

STM Autumn Conference 19th October 2021 Publishing in a changing world

The question offered was: How are STM publishers meeting the opportunities and challenges presented by a rapidly changing publishing landscape? The full programme is available at <https://www.stm-assoc.org/events/stm-autumn-conference-2021/> but the recording is only open to those who have registered. It was an entirely virtual event and appears to be a shorter replacement to the usual Annual Conference before the Frankfurt Book Fair. It will be interesting to see whether this gathering of the senior staff of the world STM companies (plus some vendors) will feature in 2022

The Conference explored how the industry can adapt to continue to improve the quality, integrity, and availability of scholarly communications whilst dealing with the important technological challenges that underpin research integrity, user privacy, and cybersecurity.

The keynote was introduced by Nick Fowler of Elsevier in his role as the current Board Chair and as usual was a distinguished person from outside the industry. This year's choice was Jean-Eric Paquet from the **EU Commission**, the Director General of the Directorate for Research and Innovation. He has been involved in scholarly communication matters since 2002 and since 2018 in a leading position. It is not often that someone of this importance becomes available to STM but his highly presentation made clear why he was there.

He thanked STM for its collaboration over the special arrangements for open and speedy delivery of peer reviewed COVID related content. "Making trusted results available is very important". The Commission recognises that "publishing services are vital". It is good to know that publishers are a "key part of the ecosystem". He also was pleased at the interest of publishers in open science

It was clear that his main message was to ram home to publishers that the Commission is committed to Plan. This means that financial support from Commission programmes such as Horizon by payment of APCs in hybrid journals is now discontinued after ten years of transition. Universities may step up for payment if they wish to do. Green OA is still open as an alternative approach to open access but it is from day one that the published paper must be deposited in an open access repository.

There was time for questions and in this part of the session we learnt more about EU forward planning.

There are no plans for mandating open deposit of preprints. It is only peer review content which is worth depositing in an open repository.

Nick Fowler made the point that China is now the biggest research player. Is the EU talking to the Chinese? The answer was positive and, yes, the EU is also talking to the global South and (when this was raised) that relatively small part of the researcher body represented by industry including pharma. Oddly it was not clear that the EU is talking to either the UK or the USA, but this may have been because no relevant question was asked.

Finally, Fowler asked Paquet if he could give his views on where scholarly communication will be in twenty years' time. Paquet has been thinking about this. Artificial Development is developing so fast. An article behind a paywall can be reproduced by using the citations. "Massive change is certain". The role of publishers will be organisation of publishing and data management.

The second item on the agenda was a panel on **the opportunities and challenges of advancing Open Research** moderated by: Tasha Mellins-Cohen, Founder & Director, Mellins-Cohen Consulting. The scope presented was as follows.

Open Science, Open Research, and Open Access are fundamental to the daily environment of all involved in scholarly communications. STM publishers sit at the interface between researchers, their research, and the rest of the world through their efforts to improve the quality and availability of scholarly communication – as such, they're deeply immersed in advancing openness and are aware of many of the opportunities and challenges. But do they understand how other stakeholders perceive the most pressing and salient issues?

The panellists were a chemistry professor Bas de Bruin from the University of Amsterdam, US librarian and information scientist Professor Lisa Janicke Hinchliffe of the University of Illinois at Urbana-Champaign and another chemist Kazuhiro Hayashi from the (Japanese) National Institute of Science and Technology (a government scientist)

As is customary in such panels each member spoke first setting the scene as they envisioned it.

Professor De Bruin did not hold back. He spoke from where he was as a researcher. For him there is scope for spending less on publications and more on research grants. He corrected Paquet. The commission did not ask researchers for their views on Plan S before it was promulgated. "It is one size fits all approach". "Most society journals are currently hybrid, and we want to publish in them". The problem with APCs is that they stimulate commercial journals and enable them to publish more and more papers. As a mode of funding publications, they represent a problem for highly selective journals which results in an APC too expensive for researchers to pay if the costs of all the papers rejected are considered. Looking at the wider picture – what (business) model did he like? His answer was any model did not depend on researchers paying APCs and if pressed he liked Projekt DEAL as adopted in Germany and presumably similar transformative arrangements

Professor Hinchliffe, who is inter alia an expert on transformative deals, complemented De Bruin by offering her generalisations to his particulars. These were her themes or "ponderings" – as follows – with some extensions from what she said.

Scholars in all fields are increasingly reliant on digital technologies and methodologies if bug data, the scholarly graph, scholarly networks, visualisation etc. Digital scholarship is now just scholarship.

This turn to digital scholarship has created new opportunities for libraries, publishers, and platforms across the research life cycle.

What does it mean to take a use centred approach to supporting digital scholarship? Digital scholarship writ large is not just publications and how do we achieve this wider openness.

How might we connect and collaborate to develop services and strategies that respond to current opportunities. There is not so a thing as a non-digital workflow. But it can be closed. Lots of the process of scholarship is not open and is not recognised or rewarded.

