In a field where measuring the impact of an individual scientist is becoming increasingly more important, many industry natives are augmenting ways in which researchers can promote and interact with their work online.

Andrea Michalek, a self-described serial entrepreneur, co-founded Plum Analytics as a way to highlight usage, captures, mentions, social media, and citations in a meaningful way.

“We want to redefine how scholarship is measured,” Michalek said.

Michalek was one of three panelists to discuss alternative metrics at the Allen Press Emerging Trends in Scholarly Publishing Seminar in April. The goal of the annual seminar is to bring together leaders that present innovative ideas as they gain momentum in the industry. “Zoom In on Alternative Metrics,” the final session of this year’s seminar, brought together several scholars—like Michalek—to discuss the developing ways of promoting scientific research online.

David Crotty, Senior Editor of the Journal Publishing Program at Oxford University Press and Executive Editor of The Scholarly Kitchen blog, moderated the panel of scholars as they each discussed how their organization assists researchers, publishers, funders, and/or institutions.

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I am a terrible photographer. I’m talking, heads chopped off, blurry images and lighting issues no Instagram filter can fix. Don’t even get me started on selfies. Why didn’t somebody tell me I looked like an extra from the latest production of Night of the Living Dead? Ok, I may be exaggerating just a tad, but the fact is, that the lenses we use have a significant impact on our perspective of the world around us.

As professionals in the scholarly publishing industry, it is important that we shift our perspective now and then to view the situation through someone else’s lens. As my colleague, Tim Cross said, “Seen through the lens of a publisher, open access repositories appear differently than they do through the lens of a librarian. The exposure of open data has different implications for researchers than for funders. An academic filters the meaning of an article’s impact differently than someone in the business office of a journal.”

This issue of FrontMatter provides a snapshot of some of the different perspectives shared in this year’s Emerging Trends in Scholarly Publishing™ Seminar, A Matter of Perspective. In our feature article, “Increasing Scientific Impact, Accessibility Online,” Danielle Jurski provides highlights from a very engaging session on alternative metrics. Our views and reviews section summarizes some key take-aways from our most popular roundtable topics. We’re happy to be able to share a few quick pics for those of you who weren’t able to join us for the event.

Choosing to view the industry through another lens can be a great way to refocus the goals and priorities of your own organization to better align with your constituents. As the Kid President recently proclaimed, “We need to live in a world with fewer selfies and more #otherpeoples.”

We’re interested in your feedback about the newsletter and any ideas you have for future articles. Please email comments, suggestions or ideas to frontmatter@allenpress.com.
“Despite nearly 350 years of practice, we still do a fairly poor job of measuring the quality and impact of research papers and the work of individual researchers,” Crotty said. “Most of our system for determining funding and career advancement revolves around one metric—the impact factor.”

While skeptical of new altmetrics practices, Crotty acknowledged that more can be done to recognize the work of individual scientists.

“The impact factor is flawed for many of the things we need to know,” Crotty said. “It’s a terrible metric for understanding the quality of an individual researcher or an individual paper.”

Crotty isn’t alone in his belief that there should be additional ways to measure the impact of a scientist besides the Journal Impact Factor (JIF).

Panelist Mark Leader, Publications Director at the American Society for Cell Biology, spoke on behalf of the San Francisco Declaration on Research Assessment (DORA). DORA supporters call for a change to research evaluation methods in response to the perceived misuse of the JIF.

In his presentation, Leader pointed out that JIF data can be skewed, making it statistically invalid. He added that even if the JIF were valid, it’s not an explanation for the success of an individual article.

“Some use the Journal Impact Factor as if it is [an individual measure],” Leader said. “They think it’s a seal of approval for their article.”

Leader also spoke about DORA’s main recommendation: don’t use journal-based metrics (such as JIFs), as a surrogate measure of the quality of the individual scientist’s contributions, or in hiring, promoting, or funding decisions.

The movement has about 11,000 signers as of June 2014. 484 organizations have also signed the declaration. (Note: DORA was featured in Issue 25 of FrontMatter. You can read more about the declaration at www.allenpress.com/frontmatter/issue/25.)

Michalek is another pioneer in the industry working to provide new and improved statistics to capture the impact of research and specific researchers. In her presentation, she described metrics as a feedback loop that can inform researchers on how they’re doing.

“We have better instruments to measure scholarly data exhaust and we can see more of that impact spectrum,” Michalek said.

She added that Plum’s approach is to create an environment around people—not just the research they are offering.

