

ScienceWriters2021: Some Highlights for Science Editors et al

Caleb Hess, Madison Semro, Danielle Gillen, Abigail Chartier, and Barbara Gastel

Although titled ScienceWriters, the annual conference of the National Association of Science Writers (NASW) and the Council for the Advancement of Science Writing (CASW) also has much to offer professionals in science editing and related realms. The following are highlights of some editorially related sessions of ScienceWriter2021, held September 28–October 8, 2021. Initially designed as a hybrid in-person and online event, with the in-person aspect in Boulder, CO, the conference was moved to online-only because of a resurgence of COVID-19.

Science in a Fact-Free World: Applying Lessons from the COVID Crisis to Climate Communication

By Caleb Hess

A word cloud populates in real-time; near the center, words submitted most frequently appear in progressively larger fonts: Scared. Hopeless. Overwhelmed. These were the audience's submissions when Katharine Hayhoe, chief scientist for the Nature Conservancy, asked for their one-word thoughts on climate change.

Hayhoe's presentation focused on the lessons gleaned from the COVID-19 pandemic about effective science communication. Specifically, it addressed how communication of politicized science can be reframed to appeal to cultural and political values.

Failures in communicating about climate issues and COVID, Hayhoe stated, stem from relying excessively on data to sway people's opinions. Instead, she said, values influence what information people are open to accepting more than data does.

Hayhoe noted that in the United States, political affiliation, which signals values, is associated with the most

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polarization in individuals' stances on popular issues. The most scientifically literate individuals, she said, are just better at "cherry picking" facts that fit their worldviews. This means that the most scientifically literate Republicans aren't more open to considering climate change than their less scientifically literate counterparts are; rather, they are more likely to identify facts that reinforce their inaction.

Hayhoe said the most important step in developing more effective conversations about climate change is to make issues more concrete and more relevant to people who feel distanced from the effects of climate change. She said, "I was asked, 'How do we talk about polar bears in Iowa?' and my answer was, 'You don't!—If you're in Iowa, talk about corn.'"

Not only does climate communication require a more strategic approach, Hayhoe said; these conversations need to include concrete solutions. Communications about the effects of climate change need to acknowledge that people and organizations around the world are engaging in proactive and impactful behaviors. Feeling that one can take action, she said, inspires hope.

As the presentation drew to a close, Hayhoe once again asked the audience to submit their one-word thoughts on climate change. Another word cloud stirs to life. In the center, spelled out in bold green font, is a new word: Hopeful.

So You Want to Put Your Science on Social Media?

By Madison Semro

Social media is "all about connecting with your audience," said Maynard Okereke, the man behind @HipHopScience

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on Instagram and a panelist at this session. “You need to meet people where they are.”

The panelists, who also included Rachel Butch and Ayanna Tucker (communications specialists at Johns Hopkins Medicine), gave tips for growing one’s social media presence. The tips centered around 5 key ideas: trends, niche, story, consistency, and engagement. For example, ties with trends can grab the attention of people so that they engage with your content, Okereke said. By incorporating them, you can reach more people—Okereke uses hip-hop trends and hashtags on his science posts to reach a broad audience of people who otherwise would not see his posts.

But, the panelists suggested starting by finding a strong voice and niche. Doing so can guide content development and keep the message consistent. The content should target a specific audience and respond to its interests, said Butch, who is behind the @JHMFundamentals Instagram account. For her science-interested audience, she has gradually increased the complexity of content, in keeping with her audience’s demands.

In addition, you must know how to best use your platform, the panelists said, and curate your content for it to maximize your account’s impact. For example, short videos are currently preferred on Instagram but may not perform the same on Facebook, panelists mentioned. And, the platform you choose may influence how you analyze your account’s growth and success.

Tucker, who is behind the @JHMFundamentals Facebook account, pointed out that these metrics may not be consistent among platforms. For example, the way she analyzes the data for the @JHMFundamentals Facebook account differs dramatically from how Butch does for Instagram: Tucker analyzes her posts by type, while Butch does so by content. Still, the panelists said the most important metric usually is engagement, as it shows how many people are interacting with your posts.

The session concluded with a workshop in which participants developed plans to incorporate these tips into their own content strategy, followed by a general question-and-answer segment. A worksheet to help develop a social media presence was provided.

Editing Experts: How to Help Scientists Meet Journalism Standards

By Barbara Gastel

Many periodicals and presentation venues in the sciences now include articles or talks in which scientists address broad audiences. Helping the scientists communicate with nonspecialists can pose challenges. At this session, editorial experts shared experience and advice in this regard.

Organized and hosted by Monya Baker (from *Nature*) and Hannah Hoag (from *The Conversation Canada*), the session

featured speakers Michael Lemonick (*Scientific American*), Tamara Poles (Morehead Planetarium and Science Center), and Fenella Saunders (*American Scientist*). At the beginning, the hosts and panelists each stated a pet peeve. The list: thinking one can write the same for all audiences, believing that just ending a piece equals writing a conclusion, neglecting to analyze the publication site before writing, requesting further changes after approving the editing, and objecting to “dumbing down” the science. Poles said she counters the objection to “dumbing down” by saying that instead she wants the scientists to build structures such as ramps and elevators to aid access.

