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SCIENCE EDITOR

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IN THIS ISSUE:

Save the Date!

2019 CSE Annual Meeting

May 4–7, 2019

Hyatt Regency Columbus
Columbus, Ohio

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On the cover: Original northern hemisphere hockey stick graph of Mann, Bradley, and Hughes (1999); smoothed curve shown in blue with its uncertainty range in light blue, overlaid with green dots showing the 30-year global average of the PAGES 2k Consortium 2013 reconstruction. The red curve shows measured global mean temperature, according to HadCRUT4 data from 1850 to 2013. The background photo shows U.S. Marines and fire crew on Marine Corps Base Camp Pendleton, California, responding to wildfires ablaze in southern California May 14, 2014. Reference and credit: Mann et al., Northern hemisphere temperatures during the past millennium: Inferences, uncertainties, and limitations. Geophysical Research Letters, 1999;26:759–762. https://doi.org/10.1029/1999GL900070. Graph redrawn by Klaus Bittermann (OTRS) [CC BY-SA 4.0 (https://creativecommons.org/licenses/by-sa/4.0)], via Wikimedia Commons. Background photo: U.S. Marine Corps photo by Lance Cpl. Joshua Murray (Battling the Blaze) [Public domain], via Wikimedia Commons.

Here We Go: A New Editor for *Science Editor*

Jonathan Schultz

Allow me to introduce myself: I'm Jonathan Schultz, your new Editor-in-Chief of *Science Editor.* This year marks 40 years since the start of *Science Editor*,[1] and I begin my tenure with a full recognition of the history of this publication and importance of my new role. In this, my inaugural Viewpoint, I will outline my vision for *Science Editor* and preview just a few of the changes and improvements I hope to roll out over the coming months with the goal of keeping *Science Editor* interesting, informative, relevant, and reliable.

Science Editors

But first, I want to explore what it means to be a science editor. The Council of Science Editors (CSE) began in the 1950s as an organization for and by science editors, but 60 years since then, the definition of what exactly a science editor is (and does) has changed quite a bit. As was seen in 2017's special issue on careers (Volume 40, Number 1), "science editor" is a broad term encompassing professional scientific editors, part-time academic editors, technical editors, managing editors, copy editors, support editors, and so on. In many cases, the day-to-day work of these roles may be different, but what binds them, and why I feel calling them all "science editors" is appropriate, is we all share the common goal of improving the scientific literature, enhancing the scientific record, and ultimately advancing science and our understanding of the world.

I recognize that this all sounds a bit too grandiose, but it is tempered by appreciating the inherent humility in the scientific pursuit. There is very little in science that is definitive, and every discovery and advance is meant to be poked, prodded, broken, and replicated. This is true even in a field such as medical science, where advances that save lives now may one day be viewed as barbaric as new and less invasive or less destructive techniques are developed. Nothing is final in science; nothing is truly finished.

This humility should extend to scientific publishing, where the scientific article is never an end in and of itself. This is reflected in the metric with the most currency in scientific publishing: the citation. Articles are only successful when they are referenced, when they influence or inspire or provoke. An article that is never cited, that never drives further research, is considered effectively worthless: an end, but a dead one.

Going further, as editors it is helpful to remember that the scientific article is not the work itself, but a report of the work, a reflection of the research. If there are ways to improve the clarity of that reflection, new tools or new formats, we must explore and possibly embrace them.

There are some who will take this point and argue that the scientific article is superfluous, and by extension, science editors are unnecessary. But, I strongly believe this to be misguided and attempts to invalidate a vital community of science editors whose professional mission is to improve the understanding of science.

This goal is reflected in CSE's vision statement: "To be indispensable in the communication of science." Building on that vision, under my watch, the mission statement for *Science Editor* will be as follows: "To provide science editors with the knowledge, skills, and concepts they need to run the best version of their journal or publication in pursuit of improving the scientific literature."

I see CSE and *Science Editor* being the place where the different types of editors can interact and support each other. To put it succinctly, I want *Science Editor* to be the place where editors connect.

[1] Technically, *Science Editor* began life in 1978 as CBE Views (back when CSE was the Council of Biology Editors) and before that there was a CBE Newsletter, but why quibble with milestones.

JONATHAN SCHULTZ is Editor-in-Chief of *Science Editor*, Director, Journal Operations for the American Heart Association, and Managing Editor of *Circulation Research*.

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A Vital Community

It is fitting then that the focus of this, my inaugural issue as EIC, is on articles from the recent CSE Annual Meeting held in New Orleans. Each May, hundreds of science editors and other scientific publishing professional gather at CSE's annual meeting to discuss recent developments, share tips and tricks, and learn from each other. I had the honor to co-chair a wonderful program committee this year with Helen Atkins and just a handful of the interesting and informative sessions are described in the meeting reports in this issue.

As reported by Peter Olson, the meeting began with a truly fascinating keynote address by Dr Michael Mann entitled "The Hockey Stick and the Climate Wars: Dispatches from the Front Lines." The titular "hockey stick" describes the graph illustrating the increasing global warming trends over the last 1000 years with a sharp uptick in the last 200 years of human-influenced climate change. This graph adorns the cover of this issue along with a photo of the California wildfires, an increasingly (and depressingly) common image of one of the many effects climate change is having on our environment.

On a more encouraging note, Kristen Hauck reports on the session "It Takes a Village: A Strong Team Can Mitigate a Crisis," including stories of editors and journals who recovered from disaster; Nida Mohsin shares some tales from "At My Desk After CSE, Now What: Use Cases from CSE 2017;" Brit Stamey describes some "New Innovations in Peer Review;" Alison McGonagle-O'Connell explores "Innovation in Author Experience;" Mike Friedman describes "Using Production Metrics to Track Journals' Workflow;" and Stacy Christiansen details the "Short Course for Manuscript Editors," one of the many short courses offering by CSE in advance of the meeting.

A meeting report that highlights a session that typifies what makes CSE great is Kristin Inman's account of how editors-in-chief, researchers, and publishers go about "Learning from One Another." As with the full meeting itself, it is a session like this that exemplifies the mission of CSE as a "dynamic community of editorial professionals dedicated to the responsible and effective communication of science." CSE, both as an organization and at the annual meeting, provides a wonderful opportunity for networking and sharing ideas and skills among encouraging professionals and it is my sincere hope that this continues onto the pages of *Science Editor*.

Along those lines, you likely wouldn't be reading an editorial from me if outgoing EIC Tracey DePellegrin hadn't asked me to be her Deputy Editor a few years back, and for that I am forever grateful. Tracey put together an excellent team, and I'm thrilled that Managing Editor Beverly Lindeen, Copy Chief Jessica LaPointe, and Technical Editor Leslie Neistadt have all agreed to continue their contributions.

As she outlines in her farewell article that bookends this issue, Tracey shepherded the creation of a new online platform for *Science Editor* and worked to better incorporate the perspective of working scientists and editors-in-chief. An example can be seen in our ongoing Editor's Perspective series; in this issue, Ryen White, new EIC of the *Information Retrieval Journal*, discusses making the transition from author and reviewer to editor and provides a unique perspective as there are 3 co-EICs at his journal. I plan to continue this focus on editors, the work of editing and running a journal, and the advancement of science through improving scientific communication.

Moving Forward

As noted, one of our proudest achievements during Tracey's tenure was the redesign of the print journal and development of a new *Science Editor* website, https://www.csescienceeditor.org. Both have been well received, and I want to build upon these great foundations by ensuring that *Science Editor* publishes articles worthy of these platforms.

A question I have heard people ask in some form or another over the years is, "What exactly is *Science Editor*? Is it a research journal? A society newsletter? A blog?" Ultimately, it is all of those and more, and whereas this format fuzziness could be seen as a weakness, I believe it is an asset as it allows the publication to be everything an editor may need, be it case studies, original research, commentary, essays, or news. For more info on the types of articles we are interested in, readers should check out our new Author Information page (https://www.csescienceeditor.org/for-authors/information-for-authors/). *Science Editor* works best with a broad and diverse collection of authors, and I encourage all readers to contribute an article for consideration. Some other changes include the following:

Social Media. In 2018, any self-respecting new EIC will discuss how they plan to use social media to expand the reach of their publication and grow its readership. And I'm no different. We hope to leverage the solid social media presence of CSE's Facebook and Twitter accounts to see a greater distribution of, and discussion of, *Science Editor* articles online and will be implementing commenting on our site soon. I personally am only on Facebook to share photos of my kids, but I'm trying to be more active on Twitter and can be found at @jdgschultz. At least until someone tries to get me fired. In all seriousness, as much as Twitter can be a hellscape of screenshots and bad faith, it is also one of the best places to have your biases challenged and horizons expanded while meeting new people and finding exciting new voices.

Newsletter. Starting this September, in conjunction with the publication of this issue, we will begin distributing a

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monthly *Science Editor* Newsletter. Because *Science Editor* now publishes on a continuous basis, we feel that a monthly newsletter would be a good way to collect and promote articles on a more frequent basis and allow for a mix of links to new and older articles, along with some (hopefully) fun extras.

Print Edition. Lest readers fear that the print edition of *Science Editor* will be getting the short shrift, over the next year, we will be introducing a number of changes and additions to the print issue members receive in the mail each quarter. We continually hear from readers that they value this member benefit, and we want to ensure that it remains an interesting and enjoyable reading experience. I personally am a lifelong browser and I like to relax by flipping through magazines, reading brief snippets and appreciating the artwork. To that end, you'll soon see a few shorter pieces interspersed through the issue, some informative, some simply diversions. In addition, we plan to feature the work of science illustrators and artists more frequently. My hope is this will both serve to highlight the importance of artists to science communication and provide editors with a pool of potential talent to commission for their journals and projects.

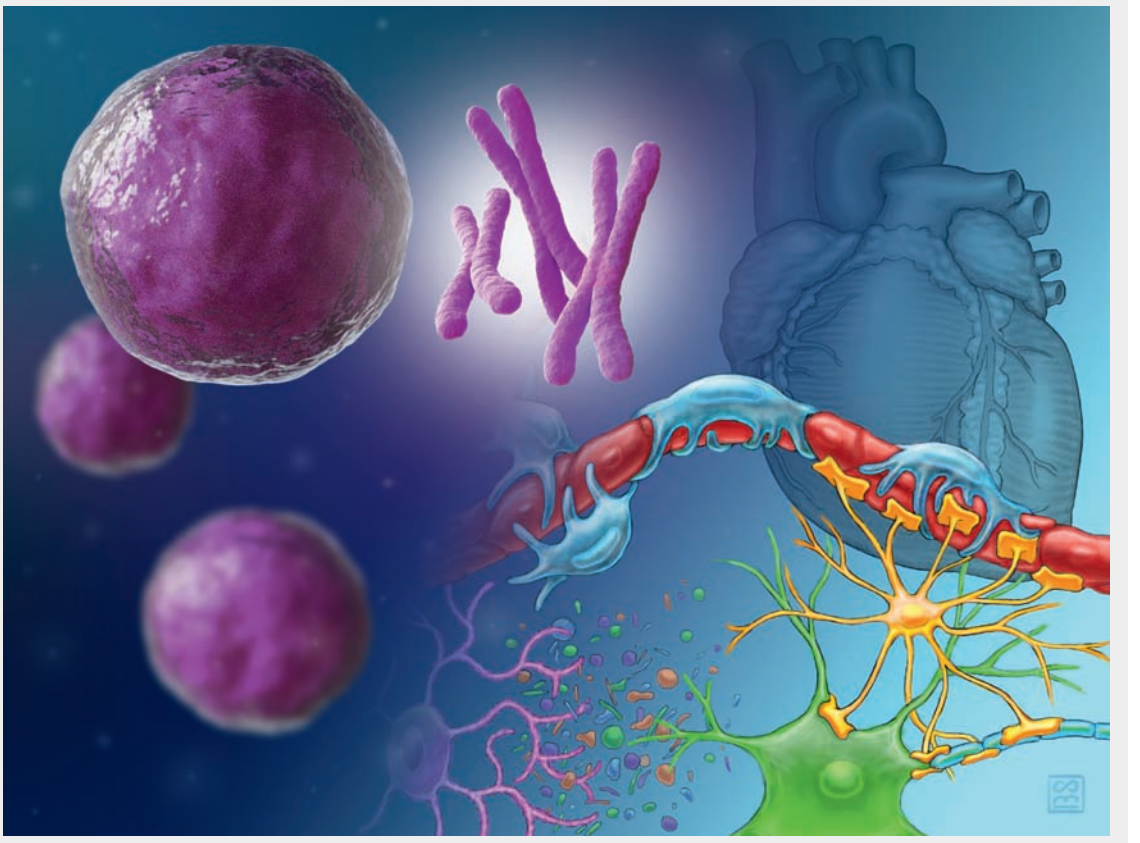
Let's Bring This to a Close

I began this article by introducing myself as "your Editor-in-Chief" and I mean that sincerely. As members (or potential members[2]) of CSE, *Science Editor* is your publication: We value and rely on your suggestions for potential articles, your ideas for improvements, or even your complaints.[3] We love considering pitches or submissions and we want to hear from you, so please contact us at scienceeditor@councilscienceeditors.org.

Thank you for your readership and we hope you enjoy this issue and what we have in store for the future. We're just getting started.

[2] If you're reading this and not yet a member of CSE, you really should consider joining: http://www.councilscienceeditors.org/membership/benefits/

[3] Please try to be nice.



Conceptual collage representing the link between genetics, cellular interaction, and organ system function by Ben Smith. A mix of 2D and 3D medical illustrations can be commissioned by contacting him at ben.smith6@gmail.com.
Scientific and medical illustrators interested in being featured in Science Editor can submit image via email to scienceeditor@councilscienceeditors.org.

From Discovery—through Communication—to Application: More Highlights of the 2018 AAAS Annual Meeting

Mabel Terminel, Chantal Cough-Schulze, Jessica Scarfuto, Alexandra Hoskins, Rachel Hoyle, and Barbara Gastel

The 2018 American Association for the Advancement of Science (AAAS) annual meeting, themed "Advancing Science: Discovery to Application," included plenary lectures, multi-speaker scientific sessions, career development workshops, and much more. An article in the Spring 2018 issue of *Science Editor* presented highlights of some of the sessions likely to interest science editors and those in related fields. The current article presents highlights of additional such sessions of this meeting, held February 15–19, 2018, in Austin, Texas; topics range from communicating with skeptical publics about climate change, to knowing what underlies conspiracy theories regarding science, to using social media to communicate research.

