

# The 2023 AAAS Annual Meeting: Some Communication-Related Highlights—And Challenges

**Barbara Gastel**

Selection pressures from the COVID-19 pandemic and its aftermath have caused much in society, including conferences, to evolve. For example, for 2021 and 2022, the American Association for the Advancement of Science (AAAS) moved its annual meeting online. For 2023, with epidemiologic conditions improving, AAAS chose a hybrid model for its annual meeting, themed “Science for Humanity” and held March 2–5 in Washington, DC. Sessions were to be available simultaneously in person and online.

As usual, I was coordinating *Science Editor* coverage of the AAAS meeting. Several current or former graduate students and I were each to cover a session, and I was to compile the reports into an article. As secretary of an AAAS section, I was attending the meeting in person. The others planning to provide session reports had arranged to attend online.

Soon into the meeting, I began receiving messages from the graduate students, stating that their assigned sessions were now being listed as available only in person. AAAS then posted a message<sup>1</sup> saying that because of technical issues, the rest of the virtual portion of the meeting was being suspended. AAAS said it was striving to record the sessions and make them available. Later, however, it announced that recordings suitable to share could not be recovered.

Having committed to *Science Editor* coverage, I revamped my schedule to attend more of the communication-related sessions, and I have written the report. Some team members who had planned to cover sessions served as reviewers of a draft. Highlights of several sessions follow.

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## Driving Diversity in Scholarly Research Publishing

At the session “Driving Diversity in Scholarly Research Publishing,” speakers from 3 publishing entities discussed their efforts to promote diversity.

Mia Ricci, Director of Publications Operations at the American Geophysical Union (AGU)—which publishes 23 peer-reviewed journals—said that since approximately 2020, AGU publications have accelerated their efforts regarding diversity. The emphasis, she said, has been on overcoming barriers. Efforts are being made, she said, to keep publication charges from serving as barriers to authors. Other efforts, it was noted, include training editors about promoting diversity.

Karla Soares-Weiser, Editor-in-Chief of the Cochrane Library—which has long been providing rigorous systematic reviews on health topics—identified limitations of her publication regarding diversity and inclusion. In particular, she noted that 84% of the authors come from high-income countries, and the reviews tend to focus on topics of concern in such countries. Steps being taken include focusing more on producing systematic reviews relating to the United Nations Sustainable Development Goals, translating materials into more languages, and using different formats for different audiences.

Finally, Valda Vinson, Executive Editor of *Science*, described how *Science* is trying to increase diversity and avoid bias at various stages of the publication process. For example, diversity has been increased on the board of reviewing editors, which recommends which submissions to send for in-depth peer review. Also, *Science* is now using sensitivity readers, for example, to help ensure that portrayals are respectful. In addition, *Science* is working with its press officers to help increase the diversity of authors quoted in popular media.

## Ask a Reporter Anything: A Look behind the Scenes of Television News

In introducing this session on television science reporting, moderator Meredith Drosback, of the AAAS-based science information service SciLine, emphasized that television

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remains a major source of news for the U.S. population. Then Miles O'Brien, of the PBS News Hour, and Stephanie Ebbs, of the ABC News climate unit, provided inside looks at covering science for television. They also gave tips for working with television journalists. In keeping with the speakers' field, the session abounded with quotable content.

The speakers said the nature of the reporting process depends on whether the story will be longform (7–8 minutes for television) or breaking news. Ebbs described how a longform piece entails lots of preliminary information-gathering and discussion. Breaking news stories, both speakers said, are "a scramble." O'Brien urged scientists contacted about breaking news to reply promptly. He said not to just say "We don't know enough." Sources "do know enough to give a couple of well-informed sentences," he added.

Both speakers emphasized including the human element. "Every TV story is about the people," O'Brien said. Ebbs noted, "People care about people." O'Brien also said that passion is key. He said he is always seeking "interesting ideas and interesting scientists with energy" who can "meet him halfway on helping people understand."

Other points from the session included the following: Talks by scientists often are posted on YouTube; reporters view them to see how the scientists come across on video. Being topical and getting to know the interview bookers can help obtain guests on talk shows. News releases serve as starting points for broader stories (in O'Brien's words: "a little bit of bait to get us in the boat"). And, as noted by Ebbs: It's helpful to contact the reporter *before* the study appears in a journal.

In closing, the speakers encouraged collaboration. "Please engage with us, and help us tell the story," O'Brien said.

### The Science of Storytelling: A Roadmap for Strategic Engagement

In this session, 2 filmmakers discussed using storytelling to engage and activate audiences regarding science.

Sam Sheline, of National Geographic's video team, said the human brain has evolved to process stories, which are "a shortcut for presenting information in a compelling way." He defined a story as an account of events that has a beginning, middle, and end and that regards characters experiencing conflict. He noted that stories can have various structures, and that different ones are preferred in different cultures; he said to be intentional in choosing a structure. "Stories are memory aids, instruction manuals, and moral compasses," he said.

Longtime filmmaker Maggie Stogner, who is Executive Director of the Center for Environmental Filmmaking,

American University, contrasted the media landscape in previous eras and now. Previously, she said, the media were expert-centric, top-down, passive, individual, serious, and single-author. Now, she observed, they are user-centered, distributed, participatory, social, playful, and co-created. Stogner presented 3 questions to consider in storytelling: Which approaches and emotional tones will engage and motivate the audience? Which relatable characters can produce empathy and trust? And which current media platforms will reach the target audience?

