooks are fairly priced for library market

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Research information

April/May 2021 ● Issue 113

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Leader: Tim Gillett
Ebook enigma

Since *Research Information* published an article by an anonymous librarian last July, referring to 'gobsmacking' price rises for ebooks, awareness of the issue has grown in the scholarly communications industry and among the general public.

Several mainstream media outlets have now covered the issue – while thousands of librarians have signed a petition complaining about prices in some cases exceeding £1,000, and the fact that budgets have left many university libraries unable to subscribe to the titles they need.

In our main feature on Page 4 Rebecca Pool delves deeper into the subject, and solicits responses from publishers keen to defend their position and to justify the figures they are charging. It's a complex issue that seems unlikely to go away any time soon.

Elsewhere in this issue we have four interviews – with two librarians, a publisher, and a researcher, that reflect many of the challenges being faced in the industry as it adjusts to new business models, a changing global order and of course the effects of the ongoing pandemic.

As we look ahead to the rest of 2021, there is little clarity as to whether there will be a move back towards in-person industry events around the world – though there are some signs that conferences and exhibitions towards the end of the year may go ahead in a more recognisable format. We can only wait and hope.

🐦 **@researchinfo**

The rise and rise of ebook prices

The last decade promised a revolution but high prices have stirred up a rebellion. **Rebecca Pool** asks: what's the way forward?

In September last year, a group of academic librarians and researchers wrote an open letter asking UK government to urgently investigate ebook pricing and licensing practices in the scholarly publishing industry. During the Covid-19 pandemic and ensuing lockdowns, librarians watched as students and researchers struggled to access essential textbooks, due to cost and lack of availability.

Among these was Johanna Anderson, library advocate and subject librarian from the University of Gloucestershire, UK. Outraged by the situation, she took action and organised the open letter, highlighting excessive ebook pricing, unexpected price rises, copyright law and licence issues.

For Anderson, the crux of the current situation lies in 'gross profiteering' from publishers, and a misunderstanding of how libraries work.

'Some publishers trawl through university reading lists, find the commonly used titles, classify these as e-textbooks rather than ebooks and raise the price,' she said. 'At the end of 2019, these books were already more expensive than the hard copies, but they are even more expensive now.

'These price rises happened with several publishers at around the same time, without warning or explanation, and it was right in the middle of the pandemic,' she added.

Anderson also pointed to the mind-boggling array of pricing models and licences that accompany ebook acquisition, which she describes as random, massively problematic, and a vast drain on her time. 'And now publishers are trying to get us to buy annual licences for an ebook,' she adds. 'We could spend, say £500 a year for this, and then have to buy the book again to stop it from getting withdrawn – we are at the behest of the publisher.'

Anderson is hardly alone in her frustrations over ebook pricing. Within a weekend of her organising the letter to government, she had attracted some 250 signatures, and at the time of writing, this figure had risen to more than 3,600. Librarians from across the UK are now crowd-sourcing examples of print book →

> "Within a weekend of her organising the letter to government, she had attracted 250 signatures"

→ and ebook prices, many of which cite more than 1,000 per cent cost differences. And using the hashtag, #ebooksos, librarians are also sharing examples of ebook prices on Twitter.

Since her letter, Anderson has featured in articles from the BBC and *The Guardian* that report on the 'ebook pricing scandal' and 'price gouging'. Westminster has since stated that it will not be acting on the letter – but, undeterred, Anderson and colleagues have taken their case to the Competition and Markets Authority, and await a response.

David Prosser, executive director of Research Libraries UK (RLUK), has also been following ebook pricing carefully.

Alongside the Society of College, National and University Libraries (SCONUL), he recently issued an open letter to the Publishers Association asking for it to work with members to review support of UK higher education institutions given the ongoing lockdowns.

During the initial lockdown, many publishers offered extended online access to ebooks and other electronic resources to students working remotely. This has now ended, so Prosser is calling for access barriers to be permanently removed for students still working remotely. However, taking a step back, he also believes that the fundamentals of the text book publishing are, in fact, broken, and simply don't work in the modern world.

As he put it: '[The market] hasn't really taken into account the move to electronic and hasn't taken into account that a lot of people might want to read a chapter here and a chapter there, and don't necessarily want an entire book.

'The pandemic has really focused minds on some of the unacceptable practices that we've been working around, but no longer can due to limits on travel.'

A publisher view
But what do scholarly publishing publishers make of ebooks, the pandemic and the ensuing pricing model row? While some publishers declined an interview, Taylor & Francis, Springer Nature and Cambridge University Press were happy to discuss the issues.

In an email to *Research Information*, Mark Majurey, commercial director and vice president of ebooks at Taylor & Francis, highlighted how the publisher had provided free e-textbooks and free upgrades from single to unlimited user access from the 2020 summer term. The company also put in place free photocopying and scanning license extensions, with these due to end come the close of the current academic year.

"In response to the pandemic, CUP developed a higher education website to quickly deliver textbooks"

Right now, a mighty 97 per cent of Taylor & Francis' catalogue, which includes supplementary textbooks, is sold through established models that, according to Majurey, 'are standard and pretty unremarkable'. However, highly-adopted textbooks make up the remainder, and are sold through library suppliers such as ProQuest and Ebsco, and retailers including Amazon, Google and Apple. What's more, these titles have, as Majurey put it, 'more nuanced' business models and 'require a considerable amount of investment and ongoing development'.

'The difference between a single print copy of a book, priced as a core text for a student, and what amounts to an enterprise licence across an entire university, is like comparing apples and pears,' said Majurey. 'Comparing individual print costs to a digital licence which gives access to many readers, does not represent the reality of how different formats are used, nor the additional functionality e-textbooks provide.'

Still, Majurey reckons these e-textbooks, which are sold on a title-by-title basis rather than 'bundles', are fairly and competitively priced for the library market. But as he added: 'We are investigating and experimenting with various partners to create new business models, designed to provide as much value and access as possible to customers. We're also working with trade bodies... to facilitate dialogue on these models.'

Over at Springer Nature, Wouter van der Velde, manager, books solutions portfolio, highlights how his company has been working hard to provide value to librarians.

'We don't know what the pricing strategies of other publishers are but I think we price fairly, we price as simply as possible and there are no restrictions on content,' he told *Research Information*. 'For example, we don't put DRM on content on SpringerLink and we don't set limits on concurrent users – obviously the ebook price for unlimited users is higher than for one user, but it isn't ridiculous.'

Come last year's lockdown, Springer Nature also made key textbooks freely accessible, via Springer Link, to educators, students and academics. Access to some 500 titles ended as university libraries re-opened – as Van der Velde said: 'Our hosting provider told us that traffic was going through the roof and we were incurring a lot more costs.

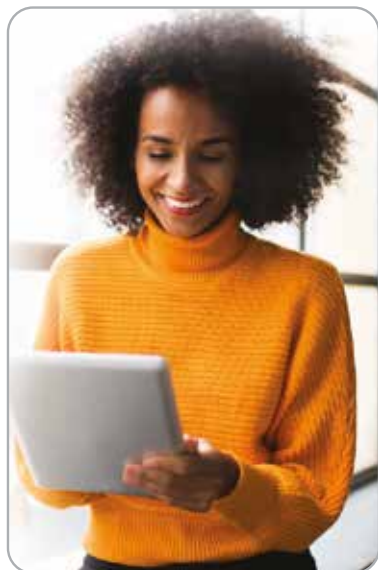The publisher has since launched 'Flexible eBook Solutions', designed to   →

Product Spotlight

SPRINGER NATURE

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→ provide libraries and research institutions with a choice of purchasing options, including full ebook collection and single title models, when accessing digital book content. Different models can be combined, and as van der Velde highlights: 'These changes may seem recent but we've been working with libraries on different iterations of this business model, and piloting various models over the years.

'Bundling of content had been our core business model for quite a few years, and being able to sell and grant access to single titles required quite a different operational set-up,' he added. 'But the constant feedback from librarians made us decide to have this complete review of how we were selling our ebooks and collections, so we've completely overhauled our business, which has resulted in Flexible eBook Solutions.'

Chris Bennett, global sales director for academic publishing at Cambridge University Press, also believes that his company's pricing models are relatively straightforward, flexible and fair. In response to the pandemic, CUP developed a higher education website to quickly

> "The important outcome is these digital resources get into users' hands. There's no use offering content a library can't afford"

deliver textbooks. Here, institutions acquire books through an annual lease that allows for an unlimited number of concurrent users.

'[The website provides] very, very low price points per student and a fraction of the book price – we're talking about discounts of more than 90 per cent against the price of an individual book,' he said. 'The point of all of our mechanisms is librarians are not being over-charged and not having to buy volumes they don't want. This has revolutionised our ebook sales – this year 40 per cent of our book sales were digital, that's the most we've ever achieved.'

