A Science Editing Workshop and a Medical Communication Conference: Highlights for Science Editors

Barbara Gastel

As 2 P.M. approached, attendees converged on the conference hall. Some pulled rolling suitcases or bore backpacks, and many wore comfortable travel garb. A speaker glanced at her phone to check the current travel time to the airport.

Scanning the room, I recognized a *Science Editor* colleague, some freelance editors, members of editorial offices, and others who had attended editorially oriented sessions at the conference. I saw on my notebook a reminder to leave for my flight by 3:15.

Once the session started, an attendee interrupted to ask, "Can you tell us now when the next edition will be published? I need to leave early to catch a plane."

This concurrent session, titled "What's New in the *AMA Manual of Style*," took place the final afternoon of the 2018 American Medical Writers Association (AMWA) annual conference, held November 1–3 in Washington, DC. The conference was one of several science communication events I attended during a busy autumn.

This report presents highlights of 2 of these events—a Kavli Workshop on Science Editing and the AMWA annual conference—with emphasis on content likely to interest science editors. In keeping with some learning from the latter event, I have started this report with storytelling rather than my usual to-the-point opening.

Kavli Workshop on Science Editing

Organized by the Knight Science Journalism Program at the Massachusetts Institute of Technology and funded by the Kavli Foundation, the recent Kavli science editing workshop, held in Austin, Texas, on September 11–12, 2018, was intended primarily to improve science coverage in the

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Participants in the Kavli science editing workshop meet in small groups to evaluate published stories. Photo credit: Joshua Hatch.

popular media. Thus, it was geared mainly toward journalists editing science stories for general audiences. Much of the content, however, also can be relevant to science editors working in more scholarly contexts.

Although limited to the 2 dozen applicants chosen, this workshop brought together a diverse group—from the United States and elsewhere; from print, broadcast, and online media; from general outlets and those focusing on science; from local, regional, national, and international venues; and from academia. Among outlets represented were the Associated Press, *Chemical & Engineering News, Consumer Reports, High Country News,* the Kenya Broadcasting Corporation, *Los Intangibles,* Maine Public, *Mental Floss,* the *Neue Zürcher Zeitung,* the *Texas Tribune,* and *Wired UK.*

From the Science Editor of the Washington Post

The first session, presented by Laura Helmuth—health, science, and environment editor at the *Washington Post*—focused on "Finding, Refining, and Elevating Science Stories." Discussing how to decide which items to cover, Helmuth advised attendees to consider those that evoke the

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following emotions: indignation, humor, confusion, curiosity, empathy, awe, and "whoa." Then, advising attendees on brainstorming with staff reporters, Helmuth offered pointers that also can help editors lead brainstorming in other settings. Among her advice: Ask questions. Show that you are confused or ignorant—"or fake it" to elicit input. Show enthusiasm. Make clear that brainstorming is "shame-free." In addition, "share your own dumb pun or bad idea," and "respond with your own emotions."

Helmuth listed questions for editors to ask freelancers when deciding whether a proposed story about findings is suitable to assign. Among the questions (which also could aid journal staff in deciding which scientific papers merit news releases) were the following: Does it address a longstanding question? What are the implications? How do the scientists know? Who says it's important, and who disagrees? Is this the right time for the story? Are people likely to misinterpret this—and if so, how do we avoid that? Regarding misinterpretation, Helmuth expressed particular caution about publishing stories that may raise false hopes, for example by publicizing treatments that seem promising in laboratory animals.

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In addition, Helmuth discussed working with freelance writers—something also done by some editors at journals, in academia, and elsewhere. Her suggestions included the following: Use conference attendance as a way to help develop a network of freelance writers. Beware of warning signs, such as a writer's being "a jerk on Twitter." Respond effectively to article proposals (known in journalism as "pitches"); for example, where warranted, ask questions that will help freelancers refine their ideas. "Build a relationship through rejections," by providing constructive criticism that may help freelancers to write suitable pitches later. Always submit payment requests promptly.