“Our approach from day one hasn’t been just about giving article level metrics,” Michalek said.

Plum Analytics’ metrics—called artifacts—are gathered on more than just typical journal articles. Blog posts, books, letters, presentations, videos, and dissertations are just some of the examples for which Plum Analytics gathers artifacts. PlumX, the impact dashboard provided by Plum Analytics, provides evidence of how research is being used and discussed online.

During her presentation, Michalek went through a live demo of chemist Antony Williams’ PlumX profile to assess his artifact/article level metrics. She discussed the importance of turning big data into information that researchers can use. A live demo on Williams’ profile went through the steps of how artifacts are gathered.

Williams, VP of Strategic Development at the Royal Society of Chemistry, founded ChemSpider, a database to search and share chemistry research. He spoke during the 2014 seminar in the “Focal Point: Technologies to Watch” session.

Known online as the ChemConnector, Williams stressed the importance of bringing together compound data on the web. While ChemSpider is different than Kudos and Plum Analytics, an overall theme remains the same—the website works to make data accessible and reusable while integrating with publications.
Melinda Kenneway, co-founder of Kudos, suggested that along with measuring scientific articles, users should also explain, enrich, and share their work to increase visibility online. Kenneway, along with Charlie Rapple and David Sommer, founded Kudos to help researchers, publishers, and institutions measure and maximize the visibility of research.

The team has developed an algorithm that can assess what happens after an article is promoted online. Researchers, institutions, and publishers can track downloads, citations, and altmetrics using Kudos.

“We know that every piece of published research has a much bigger research story around it,” Kenneway said. “An article has images, figures, and data and all these other assets that help tell the story of that particular researcher’s work.”

One of Kudos’ goals is to bring these pieces together as inbound links that will help enrich the reader’s experience. All links will become trackable so a researcher can then choose which metrics matter to them. Kenneway described Kudos as “metric agnostic.”

For publishers, Kudos boasts that a close kinship with author communities can increase a publication’s performance.

“Kudos helps publishers identify high-interest articles, understand how author-led activities impact usage and citations, and benchmark the performance of publications against a wide range of metrics,” the website states.

Kenneway added that while scientists may not have experience with the tools provided by Kudos, the organization aims to provide an intuitive interface to make it easy for researchers to promote their work. She added that a user won’t have to spend hours figuring out the Kudos system.

In May, Kudos launched a new user interface, which includes a dashboard to help researchers track performance. A publisher dashboard is also available and gives insights into achievements and activities of authors.

Ending in a quick-fire Q&A, Crotty asked the panelists several questions on the usefulness and validity of alternative metrics. He started by asking how the panelists distinguish between attention-seeking metrics versus the validity of scientific research. He added context by providing examples of articles most often re-tweeted or promoted online because of their flashy topics and not necessarily their impact on a given field.

Michalek said that because the artifacts available on Plum Analytics are divided into several categories, a researcher can distinguish and track the metrics they find most important. She added that a user might place a higher emphasis on how many times an article is bookmarked versus how many times it was re-tweeted.

Kenneway added to the discussion by stating that she believes attention metrics are short lived. Overall, she applauded scientists for being active about their research online.

“Most people want to talk about their work,” Kenneway said. “The idea that somehow we should be stopping them seems odd to me. There are many new environments in which we can support research communication. So why not support it?”

While a definitive standard for evaluating research online is yet to be determined, DORA outlines 17 specific recommendations to agencies, publishers, institutions, and other organizations that use metrics on their website.

The group suggests that publishers provide an array of metrics, focusing on article-level metrics. For institutions, DORA recommends looking at the scientific content of papers—not the journal they were published in. Researchers are advised to use a range of article metrics as evidence of the impact of their specific article(s).

“We’re very much part of a conversation,” Leader said. “The unity of the whole ecosystem needs to participate in it. Let’s not assume we’re looking for a replacement metric. We’re looking for another way to evaluate research. It may or may not lie—to some extent—on metrics.”
Does Format Follow Function?

Even in a digital era, for most publishers, our current dissemination of scholarly research still depends on the article as container. For lots of pieces of information or data, the article, and the formats thereof (PDF or XML), provide a perfectly acceptable container. A PDF is a fine way to disseminate text. It’s sharable and reproducible, and you don’t lose much in translation. For some figures, this is true as well—mostly those that originated as photographs.