Given falling librarian budgets and ebook pricing issues, a move towards more flexibility makes sense. Van der Velde said that the pandemic certainly fast-tracked Springer Nature's decision to implement single-title purchases. However, he also suspects that the pandemic, and sudden surge in ebook demand, may have taken

some publishers by surprise, exacerbating issues such as pricing.

'We've been working in ebook publishing for many years, and had noticed a growing awareness and demand before the pandemic came,' he said. 'So we were ready for this situation and could react right away... and have priced and built ebook models that are sustainable for us and users.'

CUP's Bennett also believes some publishers have yet to truly adapt to both the different world of ebooks and declining budgets. 'The use-case for consuming something digitally is very different to print... and if you look at the period from the financial crash to pandemic, library budgets have been on a slow downward slide from one crisis to another,' he said.

'Budget decreases have now sharply accelerated and next year we're hearing of cuts from 15 to 40 per cent... what some publishers didn't do quickly enough was react to this, and provide a different set of business models,' he said. 'We've got to build [our models] around digital content and services – publishing has always been a service industry, and now the delivery mechanisms are catching up with the market – there's a gap that needs closing.'

Surprise demand
Unsurprisingly aggregators, as well as publishers, also witnessed rising ebook demand come the pandemic. As Oren Beit-Arie, president of ProQuest Books and chief strategy officer points out, ProQuest Ebook Central saw double-digit growth in user engagement, as well as a strong uptick in library acquisitions.

'We've been seeing shifts towards ebooks for some time now – in the past few years this has been taking place pretty slowly, but certainly accelerated since the pandemic,' he said. 'To quote one of our librarians, the pandemic drove a shift in two weeks that we hadn't seen in two years.'

At the time, ProQuest saw strong demand for its Title Matching Fast service, which aims to swiftly match print holdings with electronic titles. And the aggregator also partnered with publishers to offer discounts on ebooks to libraries that already owned the print version.

But in a similar vein to Van der Velde and Bennett, Beit-Arie believes the pandemic-induced surge in demand was a shock to the system for many. 'The pandemic clearly drove the market shift in the availability and use of text books, particularly in high-demand collections, or course reserve,' he said. 'And because this sudden shift was forced upon us by the pandemic, quite frankly nobody was

fully prepared. We're now seeing gaps between those high demand e-resources and the model available to acquire them, and pricing is a part of this,' he added. 'The issues are complicated but ultimately, the most important outcome is that these digital resources get into the hands of the users – there's no use in offering content that a library can't afford.'

Clearly, University of Gloucestershire's Anderson agrees. However, she also wonders if aggregators could apply more pressure to publishers when it comes to ebook pricing: 'Shouldn't aggregators be joining forces with librarians, as publishers are making ebooks so expensive that we can't actually buy from them?'

'I believe some publishers are overstepping the mark, by asking us to sign up with third-party providers, such as Kortext and Bibliu, and dictating what we have access to,' she added. 'I get asked if [high ebook pricing] is widespread – well, this is what I've come to expect and I'm now shocked if there's one that's a reasonable price.'

So what comes next? Beit-Arie believes the demand for print books will 'bounce back' in the future, but also expects the elevated demand for ebooks to continue:

"We have the expertise in higher education to produce content ourselves"

'We believe that most academic librarians are e-first now.'

Given this, solutions to tackle pricing model issues are needed, and fast. Beit-Arie is absolutely certain that now is the time to create pricing models that will work for both publishers and libraries, but cautions that 'there is no single magical solution'.

Right now, ProQuest is considering how its acquisition models can help libraries to support curriculums with scalable, high-demand collections, and is also looking at workflows designed around libraries acquiring for purpose.

However, he also reckons that more open access books, as well as open educational resources (OERs), could form part of the answer. 'We are focused on content curation and expansion for librarians, and there is a growing range of titles and collections available, including open access and OERs,' he said. 'We will need a range of options to solve this problem, but open educational resources and textbooks are a part of this.'

RLUK's Prosser also advocates OERs as one route forward. He pointed out that such freely available online teaching and learning materials are widespread in the US, with UK-based organisations, including University College London and The Open University, also now sharing educational output.

'If we're thinking about long-term remedies, open educational resources really excite me,' he said. 'My hope would be that some of the clear outrage that we are seeing with ebooks, will be leveraged by the community into some really qualitative thoughts on what we can do to sort these problems.'

Anderson concurred. 'I would argue that we have the expertise in higher education to produce the content ourselves – our academics write the books and it is often public money that funds the research,' she said. 'If publishers want to price themselves out of relevance, then universities must come together and do it themselves.' **Ri**

Lack of FAIR research data 'slowing down life sciences innovation'

Siloed research data has a wide-reaching impact, write Ted Slater and James Malone

As the volume of data and the number of use cases continue to grow exponentially in life sciences, the lack of reusability needs to be addressed urgently.

In May 2018, the EU published a report estimating that not having FAIR (Findable, Accessible, Interoperable and Reusable) research data costs the European economy at least €10.2bn every year. Furthermore, by drawing a rough parallel with the European open data economy, it concluded that the downstream inefficiencies arising from not implementing FAIR could account for a further €16bn in losses annually. Similarly, in the US, according to recent Gartner research, the average financial impact of poor data quality on organisations is significant.

As emerging technologies come into play and aspects of AI – such as machine learning (ML) – become more widely adopted, data-rich workflows are being unlocked. This allows researchers to take large sets of historic data and apply them to solve more problems and ask new questions – again leading to new data uses and requiring fresh data management techniques.

This has offered the possibility of a shift in R&D around data-sharing – from individual scientists' data only being used by a specific person or team for one purpose, to data being used by the entire company and even the wider industry, to advance innovation. However, the industry is still playing catch-up to make this data sharing a reality.

Yet, Covid-19 has shown the urgency of addressing these problems and has provided a wake-up call for many organisations. To tackle this current pandemic, and indeed to respond quickly to any such event, scientists need to be able to access the right data in a useable form as quickly as possible. These data may need to be shared with other life science and biotech companies, and potentially integrate with large-scale real world evidence (for example, data from self-reporting mobile apps like ZOE in the UK). FAIR data is essential for us to bring

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"The life sciences industry has suffered an unignorable decline in innovation efficiency"

global solutions to this public health crisis, as well as the others that are sure to come in the future.

Emerging tech has revolutionised how we use data

In recent years, the life sciences industry has suffered an unignorable decline in innovation efficiency, but AI has the power to change this. Drug developers are looking to bring together everything that is known about a problem, to build a more accurate and nuanced picture of patients, diseases and medicines. As such, we need new ways to capture and manage these varied data. FAIRification is one such way.

Employing data to build more realistic, multi-dimensional analyses will help

researchers better understand diseases and assess how chemical entities behave in biological systems. Data that are structured in line with FAIR principles, and so are interoperable and reusable, will make this approach possible. It's also an approach that promises to slash drug development times and vastly reduce late-stage failures.

To build such in-depth patient and product profiles, life sciences companies need access to greater volumes of data external to their organisation, including:
- Public domain sources (such as PubMed, ClinicalTrials.gov, FDA);
- Commercial intelligence (such as Sitetrove, Pharmaprojects, Pharmapremia);
- Data provided by contract research organisations (CROs); and
- Real-world evidence (such as electronic health records (EHR), patient self-reporting);

Since 2016, the FAIR Data Principles have been adopted by the European Union (EU), together with a growing number of pharmaceutical companies, research organisations and universities. To accelerate innovation and productivity, more organisations and public bodies will need to follow in their footsteps.

Common challenges to FAIR implementation

While the ideas behind the FAIR principles have been around for some time, implementation in the life sciences industry has been slow, because the path to adoption is neither finite nor predetermined. FAIRification is the long-term overhaul of how data are created and used in an organisation, and this process is continuously influenced by an ever-changing knowledge landscape.

When organisations begin the FAIRification journey, they face some common challenges, including:
- Unstructured legacy data – often data are not tagged, contain haphazard names or identifiers and lack common terminology;
- Data silos and trapped historical data – technologies used in previous research are likely obsolete or no longer

supported; often personnel responsible for creating original datasets have moved on, leading to data becoming inaccessible or uninterpretable;

- Scientific complexity – machine-readable representations of biological information can quickly become extremely complex;
- Ontology management – there are multiple competing ontologies and vocabularies, often even in a single organisation, with little standardisation across the industry; and
- Cultural barriers – changing the culture of an organisation can be one of the most challenging tasks; researchers and organisations are typically very protective of even non-proprietary data. Incentivising all parties to do their parts in generating high-quality FAIR data will require valuing efforts to that end, as much as the marketable output of a drug development pipeline.

Path to implementation
FAIRification does not happen immediately and comprehensively. Making data FAIR is an evolving and progressive process. This is especially true for the pharmaceutical industry, where data production is continuous and new knowledge continuously reshapes the information landscape for research questions.

However complex FAIRification may seem, it is critical to start the process and allow for an agile, test-and-learn adoption. Helpfully, companies do not need to go it alone. There is a large and growing network of organisations offering assistance, expertise and tools to help FAIRify data. This includes The Pistoia Alliance, a non-profit group advocating for better data sharing in life sciences, which offers a free FAIR toolkit for implementation.