In the main part of the session, the hosts posed a series of questions that they and others then addressed. Among the questions: How do you obtain scientists to write or speak? How do you set expectations? How do you explain the edits? Setting clear expectations at the outset received particular emphasis and was deemed time well invested. Baker noted the importance of explaining up front to the scientists that their work would be edited to help ensure accessibility. Other aspects that panel members mentioned included making clear to the scientists that the editors understand the audience well, describing to the scientists the phases of editing that their work will undergo, having authors sign an agreement, and checking in regularly with the authors. Saunders emphasized “invoking the reader” in justifying edits. Baker observed that talking with authors often yields wording clearer than that written.

After the question-and-answer period that followed, each speaker received a chance to offer a closing tip. Again, speakers stressed serving readers. “The audience is your primary interest,” Lemonick said. Likewise, Hoag stated, “It’s all about the audience.”

Sketching for Science Writers

By Danielle Gillen

Make sure you have a notepad and something to sketch with, advised Bethann Merkle, the speaker for this workshop. At the beginning of the session, we received 45 seconds to sketch a tree. What does sketching have to do with writing anyway?

Merkle, director of the University of Wyoming Science Communication Initiative, created this session to focus on drawing as a communication strategy. Although many people believe that drawing is only for “creative” people, Merkle emphasized that anyone can learn to sketch. Through this session, Merkle taught tools for sketching and explained how they can aid science writers in reporting and storytelling.

When sketching, I envisioned a “classic” tree—a tree trunk with a cloud on top to resemble all the leaves together.

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At the end of our 45 seconds, many others commented in the online chat that they had created a similar image. Merkle noted that it is important to distinguish between stereotypes and real details. She told us to think about a specific tree, perhaps one from our childhood. She also told us to come up with 3 words or phrases indicating the details of the tree.

For our second sketch, we had 1 minute to draw a specific tree with our words or phrases in mind. Texture, branches, and leaves were my focus. With 1 minute and 3 words, I created an image very different from my first sketch.

Why should I use this technique in the field? Merkle explained that observational sketching helps condition our eyes to notice atmospheric details and that it is a device for memory recall. Merkle also described sketching as a creative process. She emphasized that creativity is a whole-brain process that anyone can learn with practice.

Finally, Merkle touched on 6 tools that can strengthen our sketching abilities. *Contour drawing* teaches us to focus on the edges of an object. *Words and phrases* help us connect new and existing knowledge. *Tracing* provides an outline that can be sketched into. *Framing* reminds us of spatial placement. *Marks* are like an alphabet—different tools create different patterns. *Historical context* promotes understanding the subject.

Making the Invisible Visible: Challenges to Explaining Deep Tech

By Abigail Chartier

Deep technology, the hidden tech that makes things in our lives work more easily, can be especially difficult to report on, in part because its jargon is difficult and pop culture perpetuates misconceptions about it. An hour-long panel discussion the last day of ScienceWriters2021 addressed overcoming this challenge.

Organized by science writer Anne McGovern, of MIT Lincoln Laboratory, the session featured 3 speakers: Kenna Castleberry, a science communicator at JILA (formerly the Joint Institute for Laboratory Astrophysics); Brandie

Jefferson, senior news director at Washington University in St. Louis; and Emily Mullin, a journalist teaching at Johns Hopkins University.

The speakers addressed coverage of topics such as quantum computing, cybersecurity, encryption, and biotechnology. They emphasized demystifying the technology and making sure its depiction was accurate. In Hollywood, they observed, quantum is often linked with that which seems magical and used to refer to anything complex. This misuse of the term merits correction, Castleberry indicated.

Castleberry suggested using analogies to make the topics more relatable to readers. She advised, however, against using too many, lest they overwhelm the other content.

Mullin called for using plain language where feasible. “If the term isn’t necessary for the reader’s overall comprehension of the story, then don’t use it,” she said. “If you can describe something in everyday terms ... then do it!”

During the question-and-answer segment, an attendee asked how technology reporters know whether content and language are at a level a general audience can understand. “You need a very patient person in your life who has no concept of the underlying science,” Jefferson replied, suggesting that the communicator refine the explanation until it is clear to the person.

In addition to the sessions on communicating science, ScienceWriters2021 included sessions on scientific topics. It also included the presentation of NASW awards, including the Science in Society Journalism Awards and the Excellence in Institutional Writing Awards. At the awards session, it was announced that the Sharon Begley Science Reporting Award was being established in memory of science writer Sharon Begley. The annual award, administered by CASW, will recognize the accomplishments of a mid-career science journalist. It will include a grant of at least \$20,000 for the winner to pursue a substantial reporting project.

ScienceWriters2022 has been slated for October 21–25. Epidemiologic conditions permitting, the conference will be in Memphis, TN.