

STM Annual Spring Conference

The New Normal: Users and Publishers Evolving Publishing

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STM's annual [Spring Conference, 'The New Normal: Users and Publishers Evolving Publishing'](#) was held May 1-3 in Washington, DC and provided a comprehensive update on the views and needs of the various constituencies involved in scientific publishing. Among these many constituencies are authors, researchers, librarians, editors, publishers, content providers and technology developers.

David Lipman, director of the [National Center for Biotechnology Information](#) (NCBI), gave the keynote address entitled, 'Reflections on the Life-Cycle of the Biomedical Research Paper'. He sought to distinguish data-intensive research from 'big data.' For him, big data is a huge dataset where users analyze all of the data. Data-intensive research means only selecting items or pieces of the dataset to study. He pointed out that biomedical research is moving to data-intensive science.

Lipman explained that the NCBI takes in four terabytes of data per day, and the data still needs to be sequenced and integrated. 'The big problem in biology is reducing the dataset to a derived form,' he pointed out.

Another issue in scientific research is where to publish. Open access is only a partial answer, according to him. 'It might be safe to publish in PloS because other funded investigators publish there and the review process is less onerous, but it might not be the place for a first paper,' he said.

Finally, Lipman pointed to the problem of reproducibility in science: 'What is truth?' He claimed that at most only 50 percent of the published results in genomics were reproducible so that people are doing follow-up research based on information that may well be false. He also claimed that one-fifth to one-third or more of all cancer cell lines are contaminated or misidentified. 'What are the implications of all this?' he asked. 'We need to acknowledge that peer-review cannot find all the errors.'

Mark Patterson of [eLife](#) spoke about the new venture sponsored by the Wellcome Trust, Max Planck Institute and Howard Hughes Medical Institute to publish a researcher-led, open-access digital publication. The project has yet to launch, but Patterson explained that the editorial goal of eLife is to include content that is very broad in scope, but of the most influential nature. There will be swift triage by senior editors who are active researchers themselves. 'Overall the goal is to limit the rounds of revisions and get rid of 'reviewer experiments,'" he said.

He stressed that the content as displayed digitally will be as useful as possible to facilitate the value. Rich media and inclusion of supplemental data will be encouraged. eLife will also add value after publication through the provision of metrics and indicators of influence. For now eLife is entirely underwritten by funders. 'We will introduce revenue streams in time. Maybe we'll start with publication fees in a couple of years,' Patterson concluded.

Dr. Victor Henning of [Mendeley](#) spoke about the importance of staying in touch with users to determine their needs. Mendeley currently has 1.6 million users who have uploaded 225 million scientific documents to the site. The free service allows users to organize, manage, annotate and discuss these documents. Through the Mendeley Advisors program, 1,200 volunteers around the globe give feedback.

Mendeley also collects user data and has just partnered with SWETS to provide librarians with this information. Henning claimed that the Mendeley readership data correlate highly with Thomson Reuters citation metrics. In addition Mendeley is turning its database into an app platform, and some publishers are collaborating to build apps.

Sid McNeal of [EBSCO](#) reported on EBSCO's annual survey of librarians. The good news, according to him, is that library budgets are stabilizing. However, 80 percent of librarians have moved to e-only, 34 percent did not renew their e-packages, and 50 percent renegotiated multi-year deals.

'The 'big deal' will continue, but usage is very important. Eighty-three percent of the librarians cite usage as an important metric,' he claimed. Only 55 percent of the librarians were interested in patron-driven acquisition/pay-per-view, but 55 percent worried that budgets would get eaten up too quickly with this model.

McNeal advised publishers to focus on discovery in order to boost usage. There should be little or no barriers to login. 'Researchers do not want to read on a third party site; they want to read on the publisher site because it is richer,' he said.

McNeal also cautioned that 'a lot of the communication between libraries and publishers is too adversarial. This is not constructive. Hopefully we can move to a more civil discourse.'

In a panel of five librarians entitled, 'The Transformation of Libraries and their Users: Q & A with Librarians,' it became evident that their relationships with publishers might not be improving so quickly.

Ivy Anderson from the [California Digital Library](#) stated, 'My institution wants me to be in open access so that's where I need to be.' Steven Gass of [MIT Libraries](#) agreed with her, 'We would all love to see all open access. It would be a significant way to remove the barriers.'

T. Scott Plutchak of the [University of Alabama](#) pointed out that while open access is a desirable goal, 'how do we get there without negative consequences. It's like having haystacks of needles. We don't have the tools for this.'

An important role currently for the academic librarian is creation, maintenance and preservation of institutional repositories, and data management for research projects. Librarians are increasingly being involved in research projects at their very beginning to insure that data is managed properly. These services are being paid for through reallocation of subscription budgets, according to Gass.