The FAIR movement is not the first attempt at merging data from disparate sources. But it is gathering pace at a time when computer infrastructure, knowledge engineering and data generation are finally where they need to be for firms to transition to powerful analytics, enhanced by a semantic and more comprehensive representation of knowledge.

One final key element to remember is that the outcomes from implementing the FAIR Principles will be different for each organisation. Some parts of FAIR may be more important to one group than another, for example 'findable' might be your priority to begin with, but even small steps will help improve data quality and management, to aid future innovation. **Ri**

Ted Slater is senior director, product management for PaaS, at Elsevier; **James Malone** is CTO at SciBite

Product Spotlights

Polaris OS

Advanced open repository platform for making data FAIR

MyScienceWork's Polaris OS is a brand new AI powered open source repository solution designed with data at the heart of the solution. Managed by a team of expert data scientists with decades of experience in the scholarly industry, the solution offers institutions and researchers the opportunity to reinforce research impact by making data FAIR.

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Data Portability (Interoperability)
Polaris OS supports integration with institutional IT systems (LDAP, user accounts, websites, reporting systems) and **cross-domain interoperabilit**y with bibliographic databases and other digital repositories.

Access & Data Preservation
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'UKSG gave me a community and a place to learn'

Andrew Barker, UKSG chair, looks back on
a difficult year and to a brighter future
(and tells of his love for 50s jazz)

Tell us a little about your background and qualifications…
After my degree in sociology from the University of Hull – Philip Larkin had been librarian there (though just too early for me), I began in public libraries, working for Surrey and Hounslow Libraries, meeting my wife in library school. I then moved into FE in Norwich, and then on to HE via the University of East Anglia, University of Liverpool, Liverpool John Moores University and now Lancaster University, where I am director of library services and learning development. Moving into HE from FE was a huge shock. I had a great manager and UKSG to thank for making it through the first couple of years. UKSG gave me a community and a place to learn about the wider sector and gain knowledge and experience. I owe it a great debt, and I feel a huge commitment to it. I once said that UKSG changed my life – it did then, and it continues to do so now.

What sort of a year has UKSG had since the onset of the pandemic?
I'm going to take you back to March 2020 and the dark night that Bev Acreman (executive director of UKSG) and I had when we realised we had to cancel the 2020 conference. This was a huge decision, which we knew would have significant ramifications for the organisation. UKSG is a charity, it's 'the' scholarly communications organisation and we were having to cancel the main source of its income. The money we get from the conference pays for everything UKSG does. Without it, we thought there would be no insights articles, no webinars, no workshops – no UKSG. What we did not factor in were our great sponsors and all those who agreed to roll over fees for a

year and support us. Without them, I would not be answering this question.

So, in terms of finances we had a terrible year – and I cannot overstate that. However, outside of the finances, we saw the best of UKSG. We saw great support from sponsors and organisations across the sector, we have had wonderful engagement with our webinars, seminars, and our November Digital Conference. There was a great attendance from across the sector and across the globe. Finally, we had staff and trustees who have worked incredibly hard to make sure that UKSG's future is as strong as its past. That effort

'A huge decision, which we knew would have significant ramifications for the organisation'

has been personified by Bev Acreman, who has worked incredibly hard this last year, and has ensured we look forward to our first all-digital annual conference in April.

What are the plans for the UKSG 2021 event? What are the main themes?
We will be all-digital this year, but, we know that people are missing the human elements of a conference – so Bev and her UKSG colleagues (a big-up to Vicky Drew and Brian Lewis) are working with an external provider, Underline, to try and retain the human element of the conference. We will be having the

exhibition spaces (a big thank you to our exhibitors), we will be bringing people together for informal get-togethers – and we will be having the famous UKSG quiz!

As it is a digital conference we have introduced reduced rates – I am particularly excited by the library delegate group membership fee of £275 plus £55 VAT for four attendees from any library member organisation. We do still offer the single delegate of course – but we wanted to introduced a new flexible way for people to engage with us – particularly those who may not have had the chance in the past. This allows maximum attendance at the conference.

Our themes will be the themes facing us all at the moment, what challenges face the sector in relation to content in light of the seismic changes we are seeing: access, prices. However, we are a global organisation, so we will be hearing the global perspective, not just the UK take on things. The beauty of the conference, is that it is the sector having conversations about the challenges we are all facing; presenting many answers to those challenges. That will be our theme, as it is every year.

Is the digital/virtual format, or part of it, likely to be continued in coming years? Can you see any advantages in such a format?
Yes, the digital is here to stay, at least in part – we know people have missed the in-person elements, so the answer shouldn't be either or, but like teaching and learning, we should be talking about a blended approach in the future, taking the best from what we have learnt this year.

Going digital, in terms of engagement, has been a huge success for us. We

'Going digital, in terms of engagement, has been a huge success for us'

a decade, our international enrolments are down, which has a knock-on effect in terms of rents and other university income (campus shops cafes etc). Expectations are sky-high post-pandemic – the digital is not a 'nice to have', it's an expectation. We all need to work out what the future content model looks like, when the money is not there. That is an overdue discussion.

Libraries have, however, been a success story through the pandemic – our value to our institutions, in terms of digital content and physical space, has never been clearer.

While the pandemic has also driven home the value of research – without universities we wouldn't be looking at a route out of the pandemic (as hard as things look right now) – open research will only become more prominent. That will impact on how this research is presented. We have the opportunity to go further into partnerships with our academic colleagues, the local stakeholders and our global partners. Potentially we are coming to the most challenging – and most exciting – time of my career.

Any hobbies or interests you'd like to tell us about?
My main interest is probably mid-20th century popular culture. It's books, records, films and clothes. If you were to ask my family and friends to sum me up in two words, they would probably choose 'hair' and 'records'.

Some choice examples: I am a huge Beatles fan, but I also love electronica (analogue synths) and 1950s/1960s jazz (Blue Note Records, Louis and Ella, Miles and Lee Morgan). I am a huge fan of the golden age of Hollywood (any Billy Wilder, Preston Sturges, John Ford or Howard Hawks film starring Barbara Stanwyck, Jean Arthur, Stanley Baker, Joel McCrea or Henry Fonda will do me). I am a voracious reader, loving authors like Patrick Hamilton, Elizabeth Taylor, James Baldwin and Anthony Powell. It's fair to say that my clothes and hair speak to this mid-century love… so I have been told, at least! **Ri**

Interview by
Tim Gillett

have had delegates from countries and companies who would never be able to send delegates previously, and our attendance numbers were higher than for the comparable in-person events. There is a place for in-person though, and our conference is an important part of the community calendar, so it would be good to go back to in-person in 2022 – it is certainly our ambition.

What are the biggest issues for UKSG members over the next few years?
The challenges are the same for our members as for everyone else really: uncertainty and trying to guess what the new world will look like. In terms of libraries, our universities are looking at less income from students and, at the same time, higher expectations – fees have stayed at the same level for nearly

Sowing seeds for future needs

Eric Merkel-Sobotta discusses the APE conference, the Berlin Institute for Scholarly Publishing, and a great love of horticulture

Tell us a little about your background and qualifications…
I've worked in communications for several publishers since 2002 but also worked in public affairs for trade associations and other industries. I have lived, studied and worked in Washington DC, Berlin, Brussels and Amsterdam.

I have a BA in political science from the George Washington University in Washington DC, and an MA in European studies from the University of Leuven in Belgium.

In 2020 I joined Taylor & Francis Group, where I'm the chief communications officer, working from home in Berlin with a team based all over the world. Last year I also became the managing director of the Berlin Institute for Scholarly Publishing (BISP), which is a part-time activity for me.

How did the Berlin Institute for Scholarly Publishing come about, and what is its purpose?
BISP came about in discussions with Arnoud de Kemp, who founded the APE Conference 16 years ago. Since I'm a big fan of the conference and a cheerleader for Berlin, Arnoud asked me in 2018 if I would be interested in helping determine options for the future of the conference beyond a simple sale.

My work at my previous job at De Gruyter brought me in touch with the Walter de Gruyter Foundation (which is independent of the publishing house). The Foundation was looking to do more in bringing stakeholders together within the research ecosystem. Discussions with funders, publishers and universities revealed that all of these groups were interested in supporting open and honest exchange, and the not-for-profit BISP was then registered by the Walter de Gruyter Foundation.

In addition to running the logistics of the APE Conference (Arnoud runs the programme committee), it will focus on developing a series of seminars and training courses for early-career professionals in research, publishing and funding. In the long term, we hope that this will contribute to a more constructive dialogue between those three stakeholder groups, and that it will lead to increased interconnectivity of the three groups in the shorter term.

How was the APE 2021 event? What were the main themes discussed?
The programme content – which has always been excellent – was especially so this year with the very current central theme of trust. There were outstanding contributions on open access, in the context of selectivity, collaboration and also with respect to the global south. There was an excellent session on climate and the UN's Sustainable Development Goals.