When Facts Are Not Enough

By Mabel Terminel

In this plenary lecture, Katharine Hayhoe—an atmospheric scientist at Texas Tech University and one of *Time* magazine's 100 most influential people of 2014—addressed the challenges scientists currently face when talking with the public about climate change.

Hayhoe pointed out that as scientists, "facts are our lifeblood." We thrive on disagreements, and we turn to research to solve our conflicts and find resolutions. So, what happens when facts are not enough? Overwhelming numbers of studies and amounts of data show we are facing a climate crisis. Yet, much of the population remains skeptical about whether climate change is real or whether these changes are driven by human activity.

MABEL TERMINEL is a graduate student in neuroscience; CHANTAL COUGH-SCHULZE, ALEXANDRA HOSKINS, and RACHEL HOYLE are graduate students studying science writing and science editing; JESSICA SCARFUTO is an assistant lecturer; and BARBARA GASTEL is a professor, all at Texas A&M University.

2018 AAAS annual meeting. Photo credit: Chantal Cough-Schulze.

It is easy to feel that we have tried to use every communication strategy, Hayhoe observed. Countless reports, studies, graphs, educational videos, and even comics on climate change are available to the general public. Still, the number of climate change skeptics in the United States remains high. Therefore some people have taken a different approach by trying to understand what causes someone to reject the vast evidence for climate change. Is it possible that people just do not know enough about it? Hayhoe pointed out that this is not necessarily so.

Hayhoe described a study by Larry Hamilton, a sociology professor at the University of New Hampshire. Hamilton asked people whether they believed climate change was caused mainly by human activity. He found that political affiliation was a predictor of opinions on climate change. The surprising finding was that among self-identified members of the Tea Party, the most skeptical group overall, those with more education were less likely to say they considered humans responsible for climate change.

Anticipating the audience's next question, Hayhoe stated what she viewed as the real reason people deny climate change. She said that "what people have a problem with are the perceived solutions." Specifically, people are concerned that the government is trying to take away their freedom by

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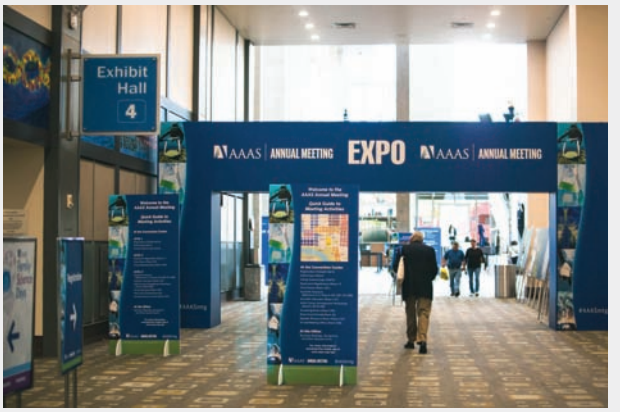

2018 AAAS annual meeting. Photo credit: Chantal Cough-Schulze.

telling them what to do about climate change. Hayhoe said that to change people's minds, we must convince people that the solutions are excellent and impacts of climate change are devastating.

Explaining how to engage in discussions with climate deniers, Hayhoe recommended taking a step back and trying a 3-step approach. First, find common ground: You can ask questions about people's lives and listen to their stories. Once you find a way to genuinely connect with a person or group, help them see their personal connections with climate. The last step is to share solutions. Scientists are used to talking about problems but refrain from suggesting solutions, she observed.

Throughout the session, Hayhoe emphasized the importance of scientists' being more than scientists and becoming advocates. "People love science when you can share your passion and enthusiasm," she reminded her audience, ending her talk with an optimistic view.

Empirical Findings on Science Fairs: Experiencing the Nature of Science

By Chantal Cough-Schulze

At this session, speakers discussed the impacts and future of different kinds of science fairs. Science fairs, the speakers agreed, are vital for encouraging students in science.

University of Arkansas professor William McComas, the first speaker, provided an introduction to science fairs. He said science fairs should be meaningful to learners, use the methods of science, involve active debate, and be potentially useful to science. He noted that science teaching and science fairs fall on a spectrum regarding the level and kind of teacher involvement. A basic level of science teaching is demonstration: Teachers ask the questions, design and conduct the investigations, and form conclusions. Ideally, science fairs are at the opposite end of the spectrum, with students doing all these things instead of teachers. To better understand and improve science fairs, McComas called for more research about the impacts of types of science fairs.

The other 2 speakers each presented research about just that. Speaker Jacqueline DeLisi, of the Education Development Center, Waltham, Massachusetts, discussed "Science Fairs Under the 'Scope," a National Science Foundation–funded national study on school-based science fairs. Among other findings, many students said the science fair taught them more about science or increased their interest in science—but not all students said both. Science fairs that mostly increased student interest were described largely as hands-on community events, or as one teacher put it, more of a carnival and less of a project board session. In a few school districts, students said science fairs made them dislike science more. In those districts, teachers indicated that they could not give students the support they needed.

Frederick Grinnell of the University of Texas Southwestern Medical Center, who organized the session, presented research about mandatory versus voluntary and competitive versus noncompetitive science fairs. He surveyed high school students who had recently participated in science fairs, as well as undergraduate and graduate students, some of whom had science fair experience. He found that students generally preferred noncompetitive science fairs and that the preference for noncompetitive fairs increased with the students' education level. Some students said that competitive fairs were more about winning than learning, though the added incentive could be useful. Grinnell also surveyed students about the obstacles they faced and whether they received help from scientists in preparing their science fair projects. Students without help from scientists were more likely to list limited resources as an obstacle.

The speakers indicated that in order to give students the best experience, more research about science fairs is necessary. More resources would also help—McComas suggested giving science-fair mini-grants to schools to alleviate economic disparities. Grinnell said that currently there is not much mentorship from scientists regarding science fairs, and session audience members displayed interest in helping with that. The speakers enthusiastically encouraged interested scientists to contact their local schools about mentoring.

The Role of Conspiracy Theories in Perceptions of Fake News about Science

By Jessica Scarfuto

"Western medicine is racist!" "Scientists doing medical research are a cartel!" "The Earth is flat!" These are just some of the conspiracy theories addressed during this session by a panel discussing why people believe in conspiracy theories.

Stephan Lewandowsky of the University of Bristol, UK, began the session by looking at the public health impacts

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of some conspiracy theories and noting reasons for belief in such theories. As it turns out, he said, it is not that people do not trust scientists. Rather, people tend to look to conspiracy theories when science threatens their world views, profits, health, or other important aspects of their lives. "If you're a smoker, it could be threatening to find out that smoking causes cancer," Lewandowsky gave as an example. This leaves people with a choice: They can accept the science and adapt to the threat it imposes, or they can reject it and find an alternative explanation. Conspiratorially minded people, Lewandowsky said, gravitate toward the latter.

Asheley Landrum of Texas Tech University shared similar insights when discussing why, in 2018, there are still people who believe the Earth is flat. She found that conspiracy theorists did not differ significantly from the general population in scientific literacy but tended to share certain traits: They usually believed in biblical literalism, had a conspiratorial world view, and tended to reject institutions. These findings indicated that certain people gravitate toward conspiracy theories because the information suits their values and beliefs, not because they do not understand the science.

Finally, Benjamin Lyons of the University of Exeter, UK, discussed the role information plays in encouraging or combatting conspiracy theories. He noted that credible news agencies can contribute accidentally to conspiracy theories. As an example, he pointed to a recent CNN headline that read, "Military Deployed as Norovirus Outbreak Hits Winter Olympic Security Guards." Lyons observed: "You might casually read that and start connecting the dots and think there's some kind of military dispute between North and South Korea." Although military personnel were replacing security guards just for medical reasons, a conspiratorially minded person might have a different interpretation.

Information such as that presented in this session may aid in communicating science suitably to those prone to favor conspiracy theories.

Science for All: Using Social Media to Take Your Research Around the World

By Alexandra Hoskins

"Has anyone been tweeting?" asked Lauren Biron of Fermi National Accelerator Laboratory to begin the career development workshop Science for All: Using Social Media to Take Your Research Around the World. The panel also included Mónica Feliú-Mójer of Ciencia Puerto Rico and Julie Haffner of CERN.

The session was geared toward scientists and others looking to promote their work, engage the public with it, and become more visible. The panel explained the most commonly used social media sites—Twitter, LinkedIn, and Facebook—with Twitter being the most used by scientists.

2018 AAAS annual meeting, Katharine Hayhoe speaking. Photo credit: Chantal Cough-Schulze.

They said social media can aid in explaining one's science, sharing a slice of one's life, providing updates, reaching reporters, forming connections, engaging in meaningful dialogue, sharing data, and unleashing creativity.

Included were short exercises in which audience members were asked to reflect on the individuals they wanted to reach, identify their goals, and brainstorm about ways to discuss their research. Emphasis was placed on staying true to oneself, owning one's brand, and thinking before one reacts. Feliú-Mójer said that if what you have drafted causes you to pause and think, "If this was on the cover of [a newspaper] tomorrow, I would be really embarrassed," edit the tweet or delete it. Other advice: Never react immediately to an inflammatory tweet or comment; cool off before responding.

Although creativity and self-expression were stressed, the session contained strong reminders of the "large ecosystem" of social media and its boundaries. Tweets are (usually) not private and can cause firestorms if not adequately vetted before entering the public's view. One must also know his/her organization's policy if working on an official site; otherwise, there can be communication nightmares and personal nightmares (i.e., getting fired!).

The question and answer session included tips such as putting one's Twitter handle (@CScienceEditors, for example) on his/her presentation slides and trusting one's organization's public information officers when they provide guidance about social media. Employing social media is a useful and increasingly popular way to promote research and science more generally, but it does require work, and an appreciation of the scientific method can promote success. Haffner said, "Observe, try, try again, tweak, evaluate, and try again."

You can check out tweets from the AAAS annual meeting using the hashtag #AAASmtg.

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Training the Next Generation of Student-Communicators: Graduate Students Can Take on the Challenge

By Rachel Hoyle

At this career development workshop, a panel of 3 graduate students discussed the development, implementation, and sustainability of programs they had initiated to provide fellow graduate students with training in popular science communication. The panelists were Ben Cook, Harvard University (program: ComSciCon); Jesse Dunietz, Carnegie Mellon University (Public Communication for Researchers, or PCR); and Elyse Aurbach, University of Michigan (RELATE). Stephanie Guerra of Harvard University moderated the session.

To start a program, the panel suggested gathering 15 to 20 stakeholders in one room to get a sense of the need, the potential impact, and the resources available. Also, the panel said to find out what already exists to avoid "reinventing the wheel." Resources that were mentioned included university media departments and local high schools or museums.

As graduate students in the sciences, the panelists approached the design of their programs scientifically. "You start with a hypothesis: what you think people want to learn. You test it and then evaluate it with questionnaires. And then you refine it," Aurbach said.

The panel acknowledged the time constraints faced when starting a program, especially given the demands of graduate research. However, each panelist described the endeavor as an "unexpected benefit" in that he or she had something "meaningful and productive when laboratory research was not going well."

Pros and cons of university backing also were addressed. Aurbach noted that university funds come with mandates that challenge the flexibility of RELATE. Dunietz argued that an à la carte style was integral to the success of PCR, which operates without university funds.

Each program provides skill-building workshops in addition to public-engagement opportunities for graduate students who are clearly "hungry for this." The programs continue to not only thrive but also expand. As Aurbach stated, "We never ever have a problem filling workshops."

Other offerings at the meeting included flash talks, student and general poster sessions, and business meetings of AAAS sections in scientific disciplines. Exhibitors included science-related institutions, scientific societies, and publishers of scientific books and journals. As usual at AAAS annual meetings, Saturday and Sunday also were Family Science Days, featuring demonstrations, presentations, and exhibits geared to young visitors.

The 2019 AAAS annual meeting, themed "Science Transcending Boundaries," will take place February 14–17, 2019, in Washington, DC. For more information, please see https://www.aaas.org/.

Resource Nook

Via the Open Science Framework, this preprint provides a thorough guide for preparing well-designed and transparent scientific research and articles:

Improving Transparency and Scientific Rigor in Academic Publishing
https://osf.io/asxcb/

Citation:
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Perspectives from a New Editor-in-Chief of a Computer Science Journal

Ryen W White

I was recently appointed co-editor-in-chief (EIC) of the *Information Retrieval Journal*, a long-standing Springer publication focused on the theory, algorithms, analysis, and evaluation of search systems. The information retrieval (IR) field draws on research from computer science and includes contributions from other areas, such as artificial intelligence, information science, psychology, and human factors. IR technologies have formed the basis of popular web search engines, which are essential tools to help people find and understand information. The *IR Journal* receives hundreds of submissions per year. Since its inception in 1999, the journal has published over 500 technical papers on many different aspects of IR research.[1]

In this article, I discuss some of the unique aspects of computer science publishing and how my experience as an author and a reviewer has helped guide me in my new role as co-EIC of the *IR Journal*. Given the rapid pace of progress in computer science, conference presentations and proceedings are the primary means of disseminating scientific findings in that area. Journals are often used to publish extended versions of proceedings papers with expanded experiments, additional discussion, and more detailed literature reviews. Looking to the future, I would like to see computer scientists more fully embrace journals as a viable alternative to conferences and a venue to present their latest significant research contributions. Expediting peer reviewing and online publication, boosting visibility via social media channels, and partnering with conferences to offer presentation opportunities for select articles are all ways to help journals thrive and grow in a fast-paced research discipline such as computer science.

[1] Recent metrics for the IR Journal: acceptance rate: 8%, h-index: 54, impact factor: 1.488.

RYEN W. WHITE, PhD, is a Partner Researcher and Research Manager at Microsoft Research, Redmond, Washington.

Reviewing Experience

I have been an active researcher in IR for almost 20 years. During that time, I have published hundreds of technical publications, including conference papers, journal articles, and textbooks. My activities as a highly active author have provided me with significant appreciation for the author's perspective in the publication process. This includes understanding the importance of critical and constructive reviewer feedback and acknowledging the significant role that editors play in shaping the research landscape through the decisions they make and the guidance they offer.

As is the case for many scientists, I have been an active peer reviewer of research publications since early in my research career. This has afforded me an opportunity to provide plenty of constructive feedback on the research of my peers (a skill that takes time to develop) and learn about reviewing best practices and pitfalls from observing others in action and participating in discussions with them. This has been invaluable training for the practice of science in general and for the EIC role.

