

Alternative Ways to Tell the Story of Science

MODERATOR:**Emilie Gunn**

Associate Director, Journals
Editorial
American Society of Clinical
Oncology
Alexandria, Virginia

SPEAKERS:**Charlotte Schubert**

Science Writer and Editor
Seattle Children's Therapeutics
Seattle, Washington

Emily Therese Cloyd

Director, Center for Public
Engagement with Science and
Technology
American Association for the
Advancement of Science
Washington, DC

Ashley Ketelhut

Managing Editor
American Society of Clinical
Oncology
Alexandria, Virginia

REPORTER:**Casey A Buchta**

Science Partner Journals
Associate
American Association for the
Advancement of Science
Washington, DC

At first blush, it may seem odd to describe scientists as storytellers. Though our assumptions of scientists may summon visions of professionals in white coats locked away in labs while carefully calibrating instruments and capturing data, these same professionals are, in fact, storytellers of science. Though the methods for telling the stories of science have changed, the importance of making sure these stories reach the public has not. In this session, moderated by Emilie Gunn of the American Society of Clinical Oncology, 3 speakers shared their observations, experiences, and efforts concerning science communication.

Opening the session, Charlotte Schubert, Science Writer and Editor at Seattle Children's Therapeutics, shared her observations of how scientists have evolved their communication with each other. While publishing research in scholarly journals and presenting at scientific meetings served as the traditional methods for scientists to disseminate their work, emerging mechanisms using new media and technology are changing the landscape of how scientists reach one another. Graphical abstracts, podcasts, videos, online lectures, blogs, community websites, social media, and preprints have emerged as methods for communicating more continuously and quickly, often in real time. Moreover, as noted by Schubert, "Not only are new technologies enabling different gatekeepers for science, but they're also enabling different audiences and different senses." Where a scientific finding was formerly

communicated by a scientist through a published paper read exclusively by other scientists, now a scientist may communicate a finding through varied outlets, such as audio (e.g., online lecture, podcast), which can also be consumed by the general public.

In discussing the evolution of blogs, Schubert highlighted their initial purpose of capturing the voice of the blogger/scientist and their transition toward collections of invited or proffered pieces from multiple scientists. Some blogs have evolved to become "go-to" landing sites for specific fields with a range of resources (e.g., The Niche¹). Perhaps as a natural evolution of blogs, some publishers and organizations have occupied larger supporting roles with community websites, with The Node² and Alzforum³ as key examples. Meant to bring a scientific community together for multiple functions (e.g., job advertisements, event listings, meeting reports, blog posts), such sites can also facilitate research through reviews of preprints.

Notably, the COVID-19 pandemic accelerated the development of what Schubert described as "...an entirely new ecosystem..." where preprints are shared and commented on via Twitter, creating new and informal (and sometimes poor) assessors of scientific information. Schubert envisions a future where journals serve as go-to aggregators and filters for a field: Science will emerge via preprints, undergo review through services such as Review Commons,⁴ and be discussed on publisher-supported community websites.

Emily Therese Cloyd, Director of the Center for Public Engagement with Science and Technology at the American Association for the Advancement of Science (AAAS), next provided an overview of the AAAS's efforts to help scientists engage with the public. While AAAS works to empower scientists and engineers to tell the stories behind their science, programs at the organization also work with journalists and public information officers in various capacities centered on science communication.

The Center for Public Engagement with Science and Technology⁵ is primarily focused on supporting scientists and engineers. The Center provides workshops and seminars (virtual and in person) focused on building communication skills and learning the fundamentals of science communication and public engagement. These sessions, available to institutions and individuals, help scientists and engineers to identify their engagement goals, audiences, and key messages. Additionally, fellowship and

CONTINUED

ambassadorship programs provided by the Center allow AAAS to work with scientists and engineers over a longer period of time, engaging in the promotion of women in STEM, supporting midcareer researchers focused on the intersection of science and society, and placing students and early career scientists in 10-week science journalism posts.

The Science Press Package team serves as the press office for the *Science* family of journals and seeks to directly support authors publishing with the journals. This support begins while research is embargoed (e.g., creating press packages with contextualized summaries, providing tips for video and infographic creation, etc.) and continues post embargo (e.g., social media events where authors can engage with the public, etc.). Lastly, Cloyd elaborated on two additional programs at the AAAS that seek to support scientists and science communication, EurekaAlert!⁶ and SciLine.⁷ EurekaAlert! is an editorially independent news release distribution service serving all publishers and institutions, and SciLine is a nonpartisan nonprofit connecting journalists with scientific experts. While both programs are distinct and offer unique services, they share a common goal of making the story of science accessible to the public.

Closing the session was a presentation by Ashley Ketelhut, Managing Editor with the American Society of Clinical Oncology (ASCO). Art of Oncology, an article type introduced in 2000 by the *Journal of Clinical Oncology*,⁸ seeks to pull back from scientific and clinical content to instead feature personal essays. These essays tell the difficult, informative, and uplifting stories experienced by those treating cancer patients, undergoing cancer treatment, or caring for people diagnosed with cancer.

While the article type was initially introduced to focus on end-of-life and symptom-directed clinical care, it has evolved to feature personal and emotional stories, often sharing authors' professional and private lives. Uniquely, these essays provide a platform for those other than scientists to tell their own stories of science. Authors include oncologists, patients, caregivers, and trainees, which has allowed the journal to expand its authorship, as Ketelhut noted. Topics of interest include reflections and emotions, patient experiences, communication and relationships, and morals and ethics, with recent articles focusing on talking to children with cancer and addressing racism in the workplace.

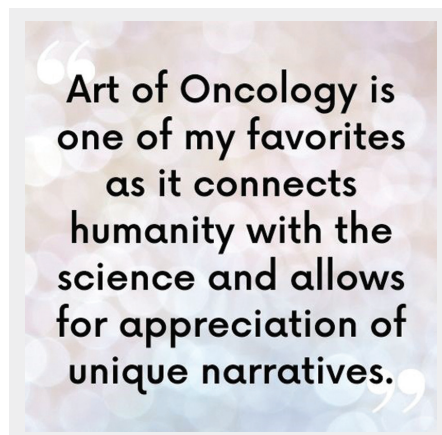


Figure. Art of Oncology reader reaction.

Just as the Art of Oncology article type enables stories from nonscientists, it also enables consumption of these stories by nonscientists due to their nontechnical nature. Furthermore, each essay is free to access immediately upon publication and some essays are transformed into audio, where the essays are read by professional actors, and interviews are conducted between the author and journal editor. As submissions for this article type have steadily increased over the years, so has their popularity (Figure). Considering this, Ketelhut noted that ASCO is actively seeking opportunities to transfer this type of storytelling content to other journals in the ASCO family.

Telling the story of science is increasingly not limited to those conducting scientific experiments, nor are those stories only consumed by other scientists, as evidenced in this session. As communication outlets continue to emerge and evolve, we can expect that the ways in which we tell the story of science will evolve as well.

References and Links

1. <https://ipsocell.com/>
2. <https://thenode.biologists.com/>
3. <https://www.alzforum.org/>
4. <https://www.reviewcommons.org/>
5. <https://www.aaas.org/programs/center-public-engagement-science-and-technology>
6. <https://www.eurekaalert.org/>
7. <https://www.sciline.org/>
8. <https://ascopubs.org/journal/jco/>