There was a lot more in this presentation, which is not directly available, but it would be good if the presenter wrote this up.

Dr Hayashi presented with the aid of big graphics, but his basic message was simple and profound. Open Access is a subset of Open Science. Sharing is crucial to the future of scholarship. It is share or perish.

After a break during which major sponsors were able give their own presentations in breakout rooms, there was the usual **Meet the CEOs** moderated by: Philip Carpenter, the Interim CEO of STM.

There was for once no attempt to gather the heads of the very big houses which can result in boring and careful replies. Of those taking part only Vikram Savkar, Wolters Kluwer Health ran a large traditional company. He was complemented by Delia Mihaila, CEO of MDPI a born-OA company and indeed the largest of its type, Peter Coebergh of BRILL, the international humanities and social sciences company, and finally Thane Kerner, of Silverchair whose platform is used by many STM publishers.

There was a real and amicable conversation prompted by some excellent moderation which was manifested in a series of questions: there was only some selling. Some answers were unintelligible even after careful listening to the recording and have been omitted. I have used the name of the company where the answer seemed to me a “we” answer and the name of the speaker when it seemed to be the answer was an “I” answer.

It was interesting that **what do we want to keep post pandemic** (the first question) produced answers which were closely related to the final question – **what you have personally learnt from the pandemic period**. Most of the answers revolved around travel. Working from home has proved possible and to some extent should be retained was a general view. Mihaila with her multitude of offices still had to travel but Savkar welcomed the extra time at home and Coebergh said Brill policy is that all travel must be justified in an era of global warming. Kerner admitted a struggle to adapt to being at home so much.

Is there any trade-off between processing speed and issues of trust/quality? MDPI, who pride themselves on speed in processing, denied the need for a trade-off, but they have found some “corruptions” in their systems (journal editors delaying a paper) which they are dealing with. There are considerable benefits from preprints (feedback) but they are being misused by the media. Wolters Kluwer have found that physicians have had to rely on social media concerning new treatments which leads to the reader having to be more critical in their responses. This is new in this experience. What does this mean for publishers? For Brill working in fields, where velocity has never been of importance, the pandemic has illustrated the continuing major importance of peer review. Science is being questioned when there is a crisis, but academic publishers must make sure they are trusted partners. Silverchair pointed out that there are a whole range of opinions: part of the rhetoric of the open community is that peer review is worthless. Kerner agreed that we have to contend with the downstream which for the lay public is media like the New York Times and we have to deal constructively with this problem

The next question followed on from these answers: **What should publishers be doing to educate the broader community and how will this be trustworthy?** There was general agreement that peer review must be explained more and more transparent said Coebergh. How peer review works had to be fully explained. Savkar added to this. We cannot just mention that there has been a retraction but we have to explain how that has become necessary. There is a space for more press officer activity after publication. **What should STM Solutions be doing to create trust** elicited little interest and some negativity. Wolters Kluwer recognised that technology solutions can be shared.

What should the industry be sharing? Silverchair interpreted the question as another one about trust. For Kerner some areas we know like image manipulation can indeed be shared. However some areas relating to integrity are more difficult to handle such as the spectrum between the robustness of the study and at one end wilful fraud. NJEM, one of his clients do a lot of work to explain this. Technology alone cannot handle this. It is a challenge of process. MDPI saw a plug for OA here: when content is open fraud can be detected more easily and feedback is provided.

How are developing open access business models impacting exclusion. This was taken to relate to the cost of publishing through APCs. Brill sees this as a particular problem for the humanities because of lack of money in the system. MDPI are working in the social sciences and what they do is to cross subsidise to enable publishing in these areas, but she does think there is money in the system. Silverchair explained as a platform provider that scalable infrastructure can still reduce costs. Surprisingly the panel did not discuss transformative business models

What about the climate emergency and how should industry be responding not just by improving its carbon footprint but in the communication of relevant research? Should this be made free like relevant medicine under COVID? Brill shareholders are pressing, and they are thinking of what action they can take. MDPI presented themselves as always digital and low cost over 25 years (no need to change) and a big publisher of journals in climate-related areas. Wolters Kluwer are keen to make climate research more available: “maximum dissemination of research is key for all.” Silverchair saw blockchain models as part of the solution despite the amount of energy they use.

Technology, Trust, Together: Common challenges and opportunities for today’s digital scholarly communication ecosystem. This session, moderated by Hylke Koers, CIO STM Solutions, was organised as follows. Through a combination of brief presentations, audience input, and moderated discussion, this session will explore challenges and opportunities for digital technology to strengthen and support scholarly communications. The focus was on common issues and pain points, for which working together within and between stakeholder groups can truly make the differences. For the remit of STM Solutions initiated in April see <https://www.stm-assoc.org/stm-solutions/>.

There were arrangements to bring the audience into the discussion.

