Challenges and Opportunities in Open Research: Webinar Commentary

Johanna Hoyos

On Jan 26, 2023, Ginny Herbert hosted the Council of Science Editors webinar titled "Challenges and Opportunities in Open Research," during which panelists discussed the concept of open science, the contributions of different scholarly publishing actors, challenges to open research, including consideration of non-academic factors such as Indigenous data sovereignty and protecting vulnerable populations, and to what extent current open research policies have made research more transparent and efficient. Panelists proposed a number of solutions to enhance research transparency and efficiency, such as San Francisco Declaration on Research Assessment (DORA),[1] CARE principles for indigenous data governance,[2] and initiatives like NASA's The Year of Open Science[3] providing an open research platform, establishing an open access university press, offering expert advice and data science resources, and providing funds for open access publishing. Panelists acknowledged that research and academic publishing have long traditions, and these traditions can be difficult to break. To encourage researchers to adopt open research practices, they posited that institutions must provide support and infrastructure for open research. Additionally, they suggest institutions should profile open research ambassadors, publicize open access articles, run training and engagement programs for early career researchers, and incentivize open research practices through grant funding, awards, and staff promotion criteria. Although there are still challenges to overcome, the panelists highlighted the potential of open research to benefit not just the research community, but society as a whole.

Open access has moved from the domain of disruptive technology to an increasingly adopted approach to research dissemination over the past 10 years. Universities in countries around the world have passed open access policies and are incorporating open access into the way in which they capture, collect, and disseminate researcher output. In addition, research funding organizations and national governments are pushing for public access, open access, and open data. The open access movement continues to gain ground with policymakers, researchers, students, and librarians, and new tools and initiatives are emerging to develop a truly global, interconnected research information system. While open access advocates continue to push for faster access, broader reuse rights, and open data, the challenge of raising awareness among researchers and addressing misconceptions still remains. As open access becomes more broadly accepted and endorsed, I argue that it creates opportunities for organizations and researchers to share research more widely and to engage with research communities in new ways for the benefit of patient safety and research efficiencies, among other goals.

The research workflow is fragmented and complex, involving multiple stakeholders with different systems and data sources. To address this, initiatives for an open and connected research ecosystem are gaining traction, such as advancements in scholarly communication to increase research impact and ease the burden on libraries, researchers, and research administrators. To move forward, potential directions include methods for easier and more transparent reuse of data and metadata and the development of open research platforms that allow simpler connectivity with other systems. I believe that academic institutions, libraries, vendors, industry organizations, journals, and the research community have the potential to influence and further advance the open research mission.

The call to change the system in which scholarly knowledge is created and accessed is clear, but the complexities of such a system can make it difficult to understand. The challenges associated with understanding large information ecosystems and the scientific information ecosystem in particular can have a huge impact on society and academia. Information science has the opportunity to further explore these challenges, but relevant research is spread across many other communities. This means that collaboration is necessary to gain a better understanding of the system and find innovative solutions to any issues that may arise. Ultimately, I believe that the knowledge ecosystem should be open, accessible, and free of politics.

Johanna Hoyos, MSc, Senior Director of Operations at the Center for Biomedical Research Transparency (CBMRT).

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Panelists also discussed language, which is not often considered within the context of open research, but is equally important. English has become the de facto global language of science, granting access to a vast reservoir of scientific literature to researchers around the world. However, this shift has also created distinct challenges for those who are not native speakers of English, who must struggle with the nuances of the language to communicate and be heard in the scientific community. Scientific knowledge is often unavailable in local languages and having the dominance of English language journals inhibits diversity and inclusion, which in turn limits the ideas that are being shared, influencing which research gets funded and rewarded. I challenge researchers, manuscript reviewers, and journal editors to work together to minimize these obstacles, making science more accessible and fostering international scientific communication. Ultimately, it is up to all members of the scientific community to work together to eliminate language barriers and advance scientific progress. In my opinion, this will lead to fresh perspectives on research and fresh insights into the world and humanity.

For more on this webinar, please see the Webinar Report article by Jessica McEwan at https://doi.org/10.36591/SE-D-4602-03.

References and Links

1. https://sfdora.org/about-dora/
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3. https://science.nasa.gov/open-science/transform-to-open-science