However, lots of the figures we embed in the article container are actually graphical representations of data. Charts and graphs, mathematical equations (which are sometimes reproduced as figures), and chemical structures are all good examples of these. Unfortunately, while the format of a graphic file or PDF might be fine for helping a reader understand the data, it’s not at all helpful for allowing the reader to use the data. There’s no way to manipulate the data behind a figure, and let’s be honest, what researchers really want is the raw data.

This is an especially irritating problem in chemistry. Chemical structures, which are typically reproduced as figures, are really little bundles of data. The elements that make up a compound, and even the name of the compound, are all inherent in the chemical structure. Furthermore, drawing out a structure is a painstaking process that is prone to error. So why spend valuable research time recreating chemical structures? That’s exactly the question that Antony Williams, Vice President of Strategic Development for the Royal Society of Chemistry and one of the founders of ChemSpider posed to attendees at this year’s Emerging Trends in Scholarly Publishing™ Seminar.¹ The answer—Don’t! Use ChemSpider instead.

ChemSpider is a database of more than 30 million chemical structures, properties, and associated information. The database, which is owned by the Royal Society of Chemists, includes data from more than 500 sources and is the most comprehensive database of freely available chemical data. If ChemSpider were simply a database of reusable chemical structures, that would be a useful tool… but it is so much more.

Not only can a user input the systematic name of a chemical compound to find the chemical structure, but the reverse is also true. And beyond that, lots of different data can be associated with a chemical structure: trivial names, safety data, spectra information, supplier names, and published articles as well as blogs, podcasts, videos and other media. All of a sudden, in place of a flat graphic file, we have a ton of useful data for researchers.

Williams noted that ChemSpider is constantly growing as new data sources become available. One of the initial goals was to bring data out of the articles that make up the scholarly record. However, the ultimate goal is not to continue to mine data from publications, but to start publishing content in a format that preserves the data in a reusable, enriched form. Williams also acknowledged that is no small feat. However, in the chemistry community, researchers do seem to be recognizing the value of such an idea and may be willing to submit content to publishers in more interactive formats.

For those of us outside the chemistry community, ChemSpider may look like an interesting, but not particularly applicable, application. However, the core concept, that data should be published in a reusable format that researchers can actually use, is one that applies to many of our disciplines. Furthermore, there is inductive evidence that the research community will turn to publishers to make such a goal reality. *

¹ To see Antony William’s presentation in its entirety, visit http://allenpress.com/resources/archive.
A Matter of Perspective: Roundtable Round-Up

A popular and regular feature of the Allen Press Emerging Trends in Scholarly Publishing™ seminar, the roundtable discussions create an opportunity for in-depth conversation with colleagues in an informal setting. Participants chose from one of 14 topics in each of two 25-minute discussion periods moderated by an expert in the field. We’ve collected key take aways from several of the most popular roundtables.

Changes and Trends in Copyright
*Moderated by Michael Carroll, Director, Program on Information Justice and Intellectual Property; Board Member, Creative Commons*

Summary: Authors and institutions expect to be able to post an article in the institution’s open access (OA) repository with or without an embargo. It is increasingly important for publishers to list their publications in Sherpa-Romeo so that librarians can quickly determine if, and when, they can deposit a faculty member’s article in their repository. Many institutions with OA mandates will grant a waiver to the faculty member if the publisher will not agree to the terms. The definition of OA was discussed in relation to copyright—does OA mean copyright free for use (commercially), or just free to access, cite, and read? If the former, Carroll suggested publishers should set Article Processing Charges (APCs) high enough to cover all potential lost revenue opportunities including permissions and licensing. This could make APCs unreasonably expensive, some attendees observed.

Social Media as a Way to Drive Users to Content
*Moderated by Matthew J. Price, Director of Membership and Social Media Marketing, Society of Toxicology*

Summary: Know your limitations and capabilities. Know your audience and your content. Don’t just network with those who are subscribers; market to students and alumni of institutions. Use annual meetings as a way to reach out to nonmembers, authors, and speakers. When necessary, establish private networks with sections/chapters that will allow users to form communities.

Author Misconduct: Policies, Procedures, and Prevention
*Moderated by Christina Bennett, Publications Ethics Manager, American Physiological Society*

Summary: Common misconduct issues experienced by participants included: splicing whole parts of published views and reviews.
articles into manuscripts (self-plagiarism), conflict of interest policies, and authors submitting figures inaccurately or untrue to data.