Anderson criticized the 'big deal' which, she said, forces the small societies to join with large publishers so they can take advantage of the big deal. 'We might have to step away from the bid deals to break the cycle,' she stated. She also directed publishers to lower the unit cost for open access publication. 'Nine dollars is the cost for publication in our repository, not including pre-publication costs. You need to get closer to that point. Even \$1500 might be too high.'

A second panel entitled, 'A Day in the Life of Three Researchers,' presented three somewhat similar views of scientific research and its information and publication needs.

Timothy L. Grove of [MIT](#) spoke from the perspective of both a professor and an editor. He has published 176 papers, given 313 meeting presentations, produced 21 PhD students and 10 post-docs. He is also the editor of [Contributions to Mineralogy and Petrology](#).

Grove cited the biggest changes in scientific publication as citation tracking forward in time, new software products such as journal submission systems, and online embedded social networks for higher education. He also mentioned being able to read what is written about one of your own papers as an important change. He said that peer review is essential and that publishers need to think beyond the PDF to provide new ways to interact with data in an article. 'Open-ness and transparency of the data is very important,' he concluded.

Christy B. Till, a post-doctoral fellow at the [U.S. Geological Survey](#), serves as both an internal and external reviewer. To find content, she uses [Papers](#) as an interface because it is the easiest to use and takes the fewest clicks. She also uses [Web of Science](#) and finds forward and backward citations useful features. But she still has problems looking for information because in-press papers do not appear in indexes. In addition, literature in her field is not digitized prior to 1990.

'We also need a more portable way to organize content. We shouldn't always have to get on-line.' Till has scanned all her important content and now has empty bookshelves. She would like one tool that provides the ability to organize, read and reference on many devices. She also noted that she does not like using PDFs and would like to see an improvement in the journal a submission process, which now takes too long.

William T. Jackson of the [Medical College of Wisconsin](#) opened by saying, 'We need publishers and the curation you provide,' but went on to point out the various impediments to research created by publishers. In particular, he singled out pay walls and the reliance on PDFs, which have no interactivity.

He also observed that scientists seek to publish in the most significant journals, which seems on the surface to be at odds with the current publishing trend of accepting more articles for NIH-mandated open access journals.

The keynote address on the seminar's second day, 'Building a Bridge to Science,' was given by Mariette DeChristina, editor in chief of [Scientific American](#). She reported that *Scientific American* is the oldest magazine of any kind and has been in continuous publication for 166 years. It is authored by trusted experts: scientists. 'I am turning it on its head and creating a trusted platform instead,' she said. '*Scientific American* was the coolest thing when it was established. I would like to make it the same today.'

DeChristina remarked that people understand that science is important, but 'not for me.' They don't know how to connect. 'What if I could make science fun and easy? What if I made it free on-line?' she asked.

DeChristina has created several features on the magazine's website that provide user interaction, discovery and learning. One is called 'Citizen Science'. Another called '1,000 Scientists in 1,000 Days' seeks to pair scientists with educators to enrich the teaching experience. A third project is 'Science in Action' which is part of the Google Science Fair. According to DeChristina, these efforts have resulted in unique website traffic doubling during year that these initiatives began.

The final feature of the Spring Conference presented four publishers/developers speaking about innovation at their companies.

Rafael Sidi of [Elsevier](#) spoke about its applications and developer network which has provided an open platform to create interoperability between Elsevier content and products and other third party products. Examples are a partnership with Mendeley and with [Faculty of 1000](#). 'This empowers the research community,' he said, and allows features to be build in as little as eight hours. 'It has transformed Elsevier into an information solution provider, not just a content provider.'

Thomas Taylor of [INFOTECH Soft](#) described Cancer Models Gateway and Cancer Images Gateway which provide cancer researchers with tools to identify in vitro, in vivo, and in-silico models of tumors. These applications were co-developed with Elsevier's SciVerse platform to enable cross-database semantic searching with the National Cancer Institute's databases.

Mady Tissenbaum of [The Journal of Bone and Joint Surgery](#) spoke about transforming from the business of a journal to a business with a journal. Journal management realized that one product was not enough and 'our circulation was dropping so they went back to the source and investigated their audience.' Using a consulting firm, journal leadership created two new products to aid orthopaedic surgeons in their clinical needs: *Essential Surgical Techniques: Evolving Practice in Orthopaedic Surgery*, which expands on techniques already contained in submitted journal articles, and *Case Connector: Connections & Trends in Orthopaedic Surgery*, which expands the current offerings of case reports. The journal also created subspecialty corridors on the website.

Ray Colon of Springer spoke about [Springer's](#) API Challenge, which was launched in late 2010. It has made available the metadata and abstracts of over five million scientific book chapters and journal articles. Some of the winners of the contest were [SpringerQuotes](#), [KontentLinks \(Kleenk\)](#) and [JournalSuggest](#). This has allowed Springer to reach new end-users, not just institutional ones.

Presentations from the STM Spring Conference are available for [viewing and download](#) from the STM website.