To demonstrate gearing a story to the audience, Sheline showed excerpts of 2 videos from the 2019 National Geographic expedition to Mt. Everest: one for a general adult audience, the other for middle schoolers. Next came an exercise in which small groups brainstormed about creating videos to engender change. The session ended by noting sources of further information. The Center for Environmental Film website is at <https://www.american.edu/soc/environmental-film/>, and case studies regarding impact of science filmmaking can be accessed at <https://www.cefimpactmedia.org/>.

### Building Trust: Telling Stories That Connect and Inspire

Storytelling also was a theme of another workshop, featuring 2 speakers from HHMI Tangled Bank Studios (a production company associated with the Howard Hughes Medical Institute and dedicated to storytelling about science and nature).

To illustrate the point that providing data may not suffice to change behavior, speaker Reyhaneh Maktoufi told the story of having dated a "horrible person." Although she knew that dating this person didn't make sense, emotional and social factors delayed her ending the relationship. Likewise, she noted, more than facts affect people's attitudes and actions regarding issues such as climate change and vaccination. She indicated that regardless of whether an issue is personal or scientific, being a good listener and establishing trust can help.

Maktoufi also presented highlights of studies relating to trust. In one study, by Susan T. Fiske and Cydney Dupree, people rated various occupations regarding members' competence and warmth. Scientists and engineers were rated as high in competence but medium in warmth. The goal, Maktoufi said, is to score high on both dimensions. Another study, by John C. Besley and colleagues, identified 4 elements contributing to public perceptions of scientists' trustworthiness: competence, integrity, benevolence, and openness.

Alexandra Pearson then presented "Audience 101": a set of items to consider when customizing communications to an audience. The items were the audience segment

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to reach (and the reason to do so), “grassroots versus grass tops” (for example, whether community members or policymakers are the target audience), allies and fans (parties that can help one succeed), and adversaries and skeptics (parties that may stand to lose and that may hinder efforts).

The last part of this workshop featured clips from 3 documentaries showing relatable individuals in the sciences. The first individual was a park ranger empathetically mediating a situation in which elephants were important to the ecosystem but were damaging farms, thus angering residents in her locale. The second individual was an entomologist identifying himself as Black and queer and using pop culture references. And the third was wildlife filmmaker Martin Dohrn humbly observing bees in his backyard during the pandemic and producing the documentary “My Garden of a Thousand Bees.”

### AAAS Kavli Science Journalism Awards

Dohrn’s “My Garden of a Thousand Bees” won a 2022 AAAS Kavli Science Journalism Award. During the 2023 AAAS meeting, Dohrn and the other recipients of these awards were honored in a virtual ceremony. Among those honored were journalists from Australia, China, Germany, India, South Korea, and the United Kingdom, as well as the United States. Awards were given in various media categories and for science news for children.

The ceremony, featuring videotaped remarks from the recipients, can be viewed at <https://www.youtube.com/watch?v=ar63ULxfirM>, and information on the winners is posted at [https://sjawards.aaas.org/awards/field\\_award\\_year/2022-151](https://sjawards.aaas.org/awards/field_award_year/2022-151). Many of the winning entries are openly accessible.

### And More

The 2023 AAAS meeting also included many other communication-related sessions. Among those not covered in this report: “Communicating Evidence of Life beyond Earth with Societal Actors,” “Projects with Purpose: Telling Stories about Why You Care,” “Climbing the Hill: Science Communication with Congress and Other Policymakers,” “Stories Grow in the Lab: Develop Your Science Storytelling Program,” and “Inclusive Science Communication, Scientists, Media, and ‘Fake News.’”

Most of the meeting focused on topics in science or in science policy. Some sessions in these areas, too, touched on communicating science. Examples included the plenary lecture “The Past, Present, and Future of Our

Research Enterprise,” by Marcia McNutt, President of the National Academy of Sciences and former Editor-in-Chief of the *Science* family of journals. McNutt noted that during her career, she has seen major changes in science communication, such as the growing use of preprints, the rise of open access (and predatory journals), and the increased acceptance—but still undervaluation—of scientists’ involvement in public communication. Discussing the use of artificial intelligence in scientific publishing, she noted its value in identifying potential peer reviewers and thus increasing the size and diversity of the reviewer pool.

Another presentation featuring a deft communicator and touching on communication was “Transformative Science with the Webb Telescope,” presented by NASA scientist Jane Rigby. Rigby described the telescope as an “engineering marvel ... built by hand, lovingly, by a lot of people.” Stating that the telescope was producing “shockingly good data,” she said that papers were now rolling in; she said the papers thus far were mainly showing the telescope’s capabilities, and that most of the discoveries were yet to come. In response to a question, Rigby said obtaining opportunity to use the telescope is based on peer review of proposals; she added that blind review, pioneered for the Hubble Space Telescope, has increased acceptance of proposals from postdoctoral fellows. When asked about the color in Webb Telescope images, Rigby said the telescope largely detects wavelengths invisible to humans, and she compared producing images from them to transposing on the piano. She said the telescope images used for public relations are enhanced but not scientifically changed.

The closing session—moderated by Holden Thorp, Editor-in-Chief of the *Science* family of journals—was titled “Doomed to Repeat: Why the History of Science Is Indispensable.” And in closing, it was noted that the next AAAS annual meeting, themed “Toward Science Without Walls,” is to be in Denver, Colorado, on February 15–17, 2024. With luck, learning from the history of the 2023 meeting will help make future content readily accessible, simultaneously or otherwise, beyond the conference walls.

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### Reference and Link

1. <https://meetings.aaas.org/2023-meeting-archives/>