Furthermore, very engaging sessions on preprints and peer review, as well as data, rounded out the programme, for which more than 700 participants registered.

Is the digital/virtual format likely to be continued in coming years?
I certainly hope not! The APE has always been about seeing people and reconnecting with peers at the very beginning of the year (despite the often appalling weather in Berlin in January).

This year we missed the serendipity of bumping into people during the breaks, lunches and dinner and the opportunity for networking. The dinners are legendary, and nothing virtual could ever come close, so it is very unlikely that we would choose to be virtual-only going forward. Of course, we will closely investigate how virtual elements could be used to broaden attendance, both geographically and by target group going forward.

What is the biggest issue facing the European academic publishing industry in the next few years?
Even after we return to some post-Covid normalcy, it will not be anything like pre-Covid times. Work will be more flexible, we will travel less and it will be harder to meet and establish meaningful, lasting networks. Universities will be different and more virtual. This means opportunities to meet must be as valuable as possible.

This year's APE Conference theme sums up the biggest issue: trust and how to establish and maintain it among the main stakeholders – not being in the same room makes it harder. Academia is changing, the role of the library is changing. Funders

> **"This year we missed the serendipity of bumping into people during the breaks"**

are increasingly keen to determine wider policy. Publishers collectively sometimes struggle to clearly, simply articulate what publishing will look like in the future and what new roles publishers will play. We must ensure that dialogue does not slip into stridency.

Any hobbies or interests you want to tell us about?
My main interest has to be food – not just eating and cooking, but also growing vegetables, nutrition (the science, not the rules…), soil health, 'ugly vegetables' and food production chains. I love gardening and anything to do with plants. I also read quite a bit – contemporary fiction mostly. I'm also mad keen on architecture, photography, design and maps. I'm also a big fan of all things Japanese. **Ri**

Interview by
Tim Gillett

Viewpoints available online

How have Libraries and Archives changed in the Digital Age?
Springer Nature

The Digital Age has significantly increased the amount of information that is produced on a daily basis.

The Modern Language Association Releases 'Literary Topics'
EBSCO, MLA

The Modern Language Association (MLA) is pleased to announce the release of "Literary Topics," the fifth subject-area module for use in conjunction with our free teaching resource Understanding the MLA International Bibliography: A Free Online Course.

Skills need an upgrade as digital techniques take hold
Royal Society of Chemistry

By Richard Kidd, Head of Chemistry Data at the Royal Society of Chemistry

Our understanding of the universe and scientific research are inexorably linked, of that there is no debate. As we improve our knowledge in one area, the other inevitably benefits.

Springer Nature Education Podcast Series
Springer Nature

Author Insights: The Future of Education with Professor Rupert Maclean

Education and schooling is always a hot topic, but particularly at the current time during the COVID-19 pandemic, which has had a profound impact on the ways in which education and schooling is delivered to learners.

Best practice for effective searching for literature reviews
EBSCO, IFIS Publishing

In a webinar with Research Information, given in November 2019, Rhianna Gamble and Carol Hollier of IFIS presented on the topic of literature reviews in food science.

Indexed by Experts, MLA International Bibliography is a Global Collaboration
EBSCO, Modern Language Association

The MLA International Bibliography is known around the world for the quality of its indexing. Mary Onorato, Director of Bibliographic Information Services and Publisher, MLA International Bibliography, shares the secrets of its success.

The role of health care professionals in a changing sector
Springer Nature

The health care sector is undergoing a significant change, moving away from a system of caring for the sick to early intervention, prevention and supporting of wellbeing.

The Importance of MathSciNet to Mathematicians
EBSCO, Mathematical Reviews, MathsSciNet

Leading subject indexes provide critical information to academic researchers, enabling them to conduct a thorough review of literature with speed and efficiency.

Using the MLA International Bibliography to Guide the Research Process
EBSCO

In a recent webinar presented by Research Information, Angela Ecklund and Farrah Lehman Den of the Modern Language Association (MLA) shared an overview of the free online teaching tools developed for use with the MLA International Bibliography. Claire Buck, Professor of English at Wheaton College, also described how she integrates the Bibliography into the curriculum to engage students in the research process.

People, not books

James Molloy reflects on the many different strands of his role as a librarian

An uncle of mine who worked in public libraries was being interviewed on national radio and was asked, 'as a librarian I guess you're all about books', and he replied that it was all about people.

When I started in University College Dublin Library in 2006, I initially worked in reader services – a very front-facing, user-focused role. Under a restructuring in 2013, an opportunity came my way to change roles to a college liaison librarian, a role that would focus on teaching and instruction of information literacy skills to students of a designated college in the university.

The other area involves the relationship management with staff and students of the college, and to the wider UCD community. This was a good fit for me; I had dabbled in teaching in previous jobs, however the chance to work directly with people is what most interests me as a librarian.

Teaching

During my college days I did some part-time work as a club DJ, it's a tough job, you have to be able to quickly read the room, a record you play one night that fills the floor, will empty the same floor with a different crowd.

You need to adapt and come prepared. Teaching is similar. You can introduce different elements, such as game-based learning, but you need to be ready to change things up if it doesn't work with a particular cohort of students. You think on your feet and draw from your experience. You often have a short window of time to inspire, engage and win over a room of people you have never met before.

The classroom sessions are supported by a blended approach; students get online videos, tutorials, infographics and libguides. Academic teaching librarians can look to the various frameworks of information literacy in what we strive to achieve for our students, examples include CILIP, ACRL or ANCIL. The approach you take is then in the hands of the individual.

At UCD Library we have won both institution-wide and national teaching and learning awards, and this recognition from our peers outside the library community demonstrates the value of what we offer in the journey of students who progress through the university.

Relationship management

Building relationships in a large university campus takes time and patience; you need to weave yourself into the fabric of a school, college and university community. Out of sight does mean out of mind, so being involved in activities across campus really helps. I try to put myself forward for as many campus-wide events as possible. This ranges from getting involved with committees, speaking at campus talks and looking for opportunities to reach outside the library world to the wider academic realm.

Often the informal contact is where this can work best. For me, having a child in the

"You think on your feet and draw from your experience"

campus creche led to conversations about the perils of nappy changing with senior members of college staff, a great leveller. Getting outside of my office and being visible is really important.

We are lucky that UCD has a fantastic woodland campus, with several lakes where you can sit and enjoy a coffee. I am strategic about this and position myself between the College of Engineering and the main restaurant, that way I get to casually make myself present to staff from the college, and it works, plus I get to enjoy a coffee outdoors.

My role is to act as the main communication channel between the college and the library, so although I am not solely responsible for collections management or research support, I do need to be kept in the loop on all library activities as much as possible. This is not always easy, the larger the university the harder to keep communication channels open and transparent.

As a team, each college liaison librarian will represent the library on college committees, then inform each other and library management on issues, developments and updates on campus. We also need to channel information from the library back to our colleges.

Striking the right balance in how and when you communicate is something you learn and will differ across disciplines. Our input into school quality reviews and accreditation panels is where we really get to show our value to the staff and students we support, and to help cement that long-term relationship.

But I do love books

Before someone asks me to hand in my librarian badge, don't get me wrong, I do love books. I would advocate this job to any library student who loves books, research and working with people. There is also a great opportunity to bring in creative interests to your work through involvement in campus orientation, e-learning and in your teaching practice.

You have to wear many different hats and this article will only give you a flavour of the role, as there are so many different strands involved. Universities constantly evolve and always have new ideas and new faces that will keep you engaged with the wider world. **Ri**

James Molloy is a college liaison librarian for engineering and architecture at UCD Library

Do James Molloy's experiences chime with you? Would you like to share your thoughts as a librarian with the readers of *Research Information*? Email tim.gillett@europascience.com

ON-DEMAND WEBINAR:
The Future of the Search Engine
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Presenters

Philip Ditchfield,
Director,
Deep SEARCH 9

Natalie Pilote,
Patent and Scientific
Analyst, Novartis

It seems like a generation ago since the physical library disappeared, to be replaced by corporate information hubs, where search was transferred from expert searchers to the scientist and end-user at their desk.

Powerful, yet complex, online databases morphed into user-friendly curated systems that provide insight and reliability but also, by definition, human bias.

At the same time, the end-user's reliance on public search has been alarming (even across circumspect R&D-centric corporations) although these general-purpose search engines (powered by secret algorithms) primary focus is to drive ad revenue whilst serving up content alongside.

Deep SEARCH 9 has redefined the search engine with the potential to change the entire information landscape. DS9 tech enables

organizations to quickly build their own intelligence systems, dynamically sourcing freely available content from the surface and deep web. Based on user-defined algorithms, unbiased and in real time. This approach has been quickly adopted by some of the world's leading pharma companies and can be applied across other corporate verticals and academic research.