A recurrent theme of Helmuth's remarks was the interpersonal aspect of being an editor, especially with regard to evoking the best work from staff writers, freelancers, and others such as graphic artists and photographers. One reminder, which Helmuth observed often went unheeded, was simply to thank people for their work.

From a Founder of Retraction Watch

The next main presentation featured Ivan Oransky, a founder of the blog *Retraction Watch* and distinguished writer in residence at New York University. Titled "Psst: That Study Is Probably Wrong," it touched on problems arising in scientific publication and offered advice on reporting savvily on science. Among problems discussed were limited replicability of published research, predatory or otherwise invalid journals, and excessive manipulation of data in search of a statistically significant result ("torturing the data until it confesses").

Oransky also discussed retraction of scientific papers, noting that although such retractions were becoming more common, they remain relatively rare. He mentioned the Retraction Watch Database of retractions (http://retractiondatabase.org), which has since been officially launched. (For those interested: The October 26, 2018, issue of *Science* magazine, which appeared on about the date of the launch, contains several feature articles, including one by Oransky, about retractions.)

In addition, Oransky provided advice that editors could give reporters covering research. Among his points: Realize that preprints have not been peer reviewed. Do not rely on only a news release about a journal article; read the entire article. Look for the limitations the journal article notes. Read editorials accompanying journal articles. Talk with outside sources in addition to article authors. Beware of using anecdotes that might be misleading; a person who benefited from a treatment may be available to interview, but it is "hard to interview people in cemeteries." Be cautious about attributing causality. Check with biostatisticians. Ask smart questions, such as whether a report was peer reviewed and published, whether the research was in humans, whether a power calculation was done, whether the study was well designed, whether the reported endpoints were the primary ones, and who could benefit from the finding.

Helmuth and Oransky expressed different views about the embargo system (in which some journals give reporters articles in advance, to provide more time to prepare stories about them, on the condition that the stories not be released before the journal's publication time). In her presentation, Helmuth stated that "embargoed stories are a gift." Oransky built on this metaphor in his presentation, terming embargoed stories "a Trojan horse." He said they "turn us all into doing hack journalism" and stated that the harms outweigh the benefits of having extra time.

From Two Experts on Fact-Checking

The third, and final, main segment focused on fact-checking of science articles. It featured Brooke Borel (contributing editor at *Popular Science* and author of *The Chicago Guide to Fact-Checking*, published by the University of Chicago Press) and Jane Roberts (deputy editor of the online magazine *Undark*). The workshop coincided with release of the report "The State of Fact-Checking in Science

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A plenary session at the 2018 AMWA annual conference. Photo credit: AMWA and EPNAC.com.

Journalism,"[1] for which Borel was project coordinator and author.

The speakers characterized fact-checking as quality control before publication. They noted that it included ensuring that individual facts such as names and statistics were accurate, determining whether the overall picture conveyed was true, and checking for completeness. They observed that two dominant models of fact-checking existed: one used largely by newspapers, and one tending to be used by magazines.

In the *newspaper model,* the speakers stated, the checking is mainly by the reporter. In addition, the editor flags possible errors, based on experience and intuition, and the copy editor may do some checking. The speakers characterized this model as being suitable for time-sensitive stories (such as those with breaking news) and short, simple stories in newspapers, blogs, and other venues.

In the *magazine model* as described by the speakers, the writer provides the source materials used and a copy of the story annotated to indicate sources of content. Someone other than the writer or editor then checks every fact. For verification, the fact-checker may even re-interview people or obtain facts from new sources. The speakers noted that this model can serve well for long-form stories and for legally or otherwise sensitive content. Settings that they identified for such checking include some print magazines, online long-form work, and narrative podcasts.

The speakers also provided guidance for fact-checking using the magazine model. Their advice included the following: Before checking individual facts, read the story as a whole. If feasible, read relevant stories from other publications for context. Then go through the story, marking each fact; on hard copy, one can use highlighters or colored pens to show that material has been checked, and on electronic copy, one can use boldface or highlighting to do so.