One topic that is consistently important for both authors and journal editors is expectation management. As an editor, I spend considerable time ensuring (through written communications) that there is a shared understanding between myself and authors about the state of their submission and its trajectory toward possible publication. In my experience, failure to communicate will inevitably lead to frustration for authors and wasted effort for both parties. I often desk-reject submissions that are off-topic or have a low chance of becoming a manuscript that is likely to be accepted in a reasonable timeframe. I accompany each desk rejection with an explanatory note tailored to the specific article. For each submission under review, I provide a detailed meta-review at each iteration that includes the relative priority of the changes requested by reviewers, which can be diverse and voluminous.

Onboarding

Joining a journal as a new EIC can be overwhelming. Support from the journal editorial office and any co-EICs is vital to assimilate quickly. Tacit knowledge about journal practices and the state of the journal need to be shared promptly by the journal editorial office (JEO) and outgoing

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editor(s). It is important that authors with submissions in progress not be impacted by the change in EIC: Review flow should be uninterrupted, and submissions need to be carefully tracked so they are not misplaced. As I joined the *IR Journal*, we opted to have the outgoing EIC manage all in-review submissions through the final decision as a way to maintain consistency and reduce the chance of error. Managing such legacy duties is part of a set of possible challenges for departing EICs.

It is common for new EICs to want to improve aspects of the journal; in my case, this included growing the social media presence of the *IR Journal*, reducing article processing times, and improving the visibility of published articles. The *IR Journal* has 3 EICs: one for the Americas (me), one for Europe, and one for Asia and rest of the world. It was vital to align quickly with my co-EICs and the JEO on each objective, and to get support and feedback from them. Working with the JEO and my co-EICs, we are implementing some changes in journal practice to meet each goal (and making other improvements). I discuss some of these modifications in the remainder of this article.

Shared Editorship

Having multiple EICs means that decisions are made by consensus, which can add overhead, but it has clear advantages including offering different perspectives and shared workload. Varying perspectives are important for the *IR Journal* because the field of IR is multidisciplinary, and we want to ensure that each perspective is considered in our discussions and decisions. In terms of workload, at present each editor manages the submissions from his or her assigned geographic region. The geographic split is helpful for many reasons (e.g., fielding author questions in a timely manner). However, we also find that the number of submissions is skewed toward specific regions; this creates significantly more work for certain editors. The EICs and JEO are revisiting the regional strategy and exploring alternatives to ensure that we distribute responsibilities more fairly among the EICs (e.g., using round-robin or time-boxed solutions to assign EICs to incoming submissions).

Publication Models

Computer science research is published both at conferences and in journals, with conference papers (6000–10,000 words in length) often serving as the initial, and quite often the primary, publication venue. The focus on conference proceedings can largely be attributed to the rapid innovation in computer science and the need to publish research results quickly to keep pace. Some of the changes in journal publication practice, such as "early online" publishing, may encourage more computer scientists to consider journals as an initial outlet. However, this needs to be accompanied by high impact factors, high visibility, and quick turnaround times for reviewing—all are significant challenges for editors. Computer science journals publish new work; but quite frequently, they publish extended versions of conference proceedings papers. Although the journal version of a proceedings paper may have considerable additions to the original paper (25–50% new material in many cases), these additions often simply comprise more experiments, discussion, and related work, but less in terms of novel technical contribution. As a result, the proceedings paper often remains the canonical reference for the research.

Computer science journals must endeavor to drive journal awareness and highlight the advantages of publishing there first (including near unlimited space for authors to discuss their research and an opportunity to improve publication quality through multiple rounds of review). This ranges from lightweight methods with broad reach (e.g., advertising new articles on social media) to deeper collaborations with specific conferences, which provides authors with a forum to present their research, obtain increased visibility, and have more impact with the work.

To this end, the *IR Journal* has recently partnered with the European Conference on Information Retrieval (ECIR), whose proceedings are also published by Springer, to provide a source of high-quality publications for the *IR Journal* and provide our authors with greater visibility for their published articles. Authors of select articles from the *IR Journal* in the previous calendar year will be invited to present at the next ECIR, and authors of award-winning/top-ranked ECIR papers will be invited to submit extended versions of their conference papers for fast-track review and possible publication in the *IR Journal*. Although these are extended versions of conference papers, and not purely original work (my ideal outcome, as highlighted earlier), I believe that there is considerable value in pursuing this to forge a relationship with ECIR, grow awareness of the *IR Journal*, and provide authors with an additional incentive to submit to the conference. Other computer science journals adopt a similar model, albeit asymmetric; they only provide the chance to present journal articles at conferences but do not also provide journal publication opportunities for proceedings authors. The Association for Computing Machinery's (ACM) *Transactions on Information Systems* (*TOIS*) journal allows authors to present their papers at several ACM conferences, and *Transactions for the Association for Computational Linguistics* is a journal that has a monthly deadline and conference presentation opportunities.

Impact and Reach

An important determinant of a journal's success is the impact of the research it publishes. Although improving

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impact scores can create a virtuous cycle of high-quality submissions, low scores can be difficult to change. In my experience, EICs often need to be creative in taking steps to improve the visibility of existing articles and attract new articles that are likely to be well cited (e.g., invite articles from specific senior scientists or arrange special issues of the journal on timely topics).

Computer science journals range from specialized, highly technical publications such as the *IR Journal*, to more mainstream publications, such as *Communications of the ACM* (*CACM*). The ACM is the flagship computing society in the United States. *CACM* is distributed to all ACM members and articles are meant to be accessible and relevant to a broad readership. Several other journals—such as ACM *TOIS*, mentioned above—also publish high-quality, highly technical IR research. Healthy competition forces journals to devise creative publishing models, reduce turnaround times, and improve the quality and visibility of the work they publish; these are all helpful for authors and the research community at large.

Review Process

One of the main bottlenecks for journals is finding willing reviewers and ensuring that they submit reviews on time. Tardiness in replying to invitations or completing reviews slows down the review process considerably. The *IR Journal* has a standing editorial board of senior researchers who serve as a source of reviewers for submissions that have already passed an initial check for relevance and technical depth, performed by the EICs. Having a standing board of senior experts helps alleviate reviewing delays and helps ensure that the reviews are consistent across submissions and of high quality.

Full utilization of the *IR Journal* editorial board requires careful planning. As EICs, we want to ensure that editorial board members are aware of incoming submissions but also do not want to overwhelm them with an invite for each submission, and EICs do not want to spend considerable time matching submissions to specific reviewers. At the *IR Journal*, we have recently arrived at a middle ground where we periodically distribute a digest of pending submissions (every 1–2 weeks), with a request for volunteers from the editorial board with interest and expertise to review them. Although this model works well most of the time, we still send directed review requests to specific reviewers if we require their input, given their expertise.

Beyond scoring received submissions, reviewers are the front line on detecting copyright issues, such as articles submitted or already published elsewhere. They are also an imperfect sensor, dependent largely on their memory, general awareness of content presented at other venues, and their attention to detail. Plagiarism detection software can also catch some cases. As with many journals, the *IR Journal* follows a clear policy—the Committee on Publishing Ethics standards—regarding plagiarism detection and follow-up. However, such cases consume considerable time and I believe that we need to do more in the computer science community to actively discourage dual submissions. Some computer science conferences now ban dual-submitting authors from submitting to the same conference in the future. Although I focus on computer science publishing, these and similar challenges are faced by any scientific discipline where there is time pressure on authors to publish their research findings quickly.

Experience So Far

I find the EIC role to be incredibly rewarding. The role carries with it considerable responsibility to ensure that the *IR Journal* publishes high-quality research that interests our readership and has impact in both the short and long term. I would advise those considering an EIC opportunity to give serious thought as to whether they have the time and enthusiasm to serve as an effective EIC. Even if the position is shared with co-EICs, I feel that it is important to be fully invested to maximize the opportunity to help shape the field. Most importantly, EICs need to be supportive and fair to authors who entrust them with their research, and in many cases, their careers.

For Authors

For those looking to find a journal with which to publish, I would suggest reading several prior articles from your target journal to obtain a sense of the style and relevance to the subject matter of your work; additionally, consider approaching the EIC(s) with an inquiry about whether the work is appropriate and worth submitting. In my experience as an author, I have found that it is best to do this before going through the (often considerable) effort of reformatting the paper, pruning or adding words to meet word limits, writing cover letters, and so on. EICs are typically responsive to requests and they are often willing to provide feedback on whether submitting is worth your time (e.g., whether a manuscript is likely to at least be peer reviewed).

In the future, I hope to see journals play a larger role in the dissemination of computer science research, and I am doing what I can as an EIC to provide a supportive and impactful publication venue.

Keynote Address: The Hockey Stick and the Climate Wars: Dispatches from the Front Lines

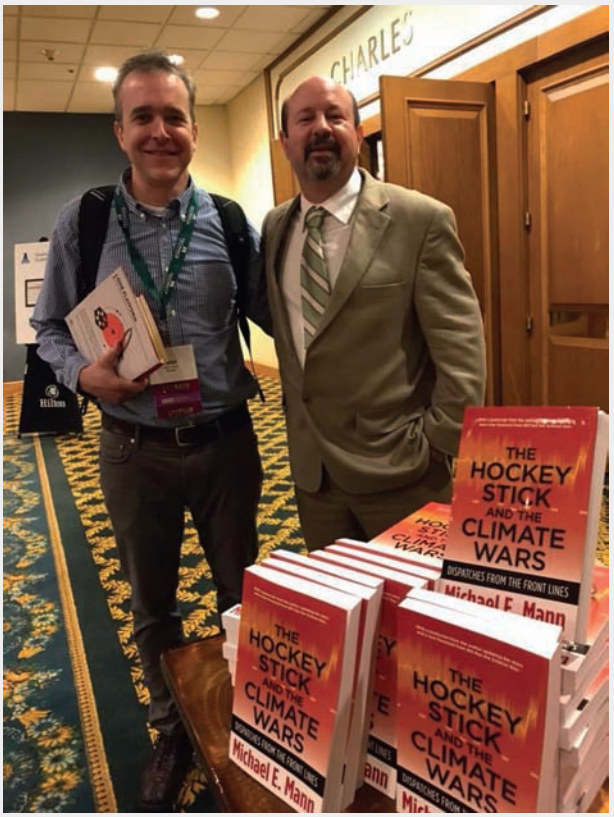
SPEAKER:
Michael E Mann
Distinguished Professor of Atmospheric Science
The Pennsylvania State University
State College, Pennsylvania

REPORTER:
Peter J Olson
Senior Copyediting Coordinator
Sheridan Journal Services
Waterbury, Vermont

If you had approached Michael Mann while he was double majoring in applied mathematics and physics at the University of California, Berkeley, and told him he would one day be one of the most prominent public figures in the fight against climate change, he likely would have laughed in your face. A mild-mannered scientist at the center of one of the most politically contentious debates in the history of human civilization? It simply wasn't the plan. Yet there he was in New Orleans, delivering an inspiring keynote address in which he recounted the "evolution of a science nerd" who became a conduit for conveying the science of climate change to the general public—and how he ultimately came to embrace this role.

Mann was thrust into the spotlight in 1998 when he and his colleagues published the now-famous "hockey stick curve," a graph illustrating the increasing global warming trends over the last 1000 years in which the curve is not so much a curve as it is an obtuse angle that resembles its namesake.[1] The hockey stick curve became an icon of the climate change debate virtually overnight, and Mann just as quickly found himself at the center of efforts to discredit the graph—and discredit him—as a means of dismissing the case for human-caused climate change altogether. He eventually came to realize that such efforts are rooted in a cynical belief that if the science behind the hockey stick curve is dismissed, the whole climate change debate will collapse like a house of cards.

Such attempts seem irrational in light of the evidence, particularly given Mann's assertion that the science of human-caused climate change is neither new nor scientifically controversial (thanks largely to Joseph Fourier, the 18th-century physicist credited with identifying the greenhouse effect). Furthermore, Mann suggested these attempts are more fallacious than ever given the myriad other lines of evidence for human-caused climate change that have surfaced since the hockey stick's debut. A "veritable hockey league" of studies now tell the same story as the hockey stick: the earth has warmed significantly in the last 1000–1400 years, humans are the cause, and we have an increasing number of droughts, heat waves, superstorms, and floods to show for it.



Peter Olson (left) and Michael Mann (right) pose with a stack of Mann's book *The Hockey Stick and the Climate Wars*.

Yet even among those who accept the scientific conclusions derived from the hockey stick, there are critics, including those who suggest that the observed warming trends are natural. Mann addressed this questionable claim in a 2017 article in *Geophysical Research Letters*[2] in which he and his colleagues demonstrated that the years 2014, 2015, and 2016 were the warmest years on record (in ascending order) and estimated that it is highly unlikely that this trend was not due to human behavior.

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This prompted Mann to ask: If the scientific evidence is so compelling, and the signs of climate change are no longer subtle, why has there been so little action to combat it?

His answer was simple: The fossil fuel industry—the largest and wealthiest industry in the world—profits from the global addiction to fossil fuels, and they wield their immense power, wealth, and influence to maintain the status quo. Their efforts to stymie any transitions toward renewable energy have taken many forms, including fake grass roots campaigns that are coordinated by fossil fuel interest groups (and the politicians who support them) to inject doubt into the public discourse. These campaigns often create front groups—some of which employ actors to portray defiant citizens, others of which recruit apostolic scientists to publicly undermine their peers—to openly contest the science of climate change, in turn creating the illusion of a groundswell of opposition. (Mann himself was once the target of a dubious Facebook campaign to prevent him from delivering a climate change lecture at Penn State.) Such tactics are not new; in particular, they emulate the campaign initiated by the tobacco industry to discredit the science linking cigarette smoking to several diseases—and some of the same players, funders, and scientists who had key roles in that campaign have climbed aboard the anti–climate change bandwagon.

For Mann, these campaigns embody what he calls the "scientization of politics," a concept wherein science is a mere tool for waging politics, and politicians can summarily dismiss the conclusions of renowned scientific organizations in favor of an "alternative universe where the laws of physics no longer apply [and] the science of climate change is an elaborate hoax." Citing personal skirmishes with climate change deniers Sarah Palin, James Inhofe, Ken Cuccinelli, and Lamar Smith, Mann derided the notion that thousands of scientists around the world could not only coordinate such a hoax, but could also arrange the melting of ice sheets and the rising of sea levels to promote their agenda. All joking aside, however, Mann said that the scientization of politics has created a disturbingly challenging environment: many U.S. EPA policies that have been established over the last 50 years are now being dismantled, and science itself is under attack by legislators who are feeling increasingly entitled to—and empowered by—their own opinions about climate change. Undaunted, Mann has endured and combated this anti-scientific fervor relentlessly over the years, often partnering with influential journalists, celebrities, and politicians to help leverage his message.

