

# Where Do We Go From Here?

## Jonathan Schultz

In the end, 2020—the year that lasted forever—will likely be an accelerant. The lasting changes to scientific publishing and communication will be those that have been simmering for a while, but only came to a boil because of this turbulent year. One of the clearest examples of this is the likely permanence of the remote workplace for information workers, such as those in scholarly publishing. A look through the CSE Annual Meeting report archive will find a decade's worth of articles on how to support a remote team, but many organizations remained hesitant or only allowed staff to work a few days from home. Now with everyone forced out of offices for what will likely be at least a year, many of those office spaces may not reopen, or when they do, they'll shift focus to meeting spaces and shared desks for staff to use as needed. The full implication of this move is unknown, but one certain positive of the remote workforce is the pool of applicants for any position expands from a few dozen locals to literally thousands of potentially talented individuals.

That change will be important as organizations attempt to address inequities brought to light (again) during the racial reckoning of this summer. The Coalition for Diversity and Inclusion in Scholarly Communications (C4DISC)<sup>1</sup> was created in 2018 to specifically raise the issue of the importance of diversity in the publishing community, and this year pushed many organizations and publishers to proclaim that they will be making systematic changes to increase racial diversity, both internally (e.g., staff and editors) and externally (e.g., invited reviewers and authors). There's hope this will be a lasting change, and if so, they will benefit from the resources Taryn Dollings describes in her meeting report on the session "Antiracism Toolkits for Developing Equitable Workplaces" from the CSE Fall Symposium in October. *Science Editor* has a topic collection devoted to Diversity & Inclusion (<https://www.csescienceeditor.org/topic/diversity/>) and we will continue to invite and encourage submissions on this essential topic.

Likewise, reviewing the articles in this Winter 2020 issue of *Science Editor* and thinking over this past year, I've collected a few thoughts on where we're heading and what will likely, or at least should, change. I profess to have no unique knowledge of all that is transpiring in the scientific publishing enterprise, so if you happen to be tackling these issues and wish to share your experiences and insights,

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I encourage you to submit an article to *Science Editor* to educate myself and our readers.

## We're in This Together

The email and website messages began appearing in mid-March as the virus spread across the world: "We're trying to be as flexible as possible during this pandemic, so if you need more time to submit, review, or revise, just let us know because we're in this together." While there had been localized events or disasters that led to accommodations for specific areas, the COVID-19 pandemic was the first disaster, at least in my professional memory, where we all were being affected at the same time. For some it was abrupt changes in childcare and support networks, for others it was closing labs and workplaces, and for those in the medical fields, it was long stressful hospital shifts. Author, editor, reviewer, and staff time were all at a premium, so journals and publishers were looking for ways to make their processes as easy as possible. Was every requirement truly a requirement? Were all those suggested revisions absolutely necessary for publication? Can a step be eliminated that saves everyone's time?

As we move into 2021 and deployment of vaccines gives hope that this too shall pass, it will be important to keep asking those questions, or at least this question: If you made a change to your process or requirements during pandemic times, why revert during normal times? In some cases, there may be a legitimate reason to go back, but I suspect those will be fewer than expected. Instead, if the quality of the submission, review, or publication is not negatively impacted, why not keep the simpler, more flexible approach?

As you reconsider your requirements, it will also save everyone time if you ensure that your journal's expectations for both authors and reviewers are "well-documented, easy to understand, and transparent" as advocated by Brittany Sutherland in her article "Train Up an Author in the Way They Should Go: The Role of Societies and Journals in Teaching the Review and Publication Process." A streamlined, simplified process is easier to document, and Brittany provides 20 questions to guide journals as they consider their standards and documentation. Although I advocate for being flexible, that's still a vague term, and outlining your expectations can go a long way to reducing stress on authors and reviewers, and ultimately, editors and staff too.

Of course, author and reviewer time is rarely spent only at 1 journal, as manuscripts typically travel between multiple journals at multiple publishers before finding a home. This

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is sometimes described as a time waste for authors and reviewers as they are asked to start over at each journal, but the same could be argued for the editors and staff handling each seemingly *de novo* manuscript. The increasing emphasis on editorial cascade at publishers and the development of cross-publisher initiatives such as Review Commons (<https://www.reviewcommons.org/>) is a step the right direction, as is the MECA recommendation described by Tony Alves in his article *Manuscript Exchange Common Approach (MECA): Why We Need It, What Is It, and What's Next?* As Tony explains, the purpose of MECA is “to establish a common, easy-to-implement protocol for transferring research articles from one system to another ... to benefit researchers by removing friction in the research evaluation process and making the flow of scholarly knowledge smoother and faster.” As we build systems using common standards and increased interoperability, collaboration will be easier, reducing redundancy and allowing for more flexibility for everyone involved.

### Articles Are Just the Beginning

For the first few months of the COVID-19 pandemic, scientific consensus was being established quickly and in full view of the public. Debates about possible transmission vectors and disease treatments played out across dozens of articles in a matter of weeks. Because of this speed, articles that should have referenced each other did not as their authors were all working and publishing simultaneously, and information became out-of-date much quicker than usual. What this made clear is that an article cannot be an endpoint in, and of, itself. In addition, while there may be exceptions, most articles are effectively single data points to be built upon, not definitive answers. Over time a consensus emerges, at which point broad conclusions can be drawn. The hydroxychloroquine saga is a good example here: although there was some fraud and sloppy science, many of the conflicting early reports were simply preliminary or narrowly focused.<sup>2</sup> Throughout the year, as more robust trials were published, it became clear that hydroxychloroquine is not an effective treatment for COVID-19.