Join us on 17th February when Philip Ditchfield, DS9 Director, explains the story behind Deep SEARCH 9, why the approach of a tech company, headquartered in the Black Forest, is disrupting the status quo. Then hear from one of DS9's early adopters, Novartis, to understand why they chose to implement DS9 and the results they've experienced.

*Registration required

Research information

'A natural response to my curious mind and quest to know'

Research Information meets award-winning researcher
Marian Asantewah Nkansah

Marian Asantewah Nkansah, a Ghanaian researcher in environmental remediation strategies, was one of the recent winners of an OWSD-Elsevier Foundation Award for Early-Career Women Scientists in the Developing World, for her work on contaminants in water, food, soil, and the atmosphere.

Remediation techniques are needed when there is no space for prevention, and this is the right response in cases where, like Ghana, countries are suffering pollution from different sources and of different natures. Marian's research involves analytical sample preparation, determination of contamination levels and interaction of contaminants in water, food, soil, the atmosphere and other environmental matrices.

Research Information caught up with Marian to find out more.

Where did you grow up?
I was born and bred in Ghana and was educated in this country from nursery up to my masters degree in environmental chemistry.

Why did you want to become a scientist? Did you decide at an early age?
I was always a curious child and used to ask a lot of questions about everything – from why birds sing and fly, to why it gets dark at night. I always wanted to understand how things came into existence.

I was particularly active in science experiments in primary school, that led me to choose science for my secondary education and later university education. I guess it was a natural response to my curious mind and quest to know!

Why did you move to Norway for your PhD? How was the experience?
I wanted to experience new people and culture, and in Bergen I was in an environment where I had access to state-of-the-art equipment for my research. The other key benefits were that the programme was in English – and was fully funded. It was a great experience.

What problems are you trying to solve with your research
I am striving to improve public knowledge on the dangers associated with pollution by toxic substances (heavy metals, aromatic hydrocarbons, and so on) by determining them in environmental samples and evaluating the exposure and risk associated with them. I also look at some remediation strategies for some of these pollutants.

What are the main difficulties of being a researcher in Ghana?
The main difficulty is around funding, which is very limited. At my university, the Kwame Nkrumah University of Science and Technology, there is funding between $2,000 and $5,000 to compete for annually and there is no national research fund, so most funded projects are supported by external donors.

Why do you stay in Ghana? Have you considered being a researcher elsewhere
First of all, Ghana is where I feel most at home; I grew up here. Secondly, there are a lot of scientists in the global north and therefore the global south needs equally credible scientists to stay, work and help solve their peculiar problems which research can address. I also serve as a mentor and role model to younger people

> "I was always a curious child and used to ask a lot of questions about everything"

who aspire to be scientists. An ambition like that looks more achievable or real when your role model looks like you and speaks like you!

What are your hopes for the future – personally as a scientist, and for Ghana's scientific community?
Personally, I am looking forward to finding collaborators to help fund my research, and also to continue in science diplomacy, outreach and mentorship. I also look forward to working in a science policy space in order to contribute to research in the field, and also report on my experiences gathered along the way.

What does winning an award like this mean to you?
Joy, pride and gratitude all in one pot. It's a litmus test to all my professional engagements and gives me the zeal to do more. This award is a huge endorsement of my scientific and professional endeavours. It is definitely going to further increase my visibility and offer more opportunities for growth and impact of my causes, including research on environmental contamination, mentorship and outreach. **Ri**

Interview by
Tim Gillett

43rd ANNUAL MEETING

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From Chaos to Innovation

MAY 24–27, 2021

MEETING HIGHLIGHTS

• **QUICKSTARTER TRAININGS** These premeeting training sessions will provide attendees with a complete overview of the academic journals or books ecosystem, giving you the "quick start" you need.

• **CAREER COACHING** Attendees of the SSP Annual Meeting have the opportunity to participate in a FREE one-on-one 20-minute Career Coaching Session, focusing on professional growth and setting goals that are sustainable beyond the meeting.

• **POSTER SESSIONS** Virtual posters will be available for viewing throughout the meeting. During the Poster Session, you can text and video chat in real time with presenters as you browse the various posters.

• **VIRTUAL TALENT SHOWCASE** Sponsors and exhibitors will be showing off the talents of their staff in our first-ever talent showcase. Exhibitors and sponsors are competing for the ultimate bragging rights!

• **SMALL GROUP DISCUSSIONS AND INFORMAL NETWORKING** Network casually with your fellow attendees through video and text chat. Move through our platform to interact with different attendees and between topics based on your interests.

• **INDUSTRY BREAKOUT SESSIONS** Industry thought leaders share advice, case studies, expertise and the latest market solutions in these 20-minute presentations. Live chat with presenters during the sessions.

• **MARKETPLACE GALLERY** Meet with exhibitors and sponsors and see what new innovations are being offered by industry service providers.

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Shifting trajectories
Michele Avissar-Whiting
outlines the course of
post-pandemic preprinting

● ● ●

At a press briefing on 21 January, Dr Anthony Fauci briefly let the public in on academia's open secret: preprints have enabled the breakneck speed of discovery we've witnessed during the Covid-19 pandemic.

The urgency of the crisis inspired researchers to skip the rigamarole of the standard publishing process and release their findings as soon they were in hand – so that others could read and build on them. Without question, prepublication data and full manuscripts made available in preprint servers and other open data repositories shaved months off the development of Covid-19 vaccines and guided clinical management of the disease and public health recommendations to control its spread.

Though preprinting has been a norm for researchers in the physics and maths communities for decades, it is relatively new to biomedical circles, with only modest increases in uptake seen each year since 2015 – that is, until 2020. While most researchers in these fields still haven't adopted the practice, the pandemic has more than doubled the monthly rate of biomedical preprints, according to the preprint advocacy group, ASAPbio – and this trend has shown no signs of slowing.

What we're seeing now in the wake of this trial by fire is a sort of renaissance in academic publishing: a collective realisation that there may be a better way to share research and assess its legitimacy. Preprints would seem to be a panacea for the many problems that have plagued scientific publishing. They condense the time to dissemination from months to days, make access to science immediate and free, and allow for wider and more diverse scrutiny of the work before it gets a journal's stamp of approval. But these benefits have some problematic counterpoints that have garnered significant attention during the pandemic.

Free dissemination and open access means that almost anything resembling a research article can find its way onto a preprint platform, and anyone with an internet connection can read it.

This permissiveness has made the medium more subject to exploitation by bad actors: those seeking merely to advance narratives and peddle dubious treatments and prophylaxes. In response to this, the more well-established and better governed preprint servers have tightened up their existing screening processes to filter out alarming, potentially harmful and fringe topics, or those that don't seem like sincere intellectual pursuits. Moreover, the leading preprint servers are actively engaged with initiatives driven by organisations like ASAPbio, aiming to build trust in preprints, while guarding against their misuse.

Those studies that do make it past the screen (around 90 per cent on our platform, Research Square) are adorned with a red-lettered disclaimer

> ## "Preprints would seem to be a panacea for the many problems that have plagued scientific publishing"

alerting readers to their not-yet-peer-reviewed status. This disclaimer typically propagates out when a preprint is shared, but it doesn't stop the occasional reader from sharing a preprint as though it has been vetted. This has been a reasonable source of worry for anyone concerned about the spread of misinformation. Ultimately, though, most of the research posted as preprints winds up published in journals, without dramatic changes to the conclusions, according to a recent study published in *eLife*. So if critical issues are not addressed during peer review – and too often, they aren't – those studies continue to be shared and cited, but without caveat, under the premise that the research is sound.

The issue of readers misinterpreting or intentionally misrepresenting the conclusions of preprints has also been pervasive during the pandemic. But that confusion and misuse is not unique to preprints - it continues with the journal-published version. It is a genuinely difficult problem that perhaps can only be addressed by authors (and reviewers and editors) anticipating misinterpretation and misuse, and taking a more proactive approach to stave it off.

The system that has governed scientific publishing for decades is based on the notion that research needs validation by at least two unbiased subject matter experts in order to be shared. But as research outputs have ballooned, publication has become excruciatingly slow. The global emergency of the last year allowed us to witness a new system in action: one in which a study posted online could receive immediate scrutiny from tens or hundreds of peers. This experiment in post-publication community review, which took place on the most consequential preprints about Covid-19, showed us that a preprint could be discredited and withdrawn nearly as quickly as it had been posted. That said, most preprints do not draw this level of attention; many are not scrutinised thoroughly until they are submitted to a journal. Indeed, until preprints are given some reliable and recognisable mechanism of endorsement, they won't be afforded the same gravitas as journal articles.