Michael Mann's role as a highly visible figure in the fight against climate change is a far cry from the humble scientist who "wanted nothing other than to be left alone in the laboratory." Yet even though he was forced into the public sphere involuntarily, he has grown to appreciate his position over time—and he continues to find inspiration in his passion for science and his vision of a political environment that fosters objective discussions about human-caused climate change. Mann perhaps put it best when he said, "What more important role could a scientist play than to try to inform the public discourse over what is potentially the greatest challenge we face as a civilization?"

References

1. Mann ME, Bradley RS, Hughes MK. Global-scale temperature patterns and climate forcing over the past six centuries. Nature. 1998;392:779–787.
2. Mann ME, Miller SK, Rahmstorf S, Steinman BA, Tingley M. Record temperature streak bears anthropogenic fingerprint. Geophys. Res. Lett. 2017;44:7936–7944.

All full list of all of the presentations from the 2018 CSE Annual Meeting, including session descriptions and most presentation slides, can be found online at https://www.councilscienceeditors.org/events/previous-annual-meetings

It Takes a Village: A Strong Team Can Mitigate a Crisis

MODERATOR:
Shari Leventhal
Managing Editor
American Society of Nephrology
Washington, DC

SPEAKERS:
L Lee Hamm
Senior Vice President and Dean of the School of Medicine and the James R. Doty Distinguished Professor and Chair
Tulane University School of Medicine
New Orleans, Louisiana

Kenneth Heideman
Director of Publications
American Meteorological Society
Boston, Massachusetts

Sheehan Misko
Director, Publications
American Association for Clinical Chemistry
Washington, DC

Meagan Phelan
Science Press Package Executive Director
American Association for the Advancement of Science
Washington, DC

REPORTER:
Kristen Hauck
Assistant Managing Editor
American Association for Clinical Chemistry
Washington, DC

We have all dealt with crises big and small over the course of our professional lives. The panelists for this session, moderated by Shari Leventhal, offered personal stories and shared some of the lessons they have learned from dealing with a variety of situations ranging from natural disasters to the dreaded retraction.

L Lee Hamm began by recounting the experience of being trapped with colleagues at Tulane University during Hurricane Katrina. Hamm and others spent 6 days waiting for help to arrive, and he shared 3 main takeaways from that experience. First, he said, know what is important. In this case, that was water, food, power, and security—all those things we take for granted were suddenly scarce. What if the elevators are out and you need to move patients between floors? Put your young, strong residents to work, it turns out. Second, communication is vitally important. What happens when your primary forms of communication—cell phone, email—are no longer available? What happens when even your backups fail? Post-Katrina, Tulane implemented a communications system in which everyone can be reached at a non-Tulane email address and all information is backed up off site. Third, plan ahead. Hamm cautioned, however, that the worst problems are often those you do not anticipate.

Ken Heideman next shared a tale of resilience and teamwork following a "publishing disaster." In July of 2010, an IT error led to the loss of 6 months of data, including submitted manuscripts and author data. After resisting the initial urge to point fingers, the editorial team jumped into triage mode, identifying which papers had been affected and where materials could be retrieved from outside vendors. Unfortunately, some papers were entirely lost, and the team needed to ask authors to resubmit everything.

According to Heideman, complete transparency was key to inspiring others to rally around the cause and find creative solutions. Having the support of the organization's leadership made it easier to tackle the problem.

Heideman cited several positive outcomes: First, this was the push the department needed to begin outsourcing more tasks, which was a great success and prompted other departments to follow suit. Also, the team experienced a new level of bonding in the face of this crisis that is still felt 8 years later. Gallows humor, says Heideman, is a great way to break the tension. Finally, a better, stronger organizational structure resulted. Groups and subgroups with different managers have proven better able to prevent or address problems.

Personnel changes are a less extreme sort of crisis but can still rock a team to its core. Sheehan Misko shared her experiences managing an editorial team through a series of staffing changes that ultimately led to surprising new opportunities.

After the launch of a new journal, *The Journal of Applied Laboratory Medicine*, finding someone to serve as a champion for that publication proved to be a challenge. An individual was hired but was not a good fit and was ultimately let go. It became necessary for Misko, the Director of Publications, to step in and handle tasks such as peer review and manuscript check-in. As an interim measure, the department began outsourcing certain tasks to J&J Editorial. However, what the journal really needed was an experienced and qualified person to take ownership, and that person was proving to be difficult to find.

The solution came in the form of a long-time employee who was looking for a change. This individual expressed interest in the position but was also considering relocating across the country and wanted to explore telework options. Misko proposed to the leadership that the employee be allowed to telework full time, a first for the organization, which also served as an incentive for that person to take on an expanded and potentially daunting role. That employee's existing work was shifted to J&J, and the end result was a win for everyone.

Like Heideman, Misko also credited transparency, saying that sharing news with one's team immediately gets everyone

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invested in sharing the load right from the start. Her advice to others dealing with a similar situation: Look to your team because they are more valuable than you might give them credit for. If your organization's leadership is forward thinking, there may be room to try out-of-the-box solutions.

The final speaker, Meagan Phelan, detailed the aftermath of high-profile retractions of *Science* articles that had the potential to negatively impact public perception of journals and, more broadly, the scientific enterprise. Such scenarios raise 2 strategic questions for journals to answer: How to respond calmly when issues are nuanced and/or still being resolved in order to avoid being cornered into too rigid a stance, and how to use such cases as opportunities to highlight the many strengths of the scientific review process?

Science has been developing a set of best practices for responding to such high-profile cases. Phelan considers it vital to respond in a timely manner, keeping in mind that reporters who will be filtering the story to the public are up against tight deadlines. Also, it is important to answer all questions directly, even if that means conveying uncertainty. Finally, use the moment. A high-profile controversy can be an opportunity to raise awareness of what works well about scientific publishing. *Science* has identified the following points to stress whenever possible: 1) Retractions are relatively rare overall; 2) journals are typically quick to alert the community (including reporters) to problems via multiple avenues; 3) enabling scientists to replicate, confirm, or *refute* findings is integral to the scholarly publishing process; 4) peer review is rigorous and constantly improving but is by nature imperfect; and 5) although misconduct does occur, most scientists can be trusted to act with integrity.

To ensure accuracy of information and a unified front, Phelan emphasized the importance of involving others who have been a part of the life cycle of the paper, such as the Editor-in-Chief and Executive Editor, in crafting a response. One should anticipate controversies before they become unmanageable and should have several possible responses drafted, reviewed, and ready to go.

Although the details of each situation varied, the speakers agreed that transparency, a team-oriented approach, and strong communication are essential tools for mitigating any crisis.

Link to Presentations

1. https://www.councilscienceeditors.org/wp-content/uploads/2.1-FullSlides.pdf

Resource Nook

Updated CSE White Paper on Promoting Integrity in Scientific Journal Publications with new sections on Preprint servers, Publication oversight committees, & Serving on more than one editorial board
http://bit.ly/2kOAf54

Learning from One Another: Editors-in-Chief, Researchers, and Publishers

MODERATOR:
Brit Stamey
Client Manager, Senior Copy Editor
J&J Editorial, LLC
Cary, North Carolina

SPEAKERS:
Windy Boyd
Science Editor
Environmental Health Perspectives
National Institute for Environmental Health Sciences
Research Triangle Park, North Carolina

Liz Fathman
Director, Print and Digital Media and Publisher
MBG Press, Missouri Botanical Garden
St. Louis, Missouri

Mike Friedman
Journals Production Manager
American Meteorological Society
Boston, Massachusetts

REPORTER:
Kristin Inman
Environmental Health Perspectives
National Institute for Environmental Health Sciences
Research Triangle Park, North Carolina

Windy Boyd, Mike Friedman, and Liz Fathman

The intent of this session was to bridge the gap between editors, researchers, and production staff, and to share knowledge regarding each stage of the publishing process. However, the session quickly evolved into a group discussion regarding unique and shared challenges faced by different types of journals and the people filling different roles within those journals. The panelists began by providing a brief background of their journals and an overview of the role(s) they play.

Windy Boyd, PhD, MPH, is a science editor at *Environmental Health Perspectives* (*EHP*), a journal published by the National Institute for Environmental Health Sciences. Because *EHP* is federally funded, all content is open access, with no publication fees for authors. The journal is self-published with a team of in-house editors consisting of federal employees and contractors. *EHP* publishes research, reviews, commentaries, and news, and publishes in an online-only continuous format.

Mike Friedman, PhD, is the Journals Production Manager for the American Meteorological Society (AMS), which publishes 11 journals, available in print and online. He oversees the production process from acceptance through publication and spoke about the value of having an internal technical editing staff to communicate with authors, explain the publication process, and ensure accuracy in the finalized manuscript.

Liz Fathman, PhD, is director, Print and Digital Media, and publisher at MBG Press, which publishes two journals (*Annals of Missouri Botanical Garden* and *Novon: A Journal for Botanical Nomenclature*). Fathman worked to transition both journals online (in addition to print), ensured they were published on a regular basis, and identified relevant editorial boards. In addition, Fathman worked to expand the readership of the journals by transitioning from content written primarily by and for the MBG research staff to content that appealed to a broader audience. To this end, she instated acting editors-in-chief and strongly recommended they invite associate editors from outside the institution to broaden their reach and the expertise of the respective boards.

One strength of this panel was the fact that they represented distinct positions at very different journals and could speak to both the unique challenges faced by their journals and to challenges that are common across all publishing domains. What follows is a summary of the topics discussed at the session and the overall takeaway. The session continued with questions from the audience and moderator.

What is the role of a technical editor (TE) at each journal?

The takeaway of this discussion was that the role of TE is important, but it is shaped by the journal. For example, at AMS,

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the TE first comes into play following the copyediting stage, to verify that edits did not change the meaning of the content; they check the formatting of technical elements such as figures and math; and they have an opportunity to review the proofs. The TE gives the final approval for publication. By contrast, at MPG press and *EHP,* TEs act in conjunction with peer reviewers, checking the content as well as editing for journal style. However, both Fathman and Boyd agreed that this level of editing does add time to an already complex process.

What has been the biggest hurdle with respect to the gap between your backgrounds and your current positions?

Fathman bounced between academia and publishing and was more familiar with the traditional publishing model. Her challenge was bringing this model to MGB. Additionally, she struggled with promoting the journals on social media. Friedman was a TE before transitioning to his current role and consciously worked on becoming a publisher, rather than a scientist. One benefit conferred by his career path was his network of peers from when he was a researcher. Boyd has been an author, bench scientist, reviewer, and associate editor. During her transition from laboratory work to performing systematic reviews, she noticed how poor scientific reporting can be and therefore wanted to gain experience on the publishing side. Her primary challenge is managing both triage and articles that may require multiple rounds of revisions. Another challenge is to take on the role of editor for authors who are still her peers.

What are the biggest takeaways from the process and what do we need to work on as a field?

All panelists agreed time is key and they each wear multiple hats. Allocating and prioritizing tasks are essential skills. Boyd stressed that regardless of the manuscript stage, we all need to appreciate and be respectful of others' time; this includes that of authors, editors, and reviewers. Friedman followed by stressing the importance of effective communication with authors and publishers and saving time by encouraging authors to promote their work. Fathman agreed by stressing the importance of "demystifying the process" for authors.

What are your perspectives regarding evolving technologies within the publishing field?

Boyd mentioned that some readers still miss the print version, which is quickly being replaced by online-only access for many journals. By contrast, Friedman indicated that many of the newer scientists are much more accepting of online-only options and the availability of early online release (through advanced or continuous publication). Fathman indicated that MBG's journals are still in print with online access available and that the editor-in-chief of *Novon* prefers the print version.

The primary takeaway from this session was that regardless of journal size, scope, or publisher, the challenges are similar: recruiting, training, and retaining quality associate editors and reviewers; mastering new skills in an ever-changing environment; time management; and communicating information to authors and journal content to readers. Certainly, we can all learn a lot by communicating with our CSE colleagues on a regular basis. From this session, it is clear we all face similar challenges and can help each other by sharing experiences, lessons learned, and best practices. As editors, publishers, and researchers, we must come together as a team, dedicated to the publication of relevant, rigorous, and transparent science.

At My Desk after CSE, Now What: Use Cases from CSE 2017

MODERATOR:
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Clinical Journal of the American Society of Nephrology
American Society of Nephrology
Derwood, Maryland

SPEAKERS:
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Amy King
Editorial Coordinator
Journal of Clinical Oncology
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Nida Mohsin
Industry Relationship Manager
The Asian Council of Science Editors
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Lan Murdock
Communications Manager
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Oxford, United Kingdom

Andrea Rindo
Managing Editor
Journal for ImmunoTherapy of Cancer
Society for Immunotherapy of Cancer
Iowa City, Iowa

Resa Roth
Freelance Editor
University of Washington & Merck KGaA
Seattle, Washington

Jasmine Wallace
Peer Review Manager
American Society for Microbiology
Washington, D.C.

REPORTER:
Nida Mohsin

In 2018, at CSE's 61st annual meeting, the session "At My Desk after CSE, Now What?" appeared for the second time, and 7 speakers were invited to talk about their learning experiences from the 2017 annual meeting. The presenters shared what they learned at different sessions, during lunch conversations, and through networking opportunities, and how they implemented those ideas once they returned to their offices after the meeting. The various topics discussed included editorial workflow, using editorial boards, bridging the gender gap, mentorship, building a house style, team transitions, and remote working. Each presentation offered another learning takeaway for the attendees in the session. Below is a brief description of how each presenter shared their learning points and how they added value to their work, meanwhile encouraging everyone to prepare to implement new things learned at the 2018 CSE annual meeting.

Speaker Jennifer Cox began by stating that change and progress in editorial management are inevitable and often necessary. Based on her attendance of the 2017 session "Transitions: Managing Your Staff through Change," she learned a great deal on planning ahead for times of change and what that would mean for the team she manages. As she managed her own team through transitions this year, there were 3 areas of focus where she implemented her knowledge from last year's session. First, as a team, they focused on ongoing communication. This included regular feedback, collaboration, and clear delegation of tasks relating to daily workflow. Second, she focused on the individual support of each team member. They found ways to embrace the unique skill set everyone brought to the team and found opportunities for each team member to lead in order to optimize productivity. Third, her team tried to maintain the right balance between planning for change while also remaining flexible. This included learning to adapt to unexpected transitions, embracing areas where revision and critique are needed in order to assist productivity, delegating leadership, and over-communication to avoid misunderstanding.

