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Open access in the age of a pandemic

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Abstract

The COVID-19 pandemic highlighted the importance of transparency, open, and timely access to information. Open Access (OA) has the potential to increase the exposure and use of not only published research but also authoritative and reliable information. The Coronavirus (COVID-19) impacted the work of journalists, scientists, and doctors while ordinary citizens are seeking trusted information sources and the truth about the new virus. Government and private institutions worldwide are reacting to the new situation where researchers, educators, students, and staff are trying to adjust to remote teaching and learning as well as telecommuting. In March 2020, a message from the White House was sent to the Scholarly Publishing Community asking them to make all COVID-19 papers openly available and machine readable. Considering the evolving and unresolved issues around OA and scholarly communications, together with the UN 2030 Agenda (a plan of action for sustainable, universal development), this panel brings together diverse perspectives to review the current landscape of OA and shed light on the role it plays in such crises. The panel will also discuss the future implications and impact of the pandemic in the overall advancement of scholarship in general.

KEYWORDS
digital scholarship, open access, scholarly communication

1 | INTRODUCTION

The Open Access movement is transforming scholarly communication. While Open Access to scholarly information is not new, various factors, including federal mandates for sharing the products of federally funded research drive scholars to rethink traditional scholarship models. Today, due to the global COVID-19 outbreak, we are witnessing unprecedented levels of research output generated in short period of time and shared globally. In so doing, virologists and microbiology labs across the world are embarking on finding vaccines and cures in an accelerated fashion mainly because the complete genome sequence of the SARS-CoV-2 out of Wuhan China was completed and shared openly (Lu et al., 2020). In this panel, panelists argue that whether in times of pandemic or not, open access to new knowledge is critical to accelerate advances in finding solutions to societal issues. Accordingly, open access to scholarly knowledge production should be the modus operandi in the time and age we live in.

As indicated in the United Nations' 2030 Agenda, (call of action for sustainable, universal development), open

access plays significant roles in expanding access by enabling scholars more equitable participation in research and development activities globally. Incidentally, publicly available research and data is more important than ever as we combat the COVID-19 Outbreak. This panel will explore the various facets of open access and how the movement impacted scholarly communication in general. In particular, as accessibility to online resources is of critical importance during the COVID-19 pandemic, the panelists will argue about the benefits of an open system of communicating scholarship.

2 | OPEN DATA ACCESS AND COVID-19

The role of open access data is essentially critical for the scientific research community and the general public across the world to tackle the COVID-19 pandemic in a timely manner. The Open COVID-19 Data Working Group was one of the few early international efforts to share accurate global data regarding the patient's travel history, date of onset, date of confirmation, and date of hospitalization (nCoV-2019 Data Working Group, 2020). The primary outcome of the shared global dataset is an initiative of the HealthMap project demonstrating the current status of the COVID-19 pandemic diffusion with location and timeline. The open access data of early cases also helped identify the five to 14-day incubation period of the virus, so the governments could learn what has worked in other countries and make data-informed decisions on preventive controls for COVID-19 (Kraemer, 2020). The same team formed the Open COVID-19 Data Curation Group with contributors from China, France, United Kingdom, and United States to actively maintaining the dataset and synthesize relevant information from multiple data sources on GitHub. Open data access, sharing and curation are of paramount importance to develop solutions for pandemic (Xu et al., 2020; Yozwiak, Schaffner, & Sabeti, 2015).

In addition, to combat the public health crisis caused by COVID-19, multiple scientific and medical research organizations including Allen Institute for AI, Chan Zuckerberg Initiative (CZI), Georgetown University's Center for Security and Emerging Technology (CSET), Microsoft, and the National Library of Medicine (NLM) at the National Institutes of Health led a collaborative effort to update weekly and curate an open access dataset in a standardized machine-readable format on coronavirus scholarly literature, namely, the *COVID-19 Open Research Dataset (CORD-19)*. With more than 33,000 full-texts in over 45,000 articles, CORD-19 is currently the most comprehensive coronavirus literature collection available (CORD-19, 2020).

Furthermore, to increase the access to the CORD-19 and its usage, the White House Office of Science and Technology Policy (OSTP) has disseminated a Call to Action to the Tech Community on New Machine Readable COVID-19 Dataset to encourage developing new text and data mining techniques that can help the scientific and medical community not only find the right information in time but also access the information faster from the huge amount of literature concerning COVID-19 and coronavirus group related research (OSTP, 2020).

Covid Near You, a sister website of Flu Near You, was co-created by Harvard, Boston Children's Hospital and the volunteers from IT industry. Covid Near You collects the self-report data from the public and uses the map to visualizes the cases that have been reported COVID-19 symptoms and reported taking COVID-19 tests geographically. This crowdsourced data informs public health agencies and citizens of potential hotspots for the recent COVID-19 cases (both covid-alike-illness vs. covid-tested-illness) in real-time.

As many states issued a stay-at-home order to reduce close interactions and prevent the further outbreak of COVID-19, various journals either generously offer open access or compile articles covering relevant topics into a COVID-19 collection during the ongoing pandemic. Multiple open access databases can be used to search and keep track of recent COVID-19 work, such as Disaster Lit, ClinicalTrials, Europe PubMed Central (PMC), PubMed's LitCovid, and WHO COVID-19 research article databases. Several open access databases allow users to search, retrieve, and analyze genomics data on COVID-19, for example, National Center for Biotechnology Information (NCBI) Virus and Public Health Genomics and Precision Health Knowledge Base.