My hope is that the preprint movement is the first in a series of shifts culminating in a monumental transformation in scientific publishing. The new model, if it is to scale with the current volume of research produced globally, will need to involve some combination of standardised assessment (both automated and human-driven), post-publication review, and a system of endorsement and curation likely assumed by journals. It won't be an easy move for an industry so notoriously bound to tradition, but the pandemic has forced us to reconsider the status quo for so many aspects of human life. This may be yet another silver lining. **Ri**

Michele Avissar-Whiting is editor-in-chief at Research Square

New White Papers available online

Managing the publication explosion: the role of libraries and technology

Scholarcy

This paper takes a look at the methods and technologies librarians can adopt to effectively teach research skills in an environment of exponentially rising research output, increased use of mobile devices, and less available time for focused research. We outline some of the most pressing challenges for librarians teaching research skills today, and present an overview of tools and technologies emerging to solve these problems.

Reproducibility in the life sciences: the role of protocols and methods

Springer Nature

In this white paper we will shine a spotlight on irreproducibility and explore: A case study looking at tackling reproducibility in high-impact cancer biology research, Actions to drive better reproducible science, Ensuring reproducibility through the publishing process, The changing roles for librarians in supporting reproducibility and Where we are now and the role of protocols in supporting the future of reproducibility.

www.researchinformation.info/white-papers

Research information

*Registration required

Open Athens prize is music to Nkoda's ears

Winner 'showed great knowledge and care for their UX and end-users'

Leading single sign-on provider OpenAthens has announced the winner of its Best Publisher User Experience (UX) Award for 2021.

The identity and access management specialist revealed winner Nkoda at its 2021 Access Lab conference which took place on Tuesday 16th March.

Nkoda was awarded the accolade after demonstrating how it has put the needs and experience of users at the heart of changes to its digital services.

Founded in 2015, the London-based digital sheet music library, Nkoda, has a product and user-centric approach and philosophy. Nkoda was selected as a finalist because of the organisation's product vision and how this serves end-users. Since its inception, Nkoda's product roadmap has been shaped by the musicians that use the digital library for maximum positive impact.

To win the coveted accolade both Nkoda and Health Data Research had to present their product's strategic components, application, and evidence to the judges. Both organisations showed great knowledge and care for their UX and end-users.

Ultimately judges decided to award Nkoda with the Best UX Publisher Award because Nkoda's design featured strategic UX components throughout that benefited end-users and enables them to access knowledge easily.

Although Health Data Research did not win the Best UX Publisher Award, judges decided that the organisation will be awarded the new Highly Commended Award in recognition of its outstanding contribution to the information sector.

Speaking at the conference on the award, Guy Spyropoulos, product manager at Ndoka, said: 'We are honoured to be recognised in this way. It validates that we are executing, maintaining, and prioritising

Wongsiri Subhayon/Shutterstock.com

user experience in the right way. It's also recognition of the hard work that the team has put in to build a platform that makes access to online material easier.

'At Nkoda we exist to support and inspire every musician in the world, helping them reach their goals. We design tools services and products to motivate, encourage and support people on their musical journey. We would like to give a special thanks to our end users who have continued to use our service and provide feedback on it, allowing us to follow a user-centred approach, something that is really important to Nkoda.'

Guy Spyropoulos has been working in product development since 2002 both in Europe and the US; he joined Nkoda in 2018 as a product manager. He has been integral in forming the product vision of Nkoda while shaping and prioritising the product development roadmap based on user value and maximum positive impact on the user experience.

Commenting on the awards, OpenAthens commercial director, John Bentley, said: 'From everyone at OpenAthens we'd like congratulate the team at Nkoda for winning this award, it is well deserved. Both Health Data Research and Nkoda demonstrated a clear understanding of their UX experience.

'Nkoda was given the accolade this year because it showed it had embedded user experience into its strategy throughout,

> ## "We exist to support and inspire every musician in the world, helping them to reach their goals"

although it should be noted it was not an easy decision as Health Data Research had also provided extensive evidence of end-user experience.

'The past year has presented many challenges for the industry; however, we are thrilled to have seen so many attend our Access Lab 2021 event and take part in so many of sessions over the two-day event.

'This award celebrates innovation in the information industry and those that push the boundaries of user experience, going above and beyond for those that need access to knowledge. Here at OpenAthens we are committed to supporting and driving these kinds of innovations, raising awareness and the importance of simplifying access to digital resources. We hope to continue our Best UX Publisher Award for many years to come.' **Ri**

To find out more about OpenAthens services and Access Lab 2021 please visit: https://openathens.org/access-lab-2021/

Webcast: Findable, accessible, interoperable, reusable

Why open or FAIR data is crucial to support scientific research in academia and industry

Watch for free on catch-up now!

Presenters

Marta Teperek,
Head of research data services at TU Delft, Netherlands

Liz Bal,
Director of open research services, Jisc

Ian Harrow,
FAIR implementation project manager, Pistoia Alliance

Webcast hosted by
Tim Gillett, editor, *Research Information*; and
Robert Roe, editor, *Scientific Computing World*

*Registration required

In the last five years – since a coalition of stakeholders set out and endorsed the application of FAIR principles to research – the principles of findability, accessibility, interoperability, and reusability have become widely recognised.

Since they were first published, the FAIR Principles have achieved widespread acceptance – and have been adopted as standards for the management of data, the development of infrastructure, and the delivery of services.

The advent of Covid-19 has further illustrated how critical the implications of open and FAIR data are, with organisations worldwide recognising the importance of open science in fighting the pandemic – and scientific discovery evolving at previously-unseen rates.

In this one-hour panel webcast, three experts representing academia and industry explain why open and FAIR data is crucial to supporting research – both now and in a post-Covid world.

Our panel represents many decades of experience in academia, librarianship and industry. They explore the progress of the FAIR movement since its inception in 2016, its importance going forward as science looks forward to an increasingly open future, and the ongoing importance of encouraging good data practice.

www.researchinformation.info/webcasts

Research information

Jisc and CNI announce library leaders conference

Event theme centres around the university library as a catalyst to research practice

Jisc and the Coalition for Networked Information (CNI), a joint project of the Association of Research Libraries and Educause, have revealed the line-up of keynote speakers for their online summer leaders conference.

The three speakers will be: Rachel Bruce, Head of Open Research at UK Research and Innovation; Francine Berman, Hamilton Distinguished Professor of Computer Science at the Rensselaer Polytechnic Institute; and Dan Cohen, Vice Provost/Dean of the Library and Professor of History at Northeastern University.

The overarching conference theme, 'At the Frontier of Research Practice – the University Library as a Catalyst', will explore the pivotal role the library plays in supporting the university's research enterprise to adapt to new technologies and workflows and realising the potential any disruption it will offer.

There is no doubt the COVID-19 pandemic has reshaped the research landscape: forcing collaborations to take place virtually, limiting access to fieldwork and labs and disrupting access to libraries, special collections and other research materials essential to many disciplines. Improvements in technology and scholarly communications practices over the last quarter-century has positioned universities to meet these challenges.

As organisations continue to face an increasingly uncertain and disruption-prone future, attention must turn to improving the resilience of the research enterprise more broadly.

What impact will the emerging important developments have? The convergence of big data with technologies such as machine learning, robotics, and ubiquitous connectivity offers the potential for new kinds of at least partially automated research at a vast scale, as well as raising important ethical questions. Open research can enable reproducibility and transparency helping to build trust and integrity in the research process while simultaneously helping to broaden participation in it. However, the transition to a scholarly communications environment that supports open research continues to pose challenges for authors, institutions, policy makers and publishers.

For many libraries their relationships with researchers and the research process continues to change. Moving from 'service provider' to active 'research partners', and 'pioneers' of new processes and platforms. So, are libraries ideally paced to act as catalysts to this change?

Clifford Lynch, CNI's executive director, said: 'There is no doubt the worldwide

"Libraries play a pivotal role in supporting the university's research enterprise adapt to new technologies"

Covid-19 pandemic has reshaped the research landscape. Through the conference theme, 'Frontiers in Research Practice – the University Library as a Catalyst', we will be exploring topics such as research continuity, data science, open scholarship, future research environments and evolving research collections.'

Neil Grindley, Jisc's director of content and discovery services, added: 'Improvements in technology and scholarly communications practices have positioned universities to meet the challenges of the pandemic. As we continue to face an increasingly uncertain and disruption-prone future our attention must turn to improving our resilience more broadly. This year's Jisc and CNI conference offers insights on how these organisations can equip themselves and respond.'

Underpinning the overall conference theme are the following breakout topics:
- Data science and the role of libraries;
- Monographs and long-form scholarly works;
- Open and faster scholarly communication in a post-COVID-19 world;
- How research collections are evolving;
- Researcher environments of tomorrow; and
- Research continuity and resilience.

What should delegates expect?
- A three-day programme of keynotes, panel debates and breakout sessions delivered by library and research thought leaders and experts, from the UK and US;
- A rich exploration of issues and innovations in digital scholarship, leading practice and policy with peers from a wide range of different universities and research organisations (more than 80 in 2018) from countries across the world (12 different countries in 2018) and
- Virtual networking opportunities and on-demand content.