Of the many great sessions at the 2017 CSE annual conference, Lan Murdock said the one that inspired her to take further action was "Mind the Gap II: Gender and Beyond." She described how she used communication channels and tools to raise awareness of gender diversity and bridge the gender gap, including the following:

- Address unspoken challenges including using a podcast to share insights. Those challenges include barriers researchers from ethnic minority backgrounds face, barriers to researchers taking parental leave, and the significance of gender in the research landscape.
- Share tips and best practices. Lan used infographics/visualization to share an editor's case study on how she increased diversity on her editorial board.
- Network and get inspired by using internal and external events to network with inspirational woman editors, leaders, and scientists in the industry and your research field.
- Recognize and overcome unconscious bias: self-reflection on your own biases and the consequences they have caused.
- Perspective on what we can do as individuals: accepting opportunities to speak, challenging our own biases and assumptions, getting a mentor, and widening our networks.

As a new member of CSE, Resa Roth was unsure of the benefits of attending the annual meeting, and CSE 2017 was the first she attended. Entering the meeting, she hoped to gain knowledge, meet new people, and grow freelance

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opportunities—and by the conclusion of the meeting, all these objectives and more were fulfilled. Though she found all the sessions valuable, both "How to Maintain and Update Outdated House Style" and "OA Monographs: Perspectives and Approaches" influenced her job course tremendously following the meeting.

After gaining additional insight into monographs from the related session, Roth expanded her Board of Editors in the Life Sciences (BELS) freelance profile to include "monographs" as a media category she would edit. Shortly thereafter, she was offered a freelance opportunity that involved building a house style for monographs. The house style session at CSE 2017 was instrumental in providing her with the confidence and know-how to proceed with the particulars of the project. The most useful takeaways from the session on house style were the following: use a style manual as a base and build upon it (to include items that are specific to the needs of the company/journal), use examples (to make the style guide easier to use), use categorization (to divide information in the guide into logical groupings, with the most important information at the start), and use version control and revision history (to keep track of any changes).

With this presentation, she hoped to instill the importance of updating one's resume and related public profiles to include any relevant updates after attending the CSE annual meeting. These updates can generate new opportunities, which may be especially important for early career professionals.

Amy King's work with the volunteer reviewers who make up the *Journal of Clinical Oncology* (*JCO*) editorial board was the focus of her presentation. Upon hearing a helpful session at CSE 2017 entitled "Getting the Most Out of Volunteers: Managing and Leading Volunteers," she learned 3 key factors to making the volunteer experience better: balancing the burden of work, engaging volunteers in communication with the journal, and orienting the board as a team with a common goal. As someone relatively new to journal publications, she described in her presentation how these 3 factors informed her plan to address the problem of associate editors (AEs) either underutilizing or overutilizing nearly half (47%) of the *JCO*'s editorial board members (EBMs). Back at her desk after CSE, she developed an "EBM Utilization Report" showing the AEs all the EBM names with 0 or 1 solicitation from the previous calendar year, and she implemented it in a way that employed all three key factors—balancing the burden, engagement, and team orientation. Her presentation showed how the report itself served as a tool for the AEs to balance the workload. To help engage the AEs in the process, she emphasized the importance of the way this information is communicated while pointing out their EBM utilization habits. King also included all AEs in this communication to help orient them to think of the EBM process as a team, where effort was needed from all the AEs to be more successful. While she still awaits the full year results, in the first quarter of 2018 after implementing the report, the board has already seen an 11% improvement of new EBM engagement over the first quarter of 2017. The initial goal for overall improvement (with engaging both new EBMs and underutilized, serving EBMs) was 10%. The "Managing and Leading Volunteers" CSE session offered helpful, practical solutions and examples of how to improve productivity of and relationships with volunteers that King was able to apply to both the *JCO* EBMs and AEs.

For Andrea Rindo, the CSE 2017 session entitled "Attracting New Authors" instilled a message of the importance of forming relationships with authors and supporting them to do their best in scientific publishing. At home, she spent time pretending to be an author trying to navigate the website of her society journal, *Journal for ImmunoTherapy of Cancer* (*JITC*), and found numerous areas—some large and some small—where its usability could be improved.

One change included visually simplified, easily accessible submission criteria. Going beyond the standard, text-heavy submission guidelines available on the journal website, Rindo and her team added an at-a-glance chart and quantitative recommendation summaries (e.g., word limits, reference counts) to give authors a quick understanding of what is typically expected for each article type without having to dig through pools of text. Understanding authors are interested in publishing their work as soon as possible, the journal transitioned from a monthly publication schedule to continuous publication at the start of 2018. In doing so, the journal observed a 45% improvement in average time from acceptance to publication. This served as a great talking point with authors to show that *JITC* was listening when they were asking for faster publication. To support general awareness of the journal's metrics, turnaround times, access information, and other statistics were also added to the journal's main landing page and subsequent pages.

Additionally, new initiatives were developed to engage and support authors. These included sending congratulatory messages to authors that contain tips on how to promote their own work and sharing every article via the society's Twitter account, where authors often replied or responded to the society's efforts. Looking at all author interactions, the journal and its publisher also set initiatives to improve overall customer service, noting all author inquiries must have some form of a response within 1 business day.

The most resonant message from the presentation was encouraging attendees to set aside time to pretend to be an author looking to submit at their journal as well as other journals. It was noted that if certain functions and services make it is easier for authors to navigate other journals,

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authors will come to expect the same service from their journal as well.

Jasmine Wallace noted one sign of a successful meeting is leaving with action items and a solid to-do list, and after attending the 2017 CSE annual meeting session on "Remote Workforces," she had both. The session provided a lot of practical information to help with developing and enhancing a remote team. Back at her desk, Wallace was able to apply several learning points from speaker Sonja Krane's presentation on "Making a Remote Workforce Work"; specifically, her considerations for remote workforces. The first step was to get everyone equipped to participate in virtual web meetings. After checking out a few video conferencing programs, her office now has virtual team meetings. The next focus was on communication and collaboration tools. While she was not able to invest in a new system, she was able to re-work how they use a shared network drive, and this made it possible to have more collaborative projects. Last, Wallace focused on her teams' visibility within their department. She put together an intradepartmental meeting among the managers, and they discussed ways to make remote workers more prominent team members. This led to not only a more inclusive team within the department but also a company-wide shift for improved inclusivity for all remote employees. Prior to the session, she was managing a remote team, and since no one else in the department had such a team, she had very little in-house guidance. The 2017 session really helped her to better develop her remote team and has led to better team dynamics, more effective communication, and enhanced engagement for remote workers throughout the company.

Nida Mohsin explained how the CSE annual meeting has always been a place for her organization to learn about new initiatives it can further apply in the Asian Council of Science Editors (ACSE). For the past several years, after attending the CSE annual meeting, she always had a bunch of ideas to implement when she returned home. The 2017 CSE annual meeting was no different, and this time, her attention was caught by the newly launched CSE Mentorship Program. ACSE's president, Dr. Gazi, and Mohsin attended the breakfast session on CSE's Mentorship Program led by Tim Cross (Westchester Publishing Services) and Patricia Baskin (American Academy of Neurology). Attendees included mentors and mentees working toward the next badge of the program. After carefully listening to them, Mohsin and Dr. Gazi were quite clear how the program works, and by that time they decided to follow CSE's Mentorship Program style and implement it at ACSE. The main reason behind this idea was that Asia, significantly lacks a common platform for training and counseling of editors, and publishing professionals in Asia are in dire need of ongoing and nonjudgmental training. After returning home, they discussed the idea with other board members and it was approved right away. The team worked on developing a mentorship committee, which further designed the program in detail. The ACSE Mentorship Program was launched at their 2017 annual conference and currently has 8 successful mentor–mentee pairs. In her presentation, Mohsin also discussed the challenges of launching and implementing the program, which included lack of willingness by mentors to participate in the program. She also discussed trying to convert this challenge into an opportunity by offering recognition and awards to the mentors who participated in that year's Mentorship Program. She also shared they are collaborating with other like-minded organizations that are already running Mentorship Programs so their mentors can be available to those organizations' mentees and vice versa.

Mohsin added that the opportunity to speak at this "At My Desk" session remarkably raised her confidence level, and provided her with encouragement to freely share the challenges and opportunities of working for the Asian scholarly publishing community. By asking members of ACSE to speak at such sessions, CSE acts as a strong bridge to connect Asian publishing professionals with the local scholarly community.

Links to Presentations

1. https://www.councilscienceeditors.org/wp-content/uploads/5.1-Cox.pdf
2. https://www.councilscienceeditors.org/wp-content/uploads/5.1-King.pdf
3. https://www.councilscienceeditors.org/wp-content/uploads/5.1-Mohsin.pdf
4. https://www.councilscienceeditors.org/wp-content/uploads/5.1-Murdock.pdf
5. https://www.councilscienceeditors.org/wp-content/uploads/5.1-Rindo.pdf
6. https://www.councilscienceeditors.org/wp-content/uploads/5.1-Roth.pdf
7. https://www.councilscienceeditors.org/wp-content/uploads/5.1-Wallace.pdf

New Innovations in Peer Review

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Client Manager, Senior Copy Editor
J&J Editorial
Cary, North Carolina

SPEAKERS:
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Editorial Operations Manager
The Journal of Bone and Joint Surgery, Inc.
Needham, Massachusetts

Trish Groves
Director of Academic Outreach, BMJ
Editor in Chief, *BMJ Open*
London, United Kingdom

Tim Houle
Chief Scientist
StatReviewer
Boston, Massachusetts

REPORTER:
Brit Stamey

Peer-review innovations can range from utilizing cutting-edge advances in technology to making editorial changes to help streamline existing processes. This year's session on New Innovations in Peer Review presented 3 different perspectives that showed that spectrum of innovation.

Christina Nelson began the session with an introduction to recent changes that *The Journal of Bone & Joint Surgery* (*JBJS*) has made to improve their overall peer-review process. In particular, they have revised both their workflow and some of their system interfaces to shorten and streamline peer review. Some of the processes Nelson outlined were using weekly automated editor reminder emails, weekly editor queue statistics emails, and monthly emails detailing editor acceptance rates and transfer rates. For peer reviewers and authors, they have shortened the deadlines they are given for reviews and revisions, respectively.

They have also added manuscript Xtract in Editorial Manager, which can pull the title, author names, affiliations, and abstract from a designated file (a title page in the case of *JBJS* to maintain double-blind review) and enter them into the submission form (Figure 1). This provides a cleaner interface, reduces manual data entry, and creates a more intuitive experience. *JBJS* is still in the beginning stages of implementing these changes, so we hope to hear more in the future about the outcomes and lessons learned from their workflow and submission system innovations.

Trish Groves followed up by talking about the processes of open review that have been utilized at the BMJ including open peer review, patient review, and reviewer discussions (Figure 2). The open review process at the BMJ includes prepublication histories. Groves discussed the inclusion of both academic reviewers and patient reviewers in the BMJ peer-review process. Data presented at the International Congress on Peer Review and Scientific Publication indicated that "all editors reported patient reviewers 'occasionally' include insights not raised by other reviewers; 6 of 7 editors

Figure 1. Editorial Manager's Manuscript Xtract is used for *The Journal of Bone & Joint Surgery* to make the submission process easier for authors.

'occasionally' and 1 of 7 editors 'frequently' find patient reviewers' comments helpful when advising authors on revisions to manuscripts," and on the part of the patient reviewers, "122 of 164 . . . (74%) responded to a survey, and 100 of those patient reviewers (82%) would recommend being a patient reviewer for the BMJ to other patients and carers."

Groves also touched on open research platforms and the partnership model of peer review used at eLife and BMJ Open Science. This form of collaborative open review includes initiating a discussion between the chosen reviewers who then come to a consensus about whether the paper will be rejected or should be revised. The referees will also work together on papers that are not rejected to identify what additional studies are needed.

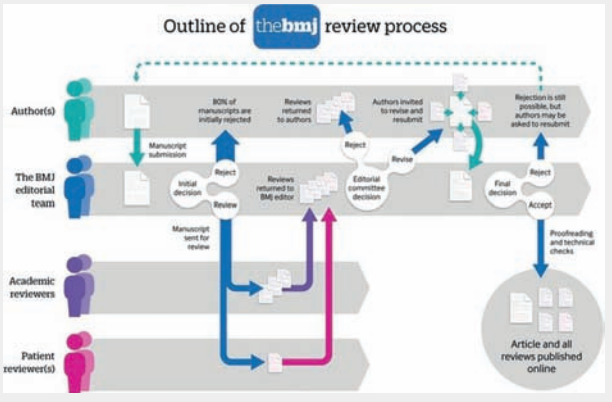

Figure 2. Outline of the BMJ open review process.

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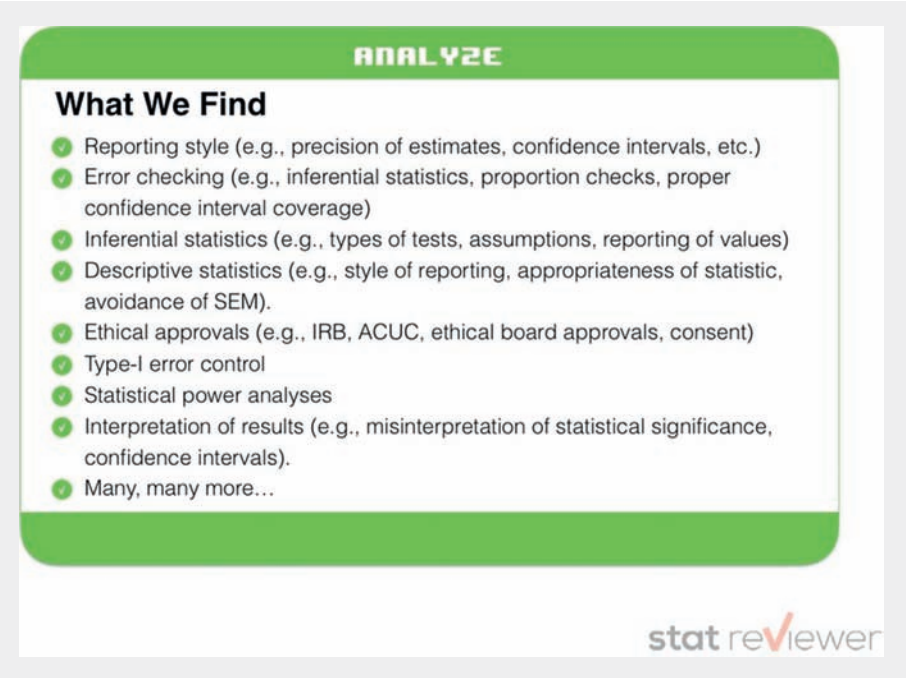

Figure 3. Functions of StatReviewer.