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Among other points that the speakers or attendees made at the session: Inform authors at the outset that their work will be fact-checked. Likewise, advise authors to tell sources that they may hear from fact-checkers. Set priorities for what to focus on most in fact-checking. Likewise, consider the quality of information sources against which to check. Of course, keep careful records.

And More

The workshop also included a segment in which small groups of attendees critiqued science stories distributed before the workshop. At this session and others—and during the

receptions, meals, and breaks—attendees augmented the formal content by sharing experiences. I made mental note of participants who might serve well as guest speakers or internship hosts—or who might be potential authors for *Science Editor.*

Between the last session and the closing dinner, I took a long walk to stretch my muscles and clear my head. A bright rainbow appeared in the distance. A fitting close to a fine workshop.

AMWA Medical Writing & Communication Conference

Known in recent years as the AMWA Medical Writing & Communication Conference (apparently for reasons other than redundant wording), the annual conference of the American Medical Writers Association serves various constituencies involved in professional communication about medicine and related realms. Among these constituencies are regulatory writers and editors at pharmaceutical and biotechnology companies, medical writers and editors at publications and institutions, and freelance medical writers and editors. To serve varied professional interests, the conference includes an array of plenary and concurrent sessions, workshops, and mealtime roundtables. The following are some highlights of sessions with editorial emphasis.

From History, to Grants, to Stories

Plenary sessions of editorial interest included the Swanberg Award Address, by award recipient Bart Harvey, of the University of Toronto public health faculty. The award recognizes an AMWA member for "distinguished contributions to medical communication or . . . unusual and distinguished services to the medical profession"; among other contributions, Harvey has developed and repeatedly led AMWA workshops on biostatistics and epidemiology. Harvey's address—titled "Harold Swanberg: How I Wish I Knew You!"—recounted the career of Swanberg, a highly active physician, writer, and journal editor who co-founded AMWA. Among items of editorial interest: In 1952, Swanberg spearheaded AMWA's establishment of a manuscript editing service, mainly for AMWA members (charge: $4.00 for 1000 words or less, plus $3.00 for each additional 1000 words or fraction thereof). Harvey quoted an announcement saying that the service aimed to "help authors say what they want to say in their own styles, yet with precision, economy, and felicity." Still an apt characterization of good manuscript editing!

The concurrent session "Grant Editing Basics: Appealing to Reviewers" also attracted many attendees with editorial interests. The speaker, Meagan Ramsey of the University of Michigan, focused mainly on editing applications for grants from the US National Institutes of Health (NIH). Noting editorial implications along the way, Ramsey summarized

the NIH grant review process, described the sections of NIH grant applications, and identified problems commonly occurring in these sections. Among the ideas that Ramsey presented: including in the research strategy section a "team overview" specifying what each research-team member will contribute (rather than relying on peer reviewers to piece together this information from the biosketches provided). Because of much unexpected discussion from the audience, Ramsey found herself short on time for her final topic, the mechanics of editing grant proposals. However, the slides from her entire talk can be accessed online.[2]

Other sessions of editorial interest included "The Power of Story in Science Communications," presented by Cynthia Lollar and James Mathews. Among points from the speakers, who work in the National Cancer Institute communications office but also have backgrounds in fiction writing: Humans are primarily feeling rather than thinking beings, and stories provide emotion that helps anchor information; a story should have a compelling character, a conflict or complication, and resolution; and the character should want something intensely and should change over time. The speakers illustrated their points with examples, including content from Siddhartha Mukherjee's Pulitzer Prize-winning *The Emperor of All Maladies: A Biography of Cancer* and versions of a single story presented as a blog post, a Facebook post, tweets, and a video. A resource list distributed at this session can be accessed online, where slides or handouts that presenters at this conference have shared have been posted.[3]

"What's New in the AMA Manual of Style"

To encourage attendees to stay until the end, conference planners often save some sessions on especially popular topics for last. Hence, perhaps, the placement of the update on the *AMA Manual of Style*. This session featured 3 members of the committee preparing this manual: Stacy Christiansen, Annette Flanagin, and Cheryl Iverson. Some changes in AMA style that they mentioned have already been implemented, and others, requiring adjustments in technology, are still in process.