Who should attend?
Leaders and senior practitioners in libraries, research, academia and organisations supporting digital scholarship, research and scholarly communications within higher education, including:
- Library directors and senior library managers;
- Pro vice-chancellors for research and senior research managers;
- Heads of open research;
- Heads of scholarly communication and open access;
- Heads of university presses;
- Research service providers; and
- Academic publishers.

● The Jisc and CNI leaders conference will take place online from 7 to 9 July 2021. Tickets are on sale now at **www.jisc.ac.uk/cni-conference**

Vicky Williams

Emerald Publishing tackles decline in female research output

To mark International Women's Day, Emerald Publishing launched a support network through its Engage platform to help women in research overcome the challenges in conducting research.

Covid has put unprecedented pressure on everyone in academia, but one group that has been disproportionally affected are female early-career researchers.

Emerald Publishing says it has seen a 35 per cent decline in research from female researchers in early-stage roles during the pandemic, and a recent survey by the publisher found that one in four female researchers say a lack of a support network is the main pressure of academic life today.

To change this, the company has launched a support network to connect researchers and provide them with a safe space to talk to others, make connections, share ideas and 'buddy up' with more established researchers who have stepped up to share their experiences, advice and provide practical tools.

The platform has already seen massive demand from more than 1,200 female researchers expressing an interest ahead of the launch, in helping to provide support as a mentor or looking for support themselves.

Vicky Williams, CEO of Emerald Publishing, said: 'There has been increased pressure on everyone in academia during the pandemic, but we have seen that women in particular have felt the effects of juggling increased caring responsibilities and work responsibilities and are seeking a strong support network. We hope that, through this network, we can connect researchers and support them so that women are not left behind in a post-Covid

world and their voices continue to be heard through the power of research.

'Publishing is an integral part of academia and the launch of this support network is just another step that we are taking to help level the playing field. We are particularly committed to amplifying under-represented voices in academia and therefore actively welcome intersectional involvement and participation in Engage.'

Several established academic professionals have joined Engage as mentors and will be sharing their real-life experiences along with practical tools, guidance and support from Emerald Works, free access for a limited time to relevant Emerald Research as well as resources from partners.

Professor Katy Shaw, professor of contemporary writings, Northumbria University, has joined the initiative as a mentor. She commented: 'International Women's Day is an annual reminder that in a world dominated by post-pandemic recovery, EDI cannot be kicked to the curb in discussions about how to get back on our feet after Covid. The only sustainable way forward – and the only real way of building resilience against future crises – is by getting up off our knees together.'

Emerald Publishing's own journey to equality has gathered pace since the appointment of Vicky Williams as its first ever female CEO in 2018. In the last four years alone, Emerald has published 3,000 articles related to gender issues, supported the Workplace Equity Project, joined the C4DISC as a member and expanded its STRIDE programme, an internal peer-led initiative which empowers colleagues to create a culture of diversity and inclusion.

MIT launches monograph framework

The MIT Press has announced the launch of Direct to Open (D2O), described as a first-of-its-kind sustainable framework for open-access monographs. D2O moves professional and scholarly books from a solely market-based, purchase model where individuals and libraries buy single ebooks, to a collaborative, library-supported open access model.

The framework gives institutions the opportunity to harness collective action to support access to knowledge. Beginning in 2022, all new MIT Press scholarly monographs and edited collections will be openly available on the MIT Press Direct eBook platform. Instead of purchasing a title once for a single collection, libraries now have the opportunity to fund them one time for the world through participant fees.

Amy Brand, director and publisher of the MIT Press, sees the model as a way to increase the impact and accessibility of high-quality scholarship: 'Direct to Open brings libraries and the Press together collaboratively, stepping outside market models, to open up our high quality professional and scholarly works. Comprehensive access to OA scholarship will increase the impact of research and contribute to the knowledge-sharing mission of the academy.'

Chris Bourg, director of Libraries at MIT', added: 'The MIT Press has been a leader in open access publishing for more than two decades, and Direct to Open builds on and extends that legacy with an innovative funding model for book publishing using an equitable and collaborative approach. The MIT Libraries is pleased to support this approach, which aims to make scholarly monographs open and available to all.'

BMJ and Jisc collaborate to support open access publishing

A transitional agreement between the BMJ and Jisc has been hailed as a way to make UK research more accessible and sustainable.

Healthcare knowledge provider, BMJ, and not-for-profit technology provider for research and education, Jisc, have agreed a 'publish and read' pilot as part of a commitment to promote knowledge and speed up discoveries to boost UK healthcare.

The 12-month pilot builds on a long-standing collaboration between the two organisations.

It grants Jisc members full read access to the BMJ's standard collection of 28 specialist journals, and gives researchers at these member institutions the opportunity to publish funded articles on an open access (OA) basis in the BMJ collection.
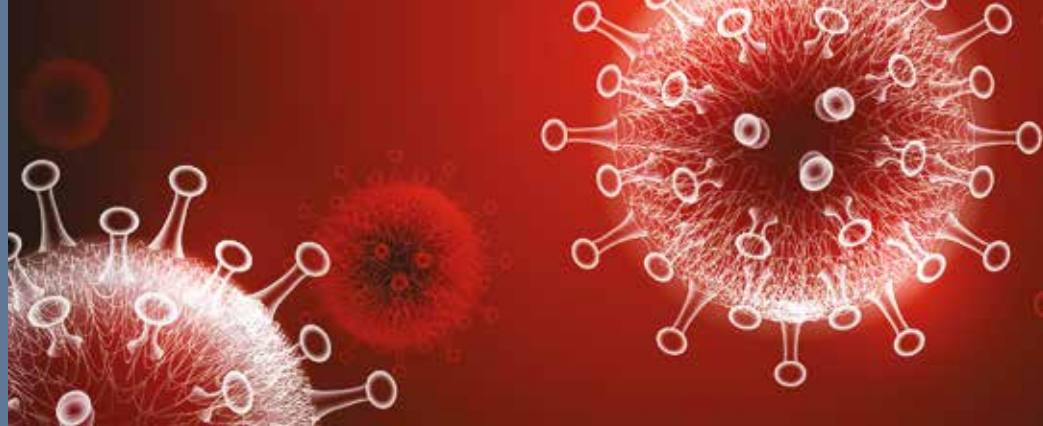
Under the agreement, research funded by UK Research and Innovation (UKRI), Wellcome, and key medical charities in the UK can be published OA.

BMJ has a long reputation as a pioneering publisher and champion of OA research, while Jisc supports UK universities and research institutions in negotiating transformative agreements with publishers. More than half of UK research output is covered by a Jisc-negotiated transformative agreement.

Claire Rawlinson, BMJ publisher, said: 'This agreement is a demonstration of our commitment to the transition to an OA future, making the content of our world-leading collection of specialist journals available to as wide an audience as possible.'

She added: 'Through this agreement with Jisc, BMJ aims to continue, redefine and grow a longstanding partnership, whilst supporting open access publishing across UK medical universities.'

Caren Milloy, director of licencing at Jisc, said: 'This pilot agreement is a tangible result of our joint mission of making open access the default for academic publishing.'

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Covid, climate and racism papers dominate Altmetric Top 100

Covid-19 research papers make up around 30 per cent of the Altmetric Top 100.

The annual Altmetric Top 100 highlights research and scholarly commentary published the previous year that generated significant international online attention and discussion – from patents and public policy documents to mainstream media, blogs, Wikipedia and social media platforms. This year's Top 100 represents the most discussed research from all disciplines, selecting the top five works by Altmetric Attention Score from 20 subjects.

The Covid-19 research in the Top 100 was across many disciplines, including biomedicine, built environment and design, and economics. Virus transmission and face-mask protection were among the most heavily discussed topics.

Top articles on Covid-19 include:
- Effectiveness of adding a mask recommendation to other public health measures to prevent Sars-CoV-2 infection in Danish mask wearers;
- Aerosol and surface stability of Sars-CoV-2 as compared with Sars-CoV-1;
- It is time to address airborne transmission of Coronavirus Disease 2019 (Covid-19);
- Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) in vitro; and
- A modelling framework to assess the likely effectiveness of facemasks in combination with 'lockdown' in managing the Covid-19 pandemic.

Two other themes emerged in the Top 100: climate change and racism. In a year that saw global lockdowns and a corresponding dip in CO_2 emissions, one article discussed exactly that. Other articles on climate change look at deforestation, rising temperatures in oceans and greenhouse gas emissions.

Top articles on climate change include:
- Global increase in major tropical cyclone probability over the past four decades;
- Deforestation and world population sustainability: a quantitative analysis;
- Record-setting ocean warmth continued in 2019;
- Global human-made mass exceeds all living biomass;
- Temporary reduction in daily global CO_2 emissions during the Covid-19 forced confinement;
- Utilising smart-meter data to project impacts of urban warming on residential electricity use for vulnerable populations in southern California; and
- Comparative greenhouse gas footprinting of online versus traditional shopping for fast-moving consumer goods: a stochastic approach.