Tim Houle concluded the session by discussing StatReviewer's ability to automate the peer review of statistical information (Figure 3). Houle began by talking about the problem that StatReviewer attempts to address: poor statistical analyses in medical journals, including erroneous conclusions, incorrect statistical methods, and potential omission of crucial information for reproducing a study because of the difficulty of identifying qualified statistical reviewers. StatReviewer provides an automated peer-review report that focuses on finding errors in areas like reporting style, statistics, ethical approvals, and interpretation of results.

Houle also discussed the types of reports StatReviewer is able to produce including a classic report (similar to traditional peer-review comments), an editorial review (with information geared more toward the editorial office rather than the author), checklists (to show if a paper has adhered to specific guidelines), and their newest report—which is still in process—scores (this would provide a quick glance at the strengths/weakness before delving into one of the more in-depth reports).

The New Innovations in Peer Review session this year showed the wide range of innovations that can be employed to make the peer-review process quicker, more efficient, and more transparent while continuing to provide high-quality reviews to authors and editors. From system and workflow changes at *JBJS* to open and patient review at the BMJ to StatReviewer's automated statistical reviewer, this session offered a lot of ideas about improving and innovating the peer review process.

Links to Presentations

1. https://www.councilscienceeditors.org/wp-content/uploads/6.4-Groves.pdf
2. https://www.councilscienceeditors.org/wp-content/uploads/6.4-Houle.pdf
3. https://www.councilscienceeditors.org/wp-content/uploads/6.4-Nelson.pdf

Short Course for Manuscript Editors

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REPORTER:
Stacy Christiansen

Faculty and attendees of the Short Course for Manuscript Editors, CSE 2018.

Attendees of the 2018 CSE Short Course for Manuscript Editors came from all over the United States as well as from South America. There were two dozen attendees from a variety of backgrounds, primarily writing and editing disciplines in biomedical or earth science, and from academic, publishing, and industry settings.

Word Tips

The short course opened with a session by Elizabeth Blake called "Microsoft Word Tips for Manuscript Editors." She noted that scholarly authors typically create documents in Word and thus that is the software editors primarily use. Blake talked about using Word to clean up and format documents. She explained how editors can use Word to convert text to tables and vice versa.

One of the most popular parts of Blake's session was demonstrating useful shortcuts to help editors with formatting. Another helpful feature she demonstrated was the split screen, which facilitates comparison of different parts of the same document (e.g., to compare data in the abstract with those in the text). Blake also demonstrated tools useful for navigating and searching within a document.

Blake showed attendees how to customize the spell-check dictionary and how to build a library of comments to embed author queries. She also explained how to customize a wide variety of Word settings, including the ribbon and Word's autocorrect tools.

Ethical and Legal Issues in Scientific Editing

Next up was Annette Flanagin to present ethical and legal issues that manuscript editors may encounter. She began by talking about authorship—who qualifies as an author and what criteria they must meet. She discussed what to do with authorship problems after a paper is submitted and how to acknowledge individuals who are not authors but contributed to the work.

Flanagin then discussed conflicts of interest: financial, academic, ethical, or political. She talked about why disclosures of conflicts of interest matter and what and how potential conflicts of interest should be disclosed in scientific articles.

Next, she addressed copyright and permission issues, including basic legal information (e.g., what is covered by copyright and publication licenses), and provided some sources for editors on this topic. She talked about the difference between copyright and trademark. Patient confidentiality was presented next, including how journals are responsible for protecting patient confidentiality in publication.

The final part of Flanagin's presentation focused on corrections, including different approaches based on the level of error. This session wrapped up with breakout groups that were tasked with wrestling with some of the ethical and legal issues that had been presented.

Manuscript Editor's Guide to References

Stacy Christiansen presented the topic of references. She began by describing research on errors in citations, including how they happen and what the downstream effects are, emphasizing that this is why manuscript editors are crucial in the quality-assurance process.

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She shared suggestions for approaches to editing references, including checking for duplicates, identifying missing entries, verifying entries against a database (e.g., MEDLINE), and editing them for style. She reminded attendees that the goal of the reference list is to help readers locate sources.

Christiansen then talked about how to format various types of references, including journal articles, books, corrections, websites, social media, preprints, and legal citations. She then outlined some of the tools that manuscript editors have at their disposal, including specialized software, databases, catalogs (e.g., Library of Congress), and search engines. She talked briefly about tagging references, which helps correct formatting, linking, and matching to databases and aids in storage and searching, as well as web/print production.

She closed the session with some guidance on how to deal with content that does not have a formal reference list but must cite sources.

Statistical Errors Even *You* Can Query

Tom Lang opened his session by defining 5 levels of manuscript review. His presentation focused mainly on analytical editing or documentation review, a level of review that falls between substantive editing (logic-based review) and peer review (validity-based review). Analytical editing is concerned with ensuring that research designs and activities, including statistical methods and results, are accurately and completely documented according to accepted guidelines, usually those on the EQUATOR website.

Lang focused first on some general reporting issues, such as the fact that many authors use no statistics or only basic statistics in their reports, that many authors who do use statistics make lots of mistakes, and that many readers are unaware of the first 2 issues. He highlighted some common reporting errors, such as false precision when reporting numbers, reporting percentages without numerators and denominators, and using the mean and standard deviation to describe data that are not normally distributed.

He also pointed out common errors in simple linear regression analysis, such as drawing the regression line beyond the data, not assessing the assumption of linearity, and not providing a measure of how well the model fits the data. He also discussed the pros and cons of *P* values, including errors in reporting and the current thinking that *P* values should generally be accompanied by, if not replaced with, confidence intervals, which focus on the clinical implications of the result and away from chance as an explanation for them.

Lang emphasized that manuscript editors do not need to be afraid of statistics. Although there is a small learning curve, manuscript and authors' editors can learn to query about statistical methods and results and, in so doing, improve the quality of research reports.

(Some) Best Practices of STM Editing

The short course wrapped up with a session led by Peter Olson. He opened by discussing abbreviation use in technical editing, especially vis-à-vis clarity and style. He then talked about ambiguous language, misplaced modifiers, and other examples of unclear writing.

Olson encouraged attendees to embrace and protect consistency regarding presentation. He emphasized that clear writing eliminates redundancy. He provided examples of poor (and better) word choice and usage, with an emphasis on patient-first language. He also discouraged the use of jargon in scientific papers.

Olson peppered his session with plenty of examples, often asking attendees to chime in with their thoughts on what could be improved. He provided tips for eliminating superfluous wording and provided guidance on the correct use of verb tenses.

The Short Course for Manuscript Editors was well received and the faculty members asked for feedback, eager to continue to hone the sessions for future CSE meetings.

Improving Author Experience

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Taylor & Francis
Milton Keynes, United Kingdom

Lindsay Morton
Contributor Experience Manager
Public Library of Science
San Francisco, California

Tiffany McKerahan
Author Engagement and Support Manager
IEEE
New York, New York

Leslie Walker
Director of Global Production Operations
American Chemical Society
Columbus, Ohio

REPORTER:
Alison McGonagle-O'Connell

Figure 1. Session presenters.

As publishers continue to shift toward viewing researchers and authors as customers, it is important to continually assess the ways in which various stakeholders implement improvements to the author experience. At this year's CSE Annual Meeting, within a session titled "Improving Author Experience," 4 publishers shared the ways they are using technology to make researchers' interactions with the publishing process less cumbersome, and possibly even pleasant. The session included overviews of Taylor and Francis' Author Submission Portal, PLOS Author Services' integration with bioRxiv, IEEE's LaTeX Analyzer, and American Chemical Society's ACS Direct Correct (Figure 1).

Siobhan Aldridge, Agile Product Owner for Taylor & Francis' Submission Portal, presented on the sleek, branded front end they have created atop the Editorial Manager Ingest Service. This allows authors to submit to all Taylor & Francis/Routledge journals from one, easy-to-use interface that collects their work on a dashboard where they can see real-time updates from the peer-review system that underpins the portal. Authors never need to interact with the underlying peer-review systems, and editors do not need to change their workflows or learn a new system to accommodate the portal.

Lindsay Morton, Contributor Experience Manager at the Public Library of Science (PLOS), presented on an integration that allows authors to opt in to automatically post a preprint of their manuscript on bioRxiv as part of initial submission to PLOS. The process leverages custom submission questions within Editorial Manager. Although the automatic deposit service began in May 2018, integration with preprint servers is not entirely new to the PLOS workflow. PLOS has been accepting direct transfers from bioRxiv since 2016, and has welcomed manuscripts with posted preprints as far back as 2001. "Preprints are relatively new to the life sciences and we are pleasantly surprised that the uptake rate is around 20%," said Morton. "We believe uptake will increase as authors better understand the benefits of preprints. We are encouraged by the positive feedback and will continue to pursue workflows that ease the author experience."

Tiffany McKerahan, Author Engagement and Support Manager at IEEE, discussed the IEEE LaTeX Analyzer, a tool the publisher developed in collaboration with Overleaf, which is openly available for anyone to use. The analyzer allows authors to quickly scan their LaTeX files, whether produced in Overleaf or another program, and assess whether there are any errors that would cause downstream delays or typographic errors during the production process. The tool flags errors and offers suggestions for addressing them, allowing authors to fix errors before submitting and to feel confident their LaTeX article will render correctly. "So far, so good!" said McKerahan of both the tool's update and impact in workflow. She presented a chart showing, as of the presentation in early May, the number of successful first-time validations, thrown errors, and conversions (Figure 2).

Leslie Walker, Director of Global Production Operations group, presented the American Chemical Society's ACS Direct Correct. ACS Direct Correct is an author service devised to enhance author experiences with ACS Publications by providing an alternative way to enter proof corrections and comments directly in the edited manuscript file. The tool leverages HTML to display a clean, readable rendition of the proof to the author and an HTML-based

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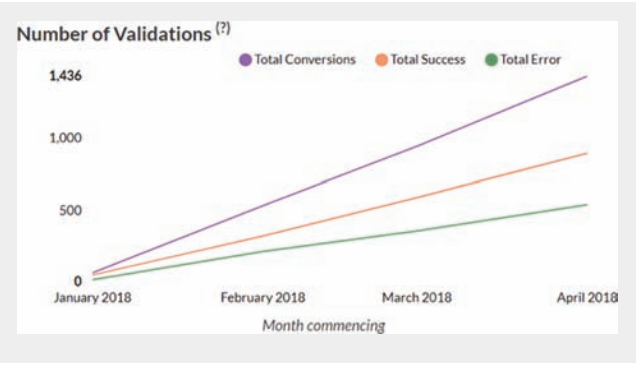

Figure 2. Outcomes of the IEEE LaTeX Analyzer.

interface handles queries and comments. The underlying XML is preserved and updated accordingly based on the author's input and the information gathered within ACS Direct Correct is reviewed and recomposed for final publication by ACS journal production staff. "Over 90% of authors who have used ACS Direct Correct reported that it was 'easy to use' within a survey. More importantly, nearly 100% of them confirm they will use ACS Direct Correct the next time they are publishing in an ACS journal," said Walker.

Perhaps as an indication of the urgency of the topic, the session was well attended by over 60 participants. Q&A was lively, and social media was abuzz with observations from the session.

"I am thrilled that Siobhan, Lindsay, Tiffany, and Leslie were all able to present within this session," said Alison McGonagle-O'Connell, session organizer. "They, and the publisher tools they represent, were all on my 'A' list when organizing because the problems that each tackle, in different points within the author's interaction with the publication process, are unique, and the solutions each represents are powerful. The author response data, in each case, underscore this."

Links to Presentations

1. https://www.councilscienceeditors.org/wp-content/uploads/4.1-Aldridge.pdf
2. https://www.councilscienceeditors.org/wp-content/uploads/4.1-Morton.pdf
3. https://www.councilscienceeditors.org/wp-content/uploads/4.1-McKerahan.pdf
4. https://www.councilscienceeditors.org/wp-content/uploads/4.1-Walker.pdf

Using Production Metrics to Track Journals' Workflow

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American Meteorological Society
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SPEAKERS:
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Production Team Manager
American Meteorological Society
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Carol Jones
Production Manager
Wolters Kluwer Health
Philadelphia, Pennsylvania

Greg Suprock
Head of Solutions Architecture
Apex CoVantage
Herndon, Virginia

REPORTER:
Mike Friedman

While there are myriad journal production workflows being followed by publishers, there are almost as many ways to measure just how well these workflows are being followed and how effective they are. This session presented different production metrics and approaches from 3 perspectives: a small society publisher, a large commercial publisher, and a production vendor. The goal was to give a wide perspective on the most effective and efficient ways to track journals production and what metrics may work best for you.

Sheila Gafvert, the Production Team Manager at American Meteorological Society (AMS), started by emphasizing the vast number of metrics that can be tracked (Figure 1). She explained that what helps to whittle that down is identifying how the particular workflow is structured, and break down the possible metrics into 4 categories:

- Number of manuscripts ready for specific actions;
- Number of tasks completed by staff, vendors, and authors;
- Durations for task completions; and
- Counts relevant to production work but not directly affected by it.

Gafvert also emphasized the different uses to which metrics can be applied, which for AMS includes identifying problems and ways to increase efficiency, prioritizing allocation of staff and resources, contributing to staff and vendor evaluations, demonstrating accountability to upper management, ensuring author needs are being met, and forecasting future needs and performance targets. She concluded by suggesting how publishers can start evaluating what metrics are best for them (Figure 2). These steps include identifying the questions to answer, confirming the audience or end user, defining the terms, vetting the results, and considering how vendor(s) can help.

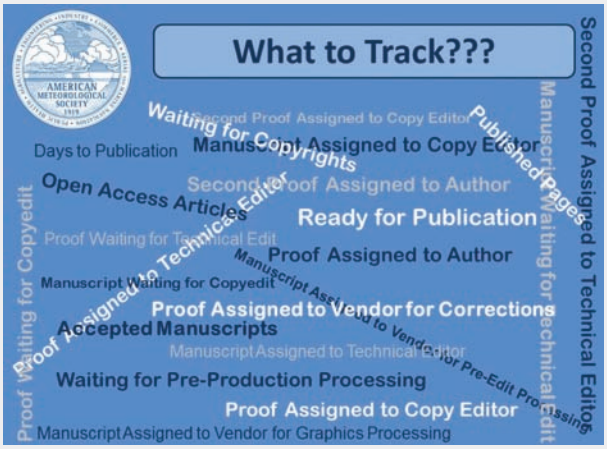

Figure 1. Sheila Gafvert pointed out the large number of possible metrics to track.