The first speaker was Roger Schonfeld of Ithaka S+R on **Rebuilding Trust in the Institution of Science**. He was concerned with science not just science publishing. His starting point was that trust in major civic institutions has been declining some time. Science and science publishing have suffered during the pandemic. There have been peer review disasters and preprint disappointments. He listed predatory publishers, paper mills and citation rings, science misconduct and fraud. Even cherished Dr Fauci boobed over masks. There is an ongoing problem with translation of science for the public: you must tell the truth. He does not see open science as the panacea. In global terms even principles are not fully aligned in what he sees as a “geopolitical split”. The record of science is not fully trustworthy, and we should not need to wait until after publication for corrections. His view is that science publishing as a sector cannot work properly unless science publishers collaborate at a higher level not just on technologies.

He was followed by Andrew Smeall formerly Chief Strategy Officer of Hindawi and now a senior director in Wiley’s open research team. His title was **Research Integrity Screening**. He began with some history including the well-known quote from John Maddox, the former long-time editor of Nature: the question – how much of the science we publish is wrong and the answer is – all of it. Science evolves. Media narratives about scientific failure reduce public trust. There can be an over-emphasis on correcting the record after publication. We can do better and use technology to catch

problems before publication. There has been work on this. For example, Ithenticate has caught plagiarism. Organisations like COPE have promoted best practice with some overall success. However, most of the barriers to change are not technical ones but rather behavioural. He gave examples. Image manipulation across publishers can be solved by technology but duplicate publication demands collaboration between publishers.

Harriet (Harry) Muncey, data science manager at Elsevier talked about **Responsible AI**. She gave examples from recent Elsevier projects: see Elsevier research collaborations site. However, she does believe that pooling knowledge among publishers is worth considering. No one publisher has the resources to go it alone. Working within one company it is important to work with all relevant functions. This is clear from work she has been doing to eliminate bias in peer review. Elsevier have a toolkit. This cannot be corrected just by technology but needs strong human intervention. Good guidance comes from the white paper released at the STM Spring Conference on AI Ethics in Scholarly Communication – see the STM site. The push for efficiency in all part of the time can be undermining

The final topic was **Common Goals, Uncommon Allies: Partnering University Security, Information Technology, Libraries and Publishers**. This was the portmanteau but realistic title for Daniel Ayala, Managing Partner of Secratic. Ayala is closely involved in the SNSI project with STM – the **Scholarly Networks Security Project** fully described at <https://www.snsi.info/>. This is the prime example of collaboration across scholarly communications boundaries. The blurb conveys this well: *Cybersecurity isn't just an issue for publishers. It isn't just a challenge for librarians. It is not just an obstacle for institutions or nuisance for researchers. This is an issue for all of us, and a problem that we firmly believe can be best addressed sustainably and effectively together.*

His presentation was essentially a riff on SNSI. To achieve good collaboration each player has to understand where the others are coming from. For example security people do not understand the emphasis librarians put on patron privacy. It is easiest to enable trust when the parties to a collaboration – for example librarians and publishers can both buy in to research integrity. The same parties do have problems over openness. The idea that all information wants to be free still exists in library circles and this leads to a resistance to the concept of licensing.

To round off the session the moderator tried out the mentimeter (<https://www.mentimeter.com>). It worked. The questions and replies from those logged in were as follows.

The first question was – **what is the first thing that comes into you mind when you see the term “collaboration”?** The reply made most frequently was “sharing”. Harry Muncey added the gloss – “reciprocity.”

The second question was **Do you think there is sufficient collaboration in our interest.** There was no clear reply – evenly balanced.

The next question was – **what were some impediments to collaboration in the past?** The range of replies boiled down to lack of trust/effort/resource. Ayala suggested that the need to make money dominates.

Finally – **what technology problems can you not solve on your own?** Some of the answers were not particularly surprising for example access control, trust in science, new AI workload, bias in AI, and better peer review system.

The session finished with a panel of the speakers who were given questions sent in by the audience. The question of press relations was taken up. Schonfeld was worried that where the

communications staff were explaining scientific discoveries this was good but there was the danger of selling company successes. There was a related question – is peer review fit for purpose He was also concerned about technology assisted peer review. For him it was not just a matter of peers being satisfied. Science is now being democratised and the public now expect to understand. Muncey considered that AI was doing a good job in leaving peer reviewers free to concentrate on the quality of research. Ayala considered that transparency was important in questions of trust and publishers must work harder on explaining how peer review works.

The end of the conference was given to a short **summing up** by the interim CEO. Since the meeting announcements have been made the new CEO (Caroline Sutton) is poised to join at the end of January. Carpenter probably was now making use of the STM platform to provide some words of wisdom. He picked on Paquet’s aim of disrupting business models. As he pointed out the only academic on the programme Professor de Bruin understood that for publisher who pays the bills is crucial. It has to be re-asserted that open does not mean free. What we do has to be sustainable and it is nothing to do with pressure from shareholders. We have also learned that technology is not enough. Few things are more important to us than the erosion of trust. Our (STM) tagline is correctly **“advancing trusted research”**

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