Managing Chinese Papers and Authors
Moderated by Jing Duan, Managing Editor, Acta Sinica Ecologica

Summary: This roundtable provided a great opportunity to pose questions to a Chinese editor about some common problems her counterparts in the United States are encountering with Chinese authors. One discussion focused on how to deliver criticism and feedback. Unlike in the United States, where iteration is seen as part of the process needed to ready a paper for acceptance (e.g., please submit references in correct style, please replace submitted image with higher resolution image, etc.), “mistakes” in the submission of a paper can have serious consequences for a Chinese author, including reprimand or demotion. The group discussed ways to differentiate errors in science from mechanical issues like submission requirements. Jing explained that Instructions for Authors are often difficult to understand as they aren’t written with non-native speakers in mind. Another discussion focused on translation. Jing offered some insights on the nuances of this, as some papers are written in Chinese and translated into English, while others are written in English and need to be heavily edited.

What Do Authors Need from Publishers
Melinda Kenneway, Director, TBI Communications, Co-Founder, Kudos

Summary: Reputation, service, reach, impact, and affordability were discussed in relation to authors. Discussion of the impact factor focused around its immediate prestige while other journals have to wait for post-publication statistics. Institutional identities are changing; ORCID is an example of this. Other topics discussed included access versus reputation and the exposure of research.

Best Practices for Contributor Roles and Authorship
Diane Scott-Lichter, VP, Publishing, American College of Physicians

Summary: Authorship used to be easily defined by the author byline, which indicated the first author as the major contributor to the article. Lately, the trend is for all contributors to a paper to get some mention and credit for the work. The Contributorship Model is one way to ensure that credit is more evenly applied. This adds more transparency, and gives voice to less powerful contributors such as postdocs, who may have done much of the work.

The Print to Digital-Only Transition
Mark Leader, Publications Director, American Society of Cell Biology, DORA

Summary: There are two main aspects to consider when making the transition from print to digital: the business decision and the mechanics of the transition. While particulars of each aspect are unique to each society, finances will play a factor in decision making. Attendees discussed using a society vs. journal budget, the member/subscriber push-back, and losing advertising revenue.

Reducing Time to Publish
Caitlin Meadows, Publishing Services Director, Charlesworth Group

Summary: Because there is increasing pressure to have things published faster, authors are pushing for time reductions. Attendees discussed streamlining the upload process and the benefits of peer review. Additionally, there was discussion about how to most effectively utilize and motivate a staff of all volunteers. Enforcing time standards and rewarding staff were answers posed.

Marketing to Libraries
Lorraine Haricombe, Dean of Libraries, Watson Library, University of Kansas

Summary: Libraries are changing and adapting to the digital market despite the fact that budgets haven’t increased or remain stagnant. Haricombe discussed how shrinking budgets have forced libraries to re-think some of their strategies. Other topics discussed include adapting to demand-driven and/or electronic models, author-paid costs, and institutions’ desire to support the journals in which their faculty are published. *
Allen Press Receives 11 GraphEx Awards for Print Quality

Allen Press was the recipient of 11 awards in the Printing and Imaging Association (PIA) of MidAmerica’s Graphic Excellence Competition (GraphEx). GraphEx was created in 1989 to recognize outstanding work in the print media industry.

Allen Press received two special awards on April 24 at the PIA MidAmerica Gala: a Best of Kansas City Silver Award for the 2014 Ames Percherons Calendar and a Best of Kansas City Bronze Award for Open the Door to Possibility. The latter is a self-promotion finishing capabilities piece that was conceptualized, designed, and produced by Allen Press staff.

Open the Door to Possibility and the 2014 Ames Percherons Calendar also received Best of Awards in the Self-Promotion and Calendar categories. FrontMatter received a Best of Award in the Newsletter category. The Mineral Collections of the Crystal Gazers and Friends took the Best of Award in the Magazines category and went on to win a PIA Premier Print Award of Recognition. This is the sixth consecutive year that Allen Press has won awards in the Best of Category.

Additionally, Allen Press received five Awards of Excellence in several categories for pieces from Doll News, Orchids, Hoover Digest, Heyday Books, and the Lawrence Arts Center.

“Receiving four Best of Awards and two Best of Kansas City Awards is truly a testament to the time our staff puts into ensuring the quality of our print work,” Gerald Lillian, CEO, said. “We are especially proud that three of our awards were from two pieces we produced completely in-house. The finishing capabilities piece is a great example of our entire team coming together to produce a unique and informative tool for our customers.”

Judges qualify pieces based on several categories, including binding, use of paper, coating, clarity, and smoothness. Entries in the Best of Category automatically compete for Best of Show recognition.