Next, Carol Jones from Wolters Kluwer Health gave an overview of Wolters Kluwer, which publishes 300 journals, and identified 3 main types of workflows that they handle: traditional article-based, fully open access, and continuous publication. For all of the different workflows, she emphasized how valuable it is to spend time building reports that consistently track the major milestones as well as the intervals of time needed to complete individual production tasks. These reports can also track open access payments that can be integrated into the workflow. Jones suggested always keeping in mind the primary goals when defining and

Figure 2. Sheila Gafvert gave some items to consider when thinking about what metrics to track.

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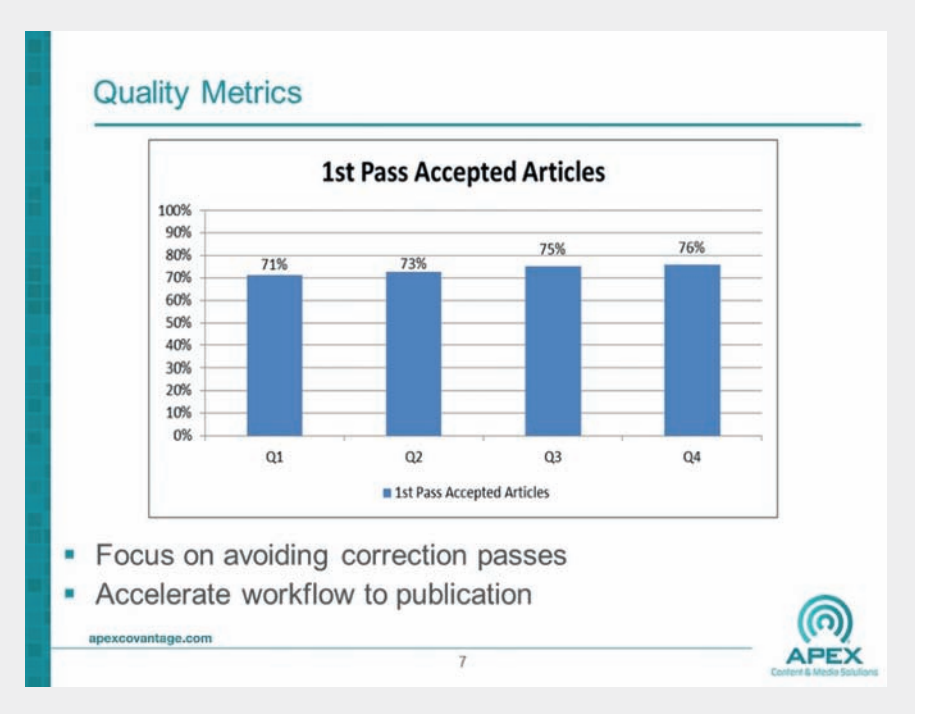

Figure 3. Greg Suprock gave an example of how tracking measuring performance can reduce the number of correction passes in a workflow.

building production reports: They must accurately assess appropriate production metrics to meet the expectations of customers and authors, increase internal awareness of productivity and vendor performance, and identify trends in content flow so adjustments can be made.

Finally, Greg Suprock from Apex CoVantage discussed workflow management tools for tracking end-to-end production tracking for Apex customers. He identified 4 key performance indicators that should be tracked: turnaround time, source discrepancies, alterations tracking, and individual performance measures. While turnaround time is a more obvious metric to track, identifying source discrepancies, or reasons for production delays, is a key part of the vendor/publisher partnership. He explained the goal of defining the right metrics for tracking and measuring performance avoids redundant correction passes so as to accelerate the workflow through to publication (Figure 3). Having flexible tools and simple, clear reporting (with easily understandable graphs and real-time results) can give publishers an excellent picture of potential hitches in the workflow so they can effectively manage them.

An interesting thread through all of the presentations was a consistent agreement on what types of metrics should be tracked. All publishers have the same goals of eliminating inefficiencies and tracking manuscripts effectively and quantitatively through the major publication milestones. In this session we saw an excellent example of how that is accomplished from 3 different perspectives.

Links to Presentations

1. https://www.councilscienceeditors.org/wp-content/uploads/2.4-Gafvert.pdf
2. https://www.councilscienceeditors.org/wp-content/uploads/2.4-Jones.pdf
3. https://www.councilscienceeditors.org/wp-content/uploads/2.4-Suprock.pdf

Extracting Maximum Value from the RFP Process

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KWF Consulting
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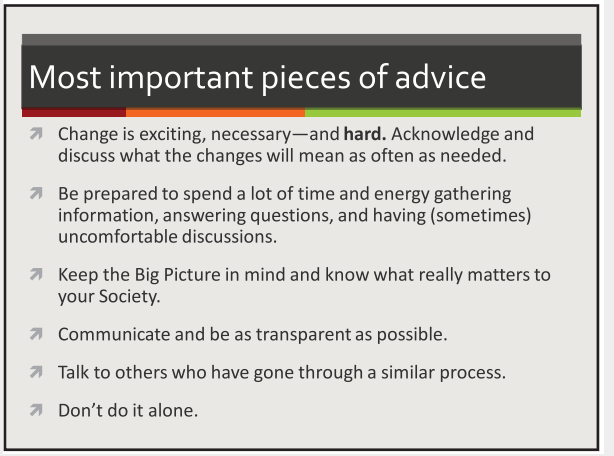
Amy McPherson
Director of Publications and Managing Editor
Botanical Society of America
Saint Louis, Missouri

REPORTER:
Alison McGonagle-O'Connell



Advice from Amy McPherson on issuing RFPs.

At the 2018 CSE Annual Meeting, 3 RFP "experts," each intimately familiar with different roles within the process, shared unique perspectives with one another, as well as with the audience of over 60 session attendees. The result was a lively discussion among presenters and a spirited Q&A following the presentation and discussion.

First, Amy McPherson, Director of Publications at the Botanical Society of America, shared her experiences issuing an RFP from the smaller society perspective. Small societies may issue RFPs for services including publishing or technology partnerships, peer review systems, or publishing platform services. These decisions may go through committees with members from many different backgrounds with differing ideas, and for this reason Amy highlighted the potential need for change management before beginning the process.

"Change is hard!" said McPherson. Without having all stakeholders on board, and in agreement with what the problem is, and why a particular solution is important, the RFP process with a multi-stakeholder committee may be very long and difficult. "Don't go it alone," said McPherson, who recommends engaging those with experience, including consultant organizations, to help keep the process moving forward.

Next, Dana Compton, Senior Consultant at KWF Consulting talked about the role of a consultant in the process. Her perspective extended to best practices for publishers of all shapes, whether issuing the RFP alone or with the help of a consultant. In her talk, Dana shared suggestions for eliciting impactful responses, whether from a commercial publisher, a technology service provider, or other vendor in workflow.

Dana highlighted the importance of being realistic when issuing an RFP. This included a suggestion to clearly identify the goals of the RFP early on in the process, and assess needs as "must-haves," preferences, or "nice-to-haves." Dana also made suggestions for structuring the RFP process to yield results focused on solving a specific, stated problem, and formatted to facilitate an apples-to-apples comparison of responses.

Above all, Dana stressed the importance of openly sharing accurate, reliable information with RFP respondents. "The promises made in a proposal are only as good as the data in the RFP," she stated. Financial projections, proposed features, and service levels offered in proposals are all based on historical data and experiences.

Last, but certainly not least, Tom Beyer, Director of Platform Services at Sheridan PubFactory, presented from the perspective of a service provider that is responding to RFPs from publishers of all sizes, both with and without consultant involvement. Tom reported that most frequently, responses are to scholarly publishers directly, to the tune of 30–50 per year.

"The most important thing is to communicate!" said Beyer, stressing that if the 2 parties do work together, the relationship will be long term, and it is best to set both sides up for successful rapport right from the start with clear, frequent, open communication.

Throughout all the presentations, a common thread was transparency. The more transparent organizations can be with themselves about 1) what they really want to do in exploring any type of change, 2) what partners they realistically would most like to work with, 3) the resources they have available to make changes, and 4) what their timelines are, the more successful their RFP engagements

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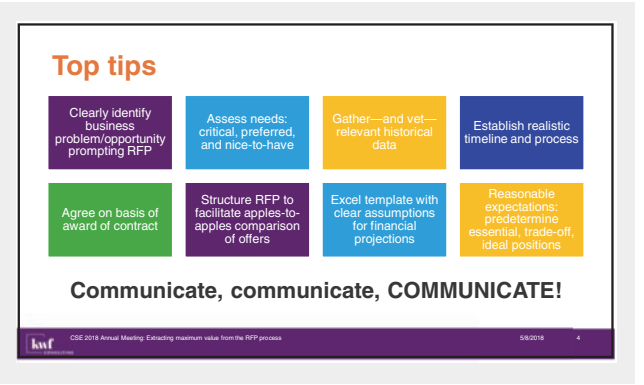


RFP tips from Dana Compton.

can be. While some parts of the process historically require a black box approach, all presenters seemed to agree that more transparency and open communication guarantees all parties higher levels of success—whether that is finding the right partner, narrowing down respondents, or deciding as a vendor how much of one's resources to put into a response.

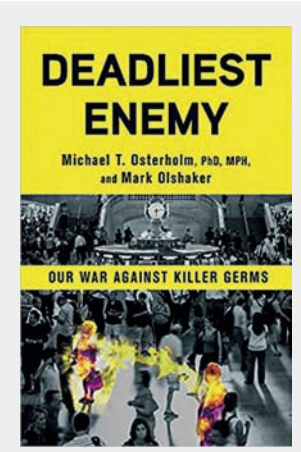
Links to Presentations

1. https://www.councilscienceeditors.org/wp-content/uploads/7.2-McPherson.pdf
2. https://www.councilscienceeditors.org/wp-content/uploads/7.2-Compton.pdf
3. https://www.councilscienceeditors.org/wp-content/uploads/7.2-Beyer.pdf

Book Review: *Deadliest Enemy*

Tatiana Aramayo

Deadliest Enemy: Our War Against Killer Germs. Michael T. Osterholm. Boston: Little, Brown and Company, 2017. 352 pages. ISBN 0316343692



The harsh texture of a sore throat, the rolling feeling of nausea, or the unbearable burn of a fever are all common symptoms we expect modern medicine easily to alleviate. We live in a day and age where doctors prescribe the cure for any discomfort and allow people to continue with their lives. Or do they? In *Deadliest Enemy*, Dr Michael Osterholm, a world-renowned epidemiologist, and Mark Olshaker, a *New York Times* #1 bestselling author and Emmy Award–winning documentary filmmaker, illuminate the reality of how ignorant and unprepared society is today over the ongoing battle against infectious diseases. Dr Osterholm gives first-hand accounts and insights to the world's most prolific epidemics and helps explain the importance of understanding both the hard science and how humans respond to these diseases. The reader is given the opportunity not only to learn the science behind humanity's turbulent relationship with the microscopic world, but also media responses and political turmoil involved in effectively arming ourselves against an oncoming "germ" attack.

The book begins each chapter with a unique quote, from doctors to songwriters, which helps highlight the main ideas the authors want to emphasize within that chapter. Readers then delve into the mind of Dr Osterholm as he recounts both his first-hand observations of the most infamous diseases and knowledge of the terrifying world of epidemiology. He begins by narrating the rise of AIDS and his attempt to stop the virus before it could take hold in America. He highlights the various questions and clues that lead to the discovery of the HIV virus and the people who spearheaded that discovery. Furthermore, he expresses the frustration felt as politicians gave false promises and refused to change policies. All the while, the public refused to change their behaviors to try and thwart its spread throughout the nation. Many other stories and cases of infectious diseases that are still predominant today, such as Ebola, are given the same detailed review of their past and present relationship with humans.

Dr Osterholm uses this book to guide readers into understanding who, what, when, where, and why some diseases become public health menaces. He describes the history of various infectious diseases (from influenza to Zika), the origins of epidemiology, the evolution of pathogens, and the creation of vaccines. Furthermore, this book exposes the world's current vulnerabilities to the next major crisis, such as how our ability to travel across seas within hours can be used to quickly infect populations throughout the world; the way a research paper may give the key to Pandora's box to a terrorist and allow a weapon more powerful than a nuclear bomb to devastate a nation; or how the overuse of antibiotics is giving rise to super-bugs that are invulnerable to all current medications and can devastate hospitals. This book explores mankind's progress in overcoming what were once humanity's greatest killers and the current stagnation that foretells doom in the face of a new disease outbreak if action is not taken now. This concept is detailed in a horrifying scenario—generated by experts and widely considered a highly realistic and possible case—of how the world today would react if faced with another major influenza pandemic. However, readers are also given a silver lining as Dr Osterholm shows how new discoveries, international cooperation, and a solid plan of action can change how people view medicine and adopt preventative action as the first few steps in the effort to avert the next world pandemic.

Deadliest Enemy is a chilling read that gives a cohesive narrative to a world plagued with disease, which causes all readers to be sucked into its words. The book acts as an important warning of the precarious position in which society has placed itself, and is a fantastic outline of the continuously evolving field of epidemiology, summarizing the science used to uncover and fight back against hostile pathogens. These authors have written a dramatic and intelligent book that uses metaphors, stories, and good old science to bond with all readers interested in preparing themselves for the oncoming fallout or any reader who just likes a good old science book.

Gatherings of an Infovore*

Barbara Meyers Ford

This year's CSE annual meeting and webinars have had 2 topics on careers in publishing. They did not cover the specifics of getting a job in publishing, but rather how to create a successful vocation as an early career professional and how to assert yourself to ensure equal treatment in a diverse environment. At the 2018 CSE Annual Meeting, Alice Meadows and I put forth our career paths and then had a lively discussion with session attendees. For this Infovore column I thought I'd continue the theme of what advice and information early career professionals might find of value.