3 | PANEL AGENDA

Each panelist will provide her/his unique perspective on the issues and panelists will share their personal viewpoints on how to enhance audience members' engagement with respect to open access broadly and within the context of a pandemic. Based on the current practices and emerging trends, this panel will further assess the open access and scholarly communication landscape and speculate on the future direction, and the influence on global scholarship. Panelists will also highlight trends in open access practices around research datasets, including the publishing, sharing, use, citation, and management of research datasets alongside scholarly publications.

With many universities and research centers migrating to an online-only model for the next

semester or so, in light of the prospects and challenges that this new environment brings, the panelists will provide overviews and lead discussions among audience members on a number of issues related to open access from a variety of perspectives. The panelists will also identify trends and relevant information in efforts to characterize this novel virus and address the associated global health crisis to ensure that all relevant information about the outbreak is shared openly and rapidly.

4 | SUMMARY

The panel will be relevant to ASIS&T community. In fact, in light of the theme of this year's conference "INFORMATION FOR A SUSTAINABLE WORLD: ADDRESSING SOCIETY'S GRAND CHALLENGES", and the Coronavirus threat, it is very fitting to revisit issues related to open access issues.

The UN theme is indeed an opportunity to take action in order to open up access to research and to realize the benefits of openness:

> "...The online platform will also facilitate the dissemination of relevant open access scientific publications generated worldwide. The on-line platform will be developed on the basis of an independent technical assessment which will take into account best practices and lessons learned from other initiatives, within and beyond the United Nations, in order to ensure that it will complement, facilitate access to and provide adequate information on existing STI platforms, avoiding duplications and enhancing synergies..."

The UN Agenda is a plan of action for the greatest global challenge and an indispensable requirement for sustainable development. Accordingly, the panelists will discuss the feasibility of making openness the default for research. This panel will provide excellent opportunity to revisit what openness means in various contexts, including as enabler to increasing the visibility and impact of scholarship at the individual level, at a particular institution, or in a specific discipline.

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AUTHOR BIOGRAPHIES

Daniel Gelaw Alemneh is a faculty member at the University of North Texas, coordinator of digital curation activities and also teaching at the College of Information. He recently (in 2020) served as a Fulbright scholar at Addis Ababa University in Ethiopia. For the past 20 years, Dr. Alemneh has been actively involved in various professional activities including member of ASIS&T Board of Directors. Dr. Alemneh will offer a presentation on promoting Open Access as well as enforcement mechanisms of institutional obligations for immediate public access to research outputs including for awards using data management plans (DMP). He will also discuss and advocate the need for removal of barriers (including legal and technical) to facilitate the numerous digital curation activities required in the lifecycle management of digital resources.

Suliman Hawamdeh is a Professor and Department Chair in the Department of Information Science at the University of North Texas. He is an expert and a pioneer in the field of knowledge management. He will discuss about Open Access in the context of Global Information Infrastructure. Given the importance of

information as a key economic resource, access to information is a basic human right issue. COVID-19 highlighted the importance of transparency and access to information across boundaries. Across the globe, countries have struggled to keep up with the pandemic. Most countries including the United States acknowledged that lack of transparency and lack of access to accurate and timely information have affected readiness and preparedness in dealing with this unknown and invisible virus. Once again this reminded us with the importance of both physical and virtual global information infrastructure and the role that information professionals can play in dealing with such crises.

Hsia-Ching Chang is an Associate Professor in the Department of Information Science at the University of North Texas. Dr. Chang is also a Cybersecurity Policy Fellow at New America, a non-partisan think tank providing advice to policy makers on emerging topics in cybersecurity. Her research activities focus on data analytics, social media, cybersecurity, and knowledge/ science mapping. She will present the open data access efforts relevant to COVID-19 as well as their implications and challenges.

Abebe Rorissa is an Associate Professor and Associate Dean for Faculty Development at the College of Emergency Preparedness, Homeland Security and Cybersecurity, University at Albany, State University of New York (SUNY). Dr. Rorissa will provide a broad overview of the articles in the Universal Declaration of Human Rights (UN General Assembly, 1948) that are relevant to open access. Building on previous panel discussions the panelists had facilitated, he will facilitate a more focused discussion on access to information and data as a basic human right.

Shimelis Assefa is Associate Professor in the Department of Research Methods and Information Science at the University of Denver. His research interests include scholarly communication and measurement of knowledge production; knowledge diffusion, learning technologies, and health informatics. He will discuss the landscape of scientific and technical research outputs together with trends and practices in open access efforts to publishing and sharing research datasets. Dr. Assefa invites panel attendees to participate in discussions that explores the following questions – to what extent does open access ease the lack of access in scientific and research outputs in developing countries; in what way the current pandemic redefined scholarly communication and why this should be the modus operandi going forward instead of just a frantic-response to conatin the disease.

Kris Helge is Assistant Dean for Academic Engagement Services at Texas Woman's University Libraries. He also adjunct teaches at Rutgers University and Texas A&M University School of Law. Dr. Helge received his Ph.D. in Information Science from the University of North Texas, his J.D. from South Texas College of Law Houston, and an M.L.S. from the University of North Texas. He will examine how legislation, Executive orders, and case law creates open access opportunities to allow for access to and sharing of data and information related to the COVID -19 conundrum. He will further analyze how some legislation, Executive orders and case law creates barriers to data and information regarding COVID -19. He will further examine how current legislation and proposed legislation could prevent the misuse of valid data, information, and knowledge. Finally, he will look at some current efforts and effects of said efforts to expand open access such as the open discovery of vendor agreements.