On racial justice, two articles reflected on police violence and reform while others discussed institutional racism in academia:
- Mapping fatal police violence across US metropolitan areas: overall rates and racial/ethnic inequities, 2013-2017;
- Active learning narrows achievement gaps for underrepresented students in undergraduate science, technology, engineering and maths;
- Five years after Ferguson: reflecting on police reform and what's ahead;
- Decolonising art history;
- Making black women scientists under white empiricism: the racialisation of epistemology in physics; and
- Disadvantages in preparing and publishing scientific papers caused by the dominance of the English language in science: the case of Colombian researchers in biological sciences.

Kathy Christian, CEO, Altmetric, said: 'In 2020, Covid-19 dominated the minds of everyone, and scientific research was front and centre in the media, as pharmaceutical companies rushed to create a vaccine.

'It is also important to remember that other important research took place. Research on racial justice, climate change, origins of life and other crucial issues also garnered significant attention. This list demonstrates the crucial role that research plays in our everyday lives.'

● View the full list at: **www.altmetric.com/top100/2020/**

Research 'indicates increasing support for immediate gold OA'

Preprints, accepted manuscripts, and the final published version of record (VOR) mean researchers now have access to increasing multiple versions of research papers. In a white paper, *Exploring researcher preference for the version of record*, produced in collaboration with data from ResearchGate, Springer Nature seeks to provide increased understanding into how researchers view these different versions, which they prefer to use and why.

The study finds that 83 per cent of researchers prefer the article VOR over the accepted manuscript (AM) and preprint, both for general reading and citing in their research. They find the VOR easier to read, more reliable, and more authoritative and credible because of the reassurance provided by peer review and proof of publication. In particular, publication in a recognised journal provides a 'stamp of credibility' unavailable in earlier versions.

Where access to the article VOR is not available, nearly 9 in 10 researchers will take direct action to gain access to it. In addition, the VOR is the version of their own work authors prefer others to use.

Springer Nature says these findings support the need to widen the availability of article VORs via the gold OA route, as this provides immediate, unrestricted access to the authoritative VOR, and for continued and sustainable funding of gold OA as a critical step to a fully open research future.

Steven Inchcoombe, chief publishing and solutions officer at Springer Nature, said: 'Overwhelmingly the article VOR is

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the version of the manuscript researchers are most comfortable using as reader and author, making this version immediately available via gold OA is where we should all be focusing all our efforts.

'Attempts to enable the further growth of green OA and to make AMs more widely available may only add confusion to the scientific record, and do not reflect researcher preference. It is why we are committed to transitioning all primary research we publish to gold OA, so that this authoritative version is immediately available to all.

'Providing only immediate access to the unfinished accepted manuscript via 'green' OA – which does not benefit from post-acceptance improvements to the article – is not linked up with data or code, does not show corrections or retractions, and relies on the continuation of library subscriptions, meaning we risk falling short in delivering on the promise of an open science future, so crucial to the future of the whole research enterprise.'

Summary of key findings:
- Researchers prefer to read and cite the article VOR. 83 per cent of respondents preferred working with the VOR for citing content in their own work, compared with 9 per cent preferring AMs, and 2 per cent preferring preprints;
- Researchers believe the article VOR is easier to read and is more reliable. In open text answers, respondents commented on the reassurance that peer review and proof of publication give to the VOR, pointing to the lack of time researchers have to read a large volume of content, and the desire to quickly assess and cite an article;
- Researchers are more likely to look for ways to find the article VOR, rather than an AM or preprint. Where authors did not have access to the VOR (i.e. via a subscription or due to it being published OA), the majority – nearly 9 in 10 – will take direct action to gain access to the VOR (such as contact the author);
- Alternative versions of the article can offer value, with caveats on use. Though VOR is preferred, many researchers feel comfortable using a preprint or an AM for reading and, in some instances, for citing. Speed of availability is noted as a benefit from preprints; and
- The article VOR is considered the most authoritative and credible source by the majority of researchers. Researcher preference for the VOR highlights the value added by publishers, in particular to the 'stamp of credibility' publication in a recognised journal brings.

Company of Biologists agrees OA deal with Max Planck Digital Library

The Company of Biologists has announced a three-year read and publish open access agreement with the Max Planck Digital Library.

Under the cost-neutral transformative agreement, which runs until 31 December 2023, corresponding authors at Max Planck Society's 86 institutes benefit from immediate open access (OA) publication of their research articles in The Company of Biologists' hybrid subscription journals – *Development*, *Journal of Cell Science* and *Journal of Experimental Biology* – with no author-facing

publishing charges. In addition, the agreement enables corresponding authors at Max Planck institutes to publish research articles without charge in The Company of Biologists' fully OA journals – *Disease Models & Mechanisms* and *Biology Open*. Unlimited access to the full journal archives is also available.

'We are very pleased to implement this new agreement with The Company of Biologists, and salute their willingness to test new economic models that are repurposing previous subscription fees to facilitate

a sustainable and cost-neutral transition of their journals to an Open Access publishing model,' said Ralf Schimmer, head of information provision at the Max Planck Digital Library. 'This agreement marks a further, significant step in the Max Planck Society's strategy to enable open dissemination of research, in line with the principles of the OA2020 Initiative and the Berlin Declaration on Open Access.'

Richard Grove, commercial manager at The Company of Biologists, added: 'As a not-for-profit publisher with a mission to support biologists and

inspire biology, we have been committed to OA for many years. We have worked closely with our library partners and funding organisations to develop sustainable OA publishing models and we pride ourselves on our flexibility and willingness to experiment.

'Following fruitful discussions with the Max Planck Society, we are pleased to pilot a read and publish agreement which has been tailored to meet the needs of a research-intensive institution with a large network of institutes.'

De Gruyter 'changes entire business' with 67 Bricks digital upgrade

De Gruyter has completed a digital transformation that it says has changed the 270-year-old publisher's entire business.

The company has announced the launch of degruyter.com, a digital research platform built by software development consultancy 67 Bricks. Using cloud technology, the platform aims to provide researchers around the world with fast, stable and secure access to more than 110,000 scholarly books and 800,000 journal articles from De Gruyter, its imprints and publisher partners.

Degruyter.com went live on 1 February after user testing in close co-operation with leading academic libraries and institutions.

67 Bricks says the platform enables the publisher to upgrade and innovate its digital services quickly and responsively. User benefits include faster page load times, enhanced website uptime, maximised security and an improved overall experience, the company says.

The platform's development and launch form part of the publishing house's strategic decision to invest heavily in its digital infrastructure and

ramp up in-house digital expertise.

Carsten Buhr, managing director at De Gruyter, said: 'The new degruyter.com is an important milestone in our 270-year history of serving academic communities and making knowledge accessible – and a big step forward in our digital transformation.'

Managing director of 67 Bricks, Sam Herbert, said: 'These are uncertain

times in publishing and forward-thinking companies like De Gruyter are looking really hard at how the world is changing and what they do.

'Digital transformation is a world away from just putting books and journals online, and requires some radical mindset shifts. De Gruyter has shown great nerve and commitment and we are delighted to be partnering with them on their journey.'

STM reasserts the importance of research data

The international publishers' organisation STM has reaffirmed its commitment to promoting and supporting the wider sharing of research data with the establishment of a permanent research data programme.

At the 16th Academic Publishing in Europe Conference (APE) in January, STM's director of research integrity Joris van Rossum explained how the programme will emphasise how research data is key to advancing Open Science and research, while highlighting how the improved sharing of data promotes transparency, reproducibility and leads to additional opportunities for scientific discovery and collaboration.

STM highlighted how publishers connect researchers, their research

and the wider world, and how they innovate to add value to an increasingly digital and interconnected environment. In doing so, they have created vital data infrastructure and founded programmes that assist researchers to share, cite, and link their data with all forms of research output. The continued development of these initiatives will play a vital role in making science more transparent and improving the reproducibility of research, as well as having the potential to be a driving force for scientific discovery, he said.

The research data programme follows a yearlong Research Data Year in 2020, with STM working alongside publishers and partners to boost the effective sharing of research data. Over 12 months the programme tracked that

the average number of journals with data policies across participating publishers went up 80 per cent (from 29 to 52 per cent) while the number of articles that contained data availability statements (DASs) more than doubled, from 7 to 15 per cent.

STM says it is aiming to continue to build on these foundations over 2021 and beyond by exploring how research data sharing can positively impact the wider scholarly ecosystem – from funders and research institutes, to data repositories, data services and wider international collaborations (such as the European Open Science Cloud).

STM's new research data function will also seek to advance progress on artificial intelligence and how data can

be made 'AI-ready', as well as widening support for both open science and FAIR data principles.

Speaking of the establishment of the new research data division, Ian Moss, STM's CEO, said: 'Publishers have held a long-standing commitment to sharing data and STM is continually expanding our efforts to ensure that the wider sharing of research data, the adoption of leading-edge tools and increasing transparency continues.

'I am delighted that Joris will be heading up our new research data programme and leading the further development of community standards and principles, around which the wider sharing of research data can be best achieved.'

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