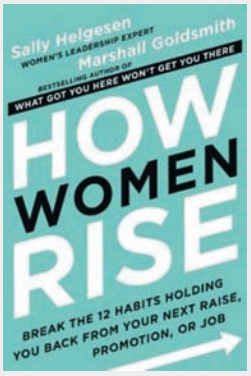
Before you try to cast your life's work in stone immediately after graduation, it's important to remember that how you start out in your career may certainly not be where you find the greatest satisfaction and success. An infographic by Reuben Yonatan posted on July 24, 2018 reports on the early career "failures" of some pretty well-known people and their take on failure. Here are a few examples:

> "A path that turns out to be a dead end is very useful because you don't devote resources on that; you go elsewhere."
>
> —Michael Bloomberg

> "Challenges are gifts that force us to search for a new center of gravity. Don't fight them. Just find a new way to stand."
>
> —Oprah Winfrey

> "It is impossible to live without failing at something, unless you live so cautiously that you might as well not have lived at all, in which case you have failed by default."
>
> —JK Rowling

You can see the full infographic at https://getvoip.com/blog/2018/07/24/career-failures/



Looking for something to really delve into? Geoff Smart, chairman and founder of ghSMART had this to say about a book devoted to circumstances every woman encounters: "Sally and Marshall have written a practical and entertaining career guide tailored to help women ascend to senior leadership roles in business, government, and not-for profits." I agree! Their 2018 book is *How Women Rise: Break the 12 Habits Holding You Back from Your Next Raise, Promotion, or Job*. Rather than cite the 12 habits, I want to share with you here the last part of this guide: "Changing for the Better."

The 4 basic tenets to follow as you strive for change are:

1. **Start with One Thing**. No matter how many of the habits you may have, take just 1 to focus on so you can develop and sustain a long-term change versus "Let's do it" enthusiasm.
2. **Don't Do It Alone.** Colleagues, coaches, and mentors help when you hit those moments of frustration, resentment, failure, or simple burnout so that you don't crawl back into your old habits.
3. **Let Go of Judgement**. We oftentimes can be our worst advisors as we critique ourselves too harshly and second-guess ourselves too frequently. Because of those bad habits you aren't facing forward. Instead you're focusing on the past. And while you're in the process of being less judgmental of yourself, try not to judge others too harshly as well. As the authors advise: "Judgment of self or of others won't improve the quality of your life. It certainly won't make you happier."
4. **Remember What Got You Here.** You may start working on changing the habits that are holding you back, but don't shortchange your accomplishments and successes. A

*A person who indulges in and desires information gathering and interpretation. The term was introduced in 2006 by neuroscientists Irving Biederman and Edward Vessel.

CONTINUED

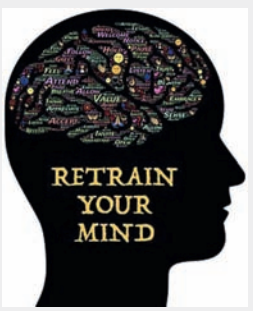
healthy respect versus arrogance regarding the skills and talents you bring to the table will balance out your impulse to focus on only your bad habits.

I encourage those of you who are truly serious to read the entire book published by Hachette Books Group. You can check out book's webpage: https://www.hachettebookgroup.com/?s=How+Women+Rise

There are a few other bits that might help you begin to construct the foundation of a fulfilling career which have helped me find my best place in the scholarly publishing ecosystem.

The first is to be courageous. When an opportunity presents itself—take it! Don't hesitate at the crossroads mulling over whether to stay on your current path or take that sharp turn to the left. No one ever regretted NOT taking advantage of an opportunity. Even if you wind up in a cul-de-sac, it might be the perfect neighborhood for you. Or a new neighbor may help you move out in a tremendous new direction.

The second is to be honest. My Dad told me when I was little that honesty was better than lying because it took less energy. When you tell a lie, you have to remember the truth, the lie, and who you told the lie to. That's a lot harder than just being honest with people. But most important you shouldn't lie to yourself. If you have become bored or frustrated in your position don't say "I'm sure if I just wait until (fill in the blank) things will be better." Look at whether there's another position where you can flourish. If not, dust off that resume and start looking elsewhere.



The third is to be aware. This concept covers a large territory: Recognize the good and bad attributes of your environment, your peers, your co-workers (up and down the hierarchy), and how what you do just doesn't reflect back on you, but how your actions affect those around you. (Suggestion: Remember to take this concept home with you each night.)

There's no one place to get advice about breaking into publishing… there are many! Primarily because there are so many different opportunities. Here are some articles you can easily access and glean a few good tidbits from each.

https://phoebemorganauthor.com/2018/03/25/getting-a-job-in-publishing/ (There are 9 pieces of good advice in this article which was written by a book publishing professional but are applicable to nearly any area of publishing.)

https://www.chroniclebooks.com/blog/2016/01/05/so-you-want-to-work-in-publishing-advice-from-a-chronicle-books-editor/ (If you are interested in book acquisitions this is a short but good article to read.)

https://www.findspark.com/how-to-break-into-the-publishing-industry-psst-it-is-not-just-for-english-majors/ (This article moves beyond book publishing even if not STM and scholarly publishing and has some good tips.)

I couldn't end an Infovore column for early career professionals in scholarly publishing without including links to some of the professional organizations in our industry. Membership and participation in these groups allows you to meet some of the most senior and some of the most respected individuals in our industry. Do visit their websites and be sure to get their e-alerts for new positions and other job postings. They are also an excellent way to stay current on news, major events, and trends.

Council of Science Editors:

- www.councilscienceeditors.org
- https://councilscienceeditors-jobs.careerwebsite.com/

International Society of Managing and Technical Editors:

- www.ismte.org
- https://careers.ismte.org/

Society for Scholarly Publishing:

- www.sspnet.org
- https://sspnet-jobs.careerwebsite.com/

Society for Technical Communications:

- www.stc.org
- https://www.stc.org/about-stc/job-bank/

And as I've said in conversations, lectures, and presentations, I'm open to helping serious early career professionals with advice and moral support. Connect with me on LinkedIn at www.linkedin.com/in/barbarameyersford

What's a Science Editor to Do? Discover, Discuss, Make a Difference: Take II

Tracey A DePellegrin

Those of you with a keen eye for detail might recognize the title of this article as nearly identical to my inaugural Viewpoint[1] published in Spring 2015. I thought it fitting to write a bit of a reprisal in my last *Science Editor* piece and to reflect on what's changed since the first.

Building on the transformative work of previous Editor-in-Chief Patty Baskin, *Science Editor* was poised to find new ways to bring its content to the reader.

We revamped the publication to become a true online presence—including early online and continuous publishing—plus a redesigned print and online version launched August 2016. I augmented our modern, clean look by publishing original scientific images as covers contributed to *Science Editor* by scientists and photographers and intended to represent the breadth of our readers.

If you've ever ushered a journal from print to online or undertaken a major redesign, you know that the work ranges from the decidedly fun parts (e.g., collaborating with colleagues, choosing typefaces and bold cover art, understanding reader workflows) to the still-interesting-but-somewhat-less-fun-parts (e.g., retroactively tagging 6 years of *Science Editor* articles, user testing, bug fixing, and figuring out how to indent text in WordPress).

The Science Editor Redesign Task Force responsible for the project from start-to-finish included Tony Alves, Tim Bennett, Amanda Ferguson, Jonathan Schultz, Lindsey Buscher, and me, with Patty as Chair, all supported by the CSE Board of Directors. The Board invested its resources so that members and readers would benefit, laying the groundwork for making *Science Editor* content easy to discover, read, discuss, and share.

One of my goals was to provide CSE members and readers with articles and tools that offered not just a broad and deep look at issues in scientific editing and publishing, but also a mechanism though which they educate others—colleagues, bosses, potential collaborators, friends—about the importance of our work. The articles could be shared in various ways and could serve as a springboard for discussion.

Sign at Farewell / Fairwell. Photo by Ken Fitlike. (CC BY-SA 2.0)

During the past few years, we've hoped to bring a scientist's viewpoint to the reader and did so in various new ways. Because their struggles often become our struggles, understanding where their concerns overlap with ours is important.

We launched new columns (like Editor's Perspective), appointed scientist-editors (like Lenny Teytelman, founder of protocols.io) to the Editorial Board, conducted in-depth interviews with leadership in relevant organizations (like Laurel Haak of ORCID[2]) and academic editors (like Karl Broman[3])—all agents of scientific, cultural, and technological change. We showed readers the nuances involved in real-world integration of taxonomies like CRediT, via Alison O'Connell's interview with Gabriel Harp,[4] a senior product manager at Cell Press. U.S. Environmental Protection Agency ecologist Joseph E Flotemersch and environmental science editor Justicia Rhodus presented authorship guidance[5] developed for a U.S. Federal Research Laboratory.

TRACEY A DEPELLEGRIN stepped down as Editor-in-Chief of *Science Editor* in June 2018. She is Executive Editor, Genetics Society of America Journals and Executive Director, Genetics Society of America.

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Readers listened as Jessica Polka, director of ASAPbio, forecasted the growth of preprints in biology[6] (and indeed, Jessica's prognostications have been spot on!), and as Lorinc et al. made a plea for editors to simplify formatting requirements in what they described as a painful publishing process.[7] Lenny Teytelman challenged our assumptions about negative results.[8] Jessica LaPointe elucidated what copy editors do and why it matters.[9] Evolutionary ecologist Stephen B Heard in "Is Everything Broken"[10] lamented the overuse of this hyperbolic phrasing, and we wrote a commentary on its application to publishing. (Those pieces, published in 2015, are even more relevant today).

We published a timely article by Thomas J Hund and Peter J Mohler on science advocacy in a changing political climate.[11] Both authors are practicing scientists as Hund is a Professor of Biomedical Engineering at The Ohio State University and Mohler is Professor and Chair, Department of Physiology and Cell Biology at The Ohio State University Wexner Medical Center and College of Medicine.

We published a spotlight on careers, with illuminating interviews with a variety of individuals from proofreaders and editorial coordinators to executive editors to senior academic editors, medical editors, and consultants.

We've also provided resources in the form of Ethical Editor columns (Debra M Parrish), "Gatherings of an Infovore" (Barbara Meyers Ford), synopses of CSE email list discussions (Tony Alves), book reviews, new member profiles, plus pieces like Editor as Educator (Michelle Yeoman),[12] and the idea of Open Access being more than just making papers free to read (Kuntan Dhanoya).[13]

We published dozens of CSE Annual Meeting Reports[14] from countless reporters—wrangled by the ever-amazing Dana Compton—to bring you summaries of the high points of CSE's Annual Meeting each year. Those reports provide not just a record of what happened at the meeting, but now, robust tagging makes it easy to find information you need on myriad publishing topics. We've published highlights from other conferences such as the 2017 Peer Review Congress[15] and AAAS Annual Meetings.

To ensure consistency in grammar and style, we appointed Jessica LaPointe, Managing Copy Editor at the American Meteorological Society, as our dedicated copyeditor. Jess created a process for each article, and—as with all good editors—her talents are showcased in smooth article flows, with all the glitches removed before they land in front of readers.

And for all we've done, there was always more to do; more I wanted to do. In the fall of 2016 I was appointed Executive Director of the Genetics Society of America. My new job brought responsibilities and challenges, not the least of which was remodeling the Society in a reorganization. Inspiring and inspired? Yes! Exhausting? Sometimes. Turning the ship of the GSA with a lean staff is rewarding but all-consuming. It requires my undivided attention.

Add to that a 2017 bookended by a broken ankle and pneumonia (what's a vacation in Hawaii without landing in the hospital?), and it was time for a redesign of my own. While overwork and stress seem to be *de rigueur* in science and in publishing, the truth is that there's a law of diminishing returns. I know many of you can relate.

It's a fascinating time in scientific editing and publishing, and change is always afoot. In that spirit, *Science Editor* is poised for new leadership, new ideas, and a renewed sense of purpose, ushered in by its new Editor-in-Chief, Jonathan Schultz.

My sincere thanks to the CSE Board and all of the *Science Editor* Editorial Board members during my tenure, but especially Patty Baskin, Dana Compton, Tim Cross, Barbara Meyers Ford, Barbara Gastel, Anna Jester, Leslie Neistadt, and Roxanne Young, and others too numerous to mention. These hard-working, talented, and lifelong CSE loyalists have been the lifeblood of the publication over multiple Editors-in-Chief.

Science Editor (and I) wouldn't have been the same without Lindsey Buscher, *Science Editor*'s first Managing Editor and a tremendous partner in publishing. Lindsey's tenacity, energy, humor, and attention to detail were apparent in the quality of *Science Editor*. Lindsey's successor, Beverly Lindeen, brings her Allen Press expertise to bear on *Science Editor,* and has picked up where Lindsey left off.

And I'm deeply grateful that Jonathan Schultz agreed to be my Deputy Editor—a position created just for him. Jonathan brought to *Science Editor* an optimism and creativity that made our tenure together inspiring and memorable.

It's an especially challenging time in scientific editing and publishing. Change is always afoot. In that spirit, *Science Editor* is poised for new leadership, new ideas, and a renewed sense of purpose, ushered in by its new Editor-in-Chief, Jonathan Schultz.

I'm excited—and I know you are too—to see where Jonathan leads *Science Editor*. He has a knack for understanding industry trends and spotting emerging themes, and he has a never-ending stream of (always good) ideas. His vision for the future is one we can all get behind.

Looking back, did we as a community discuss, discover, and make a difference, inspired by some of the material we published in *Science Editor*? I like to think so, and I hope you do as well. Here's to a future of continuing those endeavors, whether in the workplace or out in the world.

Onward!

Links

1. https://www.csescienceeditor.org/article/whats-a-science-editor-to-do-discover-discuss-make-a-difference/

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2. https://www.csescienceeditor.org/article/orcid-in-full-bloom/
3. https://www.csescienceeditor.org/article/interview-karl-broman-academic-editor/
4. https://www.csescienceeditor.org/article/implementing-credit-interview-cell-presss-gabriel-harp/
5. https://www.csescienceeditor.org/article/authorship-guidance-in-a-federal-research-laboratory-a-case-study/
6. https://www.csescienceeditor.org/article/forecasting-growth-preprints-biology/
7. https://www.csescienceeditor.org/article/the-painful-publishing-process-a-request-to-simplify-bureaucratic-requirements/
8. https://www.csescienceeditor.org/article/reevaluating-the-quest-for-negative-results/
9. https://www.csescienceeditor.org/article/the-value-of-copyediting/
10. https://www.csescienceeditor.org/article/is-everything-broken/
11. https://www.csescienceeditor.org/article/science-advocacy-election-year-speak-speak-well/
12. https://www.csescienceeditor.org/article/editor-as-educator/
13. https://www.csescienceeditor.org/article/open-access-far-just-making-research-available-read/
14. https://www.csescienceeditor.org/special-collections/annual-meeting-reports/
15. https://www.csescienceeditor.org/article/editorial-peer-review-process-innovations-2017-peer-review-congress/

There are about 34,550 active scholarly peer-reviewed journals, collectively publishing about 2.5 million articles a year.

(The STM Report, Fourth Edition)

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