However, if you go back to those early articles on a journal site, you will have no idea of the current consensus. When the typical article is being written and reviewed, there is the expectation that the authors have properly cited all relevant literature, have a comprehensive view of the field, and any work that is being built upon is cited. But once published, all this stops, and the article is frozen in time. When visiting an older article, how easy is it to find out what has happened since? Has it been replicated or refuted? Where does the consensus seem to stand on this topic? You can tell if an article itself has been corrected or retracted, but what about key references in the article? If it's a clinical trial, is it still ongoing?

Was it suspended? There are browser plugins and other services that attempt to answer some of these questions, but they require readers to actively install and use them.

Maybe when a reader visits an article it should be the journal's responsibility to provide that further context. I'm not suggesting that the text or figures of an article need to be constantly updated, which can be confusing and hard to maintain, but articles could have sidebars that update with links to new developments as they publish. The “cited by” section provided by many journals is a start, but those tend to be less helpful as citations pile up without context. One approach that may be promising is alluded to by Christian Grubak and Martin Jagerhorn of ChronosHub in their article, “The Forgotten Open Access Challenge: What Happened to the Author Experience?” The authors push for using many of the tools and standards of research openness and transparency, such as persistent identifiers, to reduce the burden on authors during the submission and publication process, but this metadata could also likely be used to build tools that provide more context to published articles. We're likely only at the beginning of what can be accomplished with persistent IDs, integrations, and data exchange, and I hope that articles of the future use these to improve context and replicability. In turn, this additional context may help increase the apparent trustworthiness of scientific articles.

### Science in the Spotlight

This brings us to possibly the most significant development of 2020: The prominence of science, and scientific publishing, in the minds of the general public. With most COVID-19 articles being published free or Open Access, the public has had unprecedented access to original scientific research and seemingly everyone<sup>3</sup> was sharing these articles online. At the same time, the COVID-19 pandemic accelerated trends toward rapid dissemination of research, with significantly more rapid peer review, and increased the use and prominence of preprint servers such as BioRxiv and MedRxiv.<sup>4</sup> Preprints and their use are now regularly discussed and highlighted in the media such as *The New York Times* and *The Guardian*, as are some prominent withdrawals and retractions of COVID-19 articles.<sup>5</sup>

All of this is happening against a backdrop where public trust in science has potentially life or death consequences. Although polls show a relatively steady trust in science,<sup>6</sup> a distrust of science-based recommendations for addressing the pandemic among a vocal minority of Americans and politicians has led to a fair amount of handwringing from scientists and science communicators as to the drivers of this distrust. Those skeptical of preprints and Open Access will point to them as the root of this problem, while those disdainful of traditional scientific publishing will highlight lapses in peer review and retractions as the primary cause.

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In my opinion, I'm not so sure that any of this mistrust can be blamed on peer review, preprints, retractions, or anything related to science because people believe what they want to believe and backfill from there. With their identity tied up in a political party, ideology, or personal preference, they embrace evidence that supports their identity and reject anything that doesn't. Science being a messy, complicated process above anything else makes for a convenient foil as there is always something that can be latched onto. Especially in my personal life, I'm not immune to this and my guess is you aren't either; for example, I'm more likely to remember and quote back a study showing a food I already like is healthy than one that says the opposite. The burden falls to institutions, politicians, and those making policy, guidelines, and laws to ensure they are following the scientific consensus and not simply making choices that are politically expedient or personally and professionally advantageous. For the rest of us, the burden is in how we choose to respond.

As we start 2021, it's important to remember that we don't fully know where we go from here, but it's still possible to help push us in the direction we should be heading.

This Winter 2020 issue of *Science Editor* continues with a recap of the worthy recipients of CSE's 2020 Awards and Honors. Plus, Barbara Gastel and co-authors provide highlights for editors from the recent virtual ScienceWriters2020 meeting and we have CSE Meeting Reports from Andrea Kunz on "Publishing Chinese Research," Duanduan Han on "Three New Style Manuals in the Sciences," and Beverly Lindeen on "The Expanded use of DOI and Content Citation Granularity." Kelly Fleshman and coauthors share their experience with Workflow and Team Optimization for Editorial Services within the United States Pharmacopeia, and in a new interview, Karen Stanwood discusses "Staying Curious and Taking Chances." We finish out the issue with 3 of our excellent regular columns, Stacy Christiansen on "What Do/Does the Data Show?"; Jennifer

Regala on "Amplifying Your Message 101: Social Media to Promote Yourself and Others"; and Barbara Meyers Ford on "Gatherings of an Infovore: Open to the World. Really?"

## Optimism

The cover of this Winter issue is a detail from *Aurora Borealis* by the American landscape painter Frederic Edwin Church. Painted in 1865 from sketches given to him by an arctic explorer, it depicts a desperate scene as the ship is trapped in the arctic ice. However, the approaching dogsled offers a glimmer of hope and the beauty of the northern lights keeps it from feeling dreary, and is almost optimistic. As auroras were usually a northern phenomenon, when Church painted this landscape during the American Civil War, it was likely seen as a sign "of God's displeasure with the Confederacy for advocating slavery, and of the high moral stakes attached to a Union victory." It is likely the aurora represents the uncertainty of the time, ominous yet hopeful.

This painting is on display in the Smithsonian American Art Museum in Washington DC,<sup>7</sup> a museum I have frequented many times. I haven't been to this, or any museum, since the pandemic reached these shores earlier this year. I'm hopeful that will change in 2021.

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## References and Links

1. <https://www.csescienceeditor.org/article/introducing-the-coalition-for-diversity-and-inclusion-in-scholarly-communications-c4disc/>
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