Some style changes mentioned at the session reflect contemporary trends. For example, it is now AMA style to write *email* (without a hyphen), *internet* (lowercase), and *website* (lowercase). Use of *they* as a singular is now permitted, although alternatives should be used when feasible; a valid use, it was noted, is to prevent identifiability when a patient being discussed is the sole member of a given gender in an identified group. The manual also has updates regarding nomenclature in genetics.

Other changes in AMA style reflect evolution of technology. For example, drug manufacturers' locations no longer are stated in methods sections, and book publishers' locations no longer will be required in reference lists; if

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relevant, readers can learn locations online. Other changes in reference format include making the URL the last item in a reference, without a period after it, and no longer placing a period after a digital object identifier (DOI) at the end of a reference; these changes, it was observed, can facilitate linking and cutting-and-pasting. In addition, examples were provided of how to cite Facebook posts, Twitter tweets, and blog posts. Style for social media posts also was discussed; contractions are acceptable, but texting jargon (such as *L8* for *late*) should be avoided, and proper capitalization should be used. It was noted that the new edition of the manual will include material on electronic workflow.

"Our statistics chapter had a massive overhaul," the speakers noted. They mentioned a distinction now made: Rather than being synonyms, *multivariable* refers to having multiple independent variables and a single outcome, whereas *multivariate* indicates having one or more independent variables and multiple outcomes.

The session also addressed editorial-policy changes being reflected in the manual. Of note, the option "retraction and replacement" now exists, to be used when a "pervasive error" (such as an inadvertent error in coding) is found to have affected the direction of results in a published article.

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Updates regarding authorship were summarized; it was noted that requests to have 2 corresponding authors would now be considered. Other changes in the manual include updates about data sharing, addition of content distinguishing public access from open access, and inclusion of a section on predatory journals.

Among other items noted:

- The "death dagger" (†) is no longer used to indicate that an author is deceased. Instead, the information can be included in the acknowledgment section.

- Sentence-style capitalization will now be used in all column headings in tables and all axis labels in figures.

- In keeping with SI convention, spacing in temperatures will now be as in the following example: 37.5 °C (rather than 37.5° C or 37.5°C).

- The term *CI*, for *confidence interval,* can now be used without expansion on first use, as readers of a medical journal can be expected to know its meaning.

- In mathematical composition, thin spaces will now be used before and after symbols used as verbs.

- The new edition will include an updated publishing glossary. Terms such as *CD-ROM, elite type, internet,* and *keyboard* have been removed, and terms such as *cloud, STEM,* and *stylesheet* have been added.

- Additional abbreviations are being listed. However, the manual will no longer list abbreviations for fellowship designations, as bylines normally do not include such designations and the weight of a given such designation can be difficult to determine.

It was quipped that no changes were made in the list of proofreading symbols.

Characterizing the manual as a living document, the presenters noted that updates are continually being posted online.[4] They also mentioned that the slides from the current presentation would be available.[5]

As the presenters reached their final slide—which said the 11th edition of the *AMA Manual of Style* would appear, both in print and online, in 2019—my watch showed 3:15 p.m. approaching. Listening to the first questions in the discussion period, which was scheduled to run to 3:30, I edged to the door. Then I scrambled to catch a taxi.

Despite a brief slowdown, which the driver ascribed to a hockey game in town, I reached the airline departure gate at the designated boarding time. The aircraft, though, had not yet arrived. During the resultant wait, I reflected on the conference. And I decided that in writing it up, I would give storytelling a try.

Links

1. https://www.moore.org/docs/defaultsource/default-document-library/fact-checking-in-sciencejournalism_mit-ksj.pdf?sfvrsn=a6346e0c_2
2. https://cdn.ymaws.com/www.amwa.org/resource/resmgr/conference/ 2018/handouts/GrantEditingBasics_Ramsey.pdf
3. https://www.amwa.org/page/2018sessions
4. http://www.amamanualofstyle.com/page/updates
5. https://cdn.ymaws.com/www.amwa.org/resource/resmgr/conference/2018/handouts/NewAMAStyle_Session.pdf