

## Old questions, new circumstances: Some reflections on information during the COVID-19 pandemic

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The COVID-19 pandemic has had limited effects on our access to and use of information. In the last few decades, much information has been digitised, if not created and produced, online. Confined in physical space and sitting at our desk (or kitchen table), we are able to connect to the outside world through various applications on our laptop and other mobile devices. It is fascinating to think that Paul Otlet's visions of the Mundaneum<sup>1</sup> in the late 19th century and Vannevar Bush's conceptualisation of the memex<sup>2</sup> after WWII have come true – that we no longer need to leave our desk (or kitchen table) or house to be informed. Indeed, it is difficult to imagine how we might live and work through the current pandemic without instant and constant information and communication. Yet, many old questions about information re-emerge and prompt re-thinking, in particular, the role of information and library professionals as we face ever increasing volume of academic publications, as well as opinionated blogs, news articles, and tweets online. I reflect on some of these issues and the question 'What is information?' in this short essay.

### 1. Deluge of Information

As of today, October 2, 2020, a total of 9231 preprints about SARS-CoV-2 have been posted on the medRxiv and bioRxiv. These preprints are rapid responses to a health crisis, representing scientists' need and will to share data and results and to find solutions. With the number of preprints, an old problem of information overload creates puzzles for the scientific community as well as information professionals: How to find the most relevant information and weed out the irrelevant? How can we make use of the vast amount of information to answer questions and solve problems efficiently and effectively? The deluge of preprints and other scientific outputs will continue in the coming years as, and if, the academic reward systems move away from

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<sup>1</sup>See <http://www.mundaneum.org/>.

<sup>2</sup>Vannevar Bush describes the memex as a device 'in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory' (Bush, 1945).

publishing in traditional journals and their metrics and move towards open science and open scholarship. There needs to be new ways of disseminating and retrieving information amongst researchers and research institutions, while at the same time, of preventing misuses and misinterpretations of scientific information by the general public. For one, it is important for all to understand that scientific research can produce results that are inconclusive, and sometimes proved to be false at a later date. There are, of course, also cases of scientific frauds such as the reported retraction of papers in *The Lancet* and *The New England Journal of Medicine* during the pandemic.<sup>3</sup>

We are also witnessing the deluge of information, disinformation and misinformation shared and circulated on social media platforms such as Twitter and communication tools such as WhatsApp during the pandemic. How much of these exchanges should be archived as records of the pandemic for future historians and generations? How can we study information behaviour to understand why people trust certain kinds of information and not others? How do we tackle the problems and issues about misinformation and disinformation amplified by the rapid circulation?

Yet, whilst the number of preprints and scientific information and tweets and posts are increasing every minute, there is actually a lack of information when it comes to tackling the pandemic on the ground. The *New Yorker* article “What the Coronavirus Crisis Reveals About American Medicine” reported that there is not an efficient information system for doctors to communicate vital information such as the symptom of blood clots when COVID-19 was taking hold in the United States and hence resulted in delayed treatments. The article states that “clinical medicine is, among other things, an information system, and a central part of that system is broken” (Mukherjee, 2020). The need for more accurate and faster exchange of information becomes apparent during a crisis – whether it is about too much or too little information. Information retrieval remains central to the study and work of information and library professionals.

## 2. Neutrality

The Library Bill of Rights states that “Libraries should provide materials and information presenting *all points of view* on current and historical issues. Materials should not be proscribed or removed because of partisan or doctrinal disapproval” (ALA, n.d., emphasis added). The ideal is to uphold the rights of intellectual freedom, but what happens when information can lead to negative health consequences or is ostensibly misogynistic, racist, or transphobic? Should all kinds of information be collected, organised, recorded, made accessible and shared at present and for the future?

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<sup>3</sup><https://www.sciencemag.org/news/2020/06/two-elite-medical-journals-retract-coronavirus-papers-over-data-integrity-questions>.

During the pandemic, there have been many questions and doubts about the trustworthiness of scientific experts and their advice, whilst at the same time, there have been suggestions that the pandemic is a hoax and suggestions of preventive treatments involving poisonous chemicals used in bleach, notably shared by an authoritative political figure.<sup>4</sup> In the midst of this health crisis, we are also experiencing social movements and cultural changes on social media and beyond. #BlackLivesMatter, #CancelCulture, and public shaming have questioned the value of literary and scientific work based on, for example, an author's stance on cultural and social issues. Should Harry Potter be removed from public and school libraries because of the author's views on transgender women?

Anne Carroll Moore, the librarian who created the New York Public Library children's reading room, has paved the way for making reading for pleasure a norm for children and their families. Some, however, criticised her acts of control – or censorship-during her tenure. For one, she banned a popular children's book, *Goodnight Moon*, from the library shelf.<sup>5</sup> The selection of materials based on her own interests and preferences was seen as a form of control, if not censorship. Today, many digital platforms claim to be an intermediary, meaning they are neutral facilitators for the dissemination of information and hence they are not responsible for the contents – be they trustworthy or inflammatory information or disinformation. Information and library professionals have never been truly neutral for the very design of information systems can be affected by cultural and social affordances (see, for example, Dousa & Ibekwe-SanJuan, 2014; Hjørland, 2013). At this moment when there is the deluge of information – some of which emotionally and politically charged – it is pertinent to reflect on the role of information and library professionals as gatekeepers and sometimes the fine line between censorship and acting on public interests.

### 3. What is information?

Michael Buckland's awardwinning paper "Information as Thing" (1991) is worth revisiting and considered at this time when information is of abundance, while at the same time diverse and sometimes polarized:

Progress beyond an anarchy of individual opinions concerning *what is or is not reasonably treated as information depends on agreement, or on at least some consensus*. We can use an historical example to illustrate this point. It used to be considered important to know whether a woman was a witch or not. One source of evidence was trial by water. The unfortunate woman would be put in a pond. If she floated she was a witch. If she sank she was not. This event, the outcome

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<sup>4</sup>See <https://www.bbc.com/news/world-us-canada-52407177>.

<sup>5</sup>See <https://slate.com/culture/2020/01/goodnight-moon-nypl-10-most-checked-out-books.html>; see also the related 99% *Invisible* podcast episode at <https://99percentinvisible.org/episode/goodnight-nobody/>.

of the experiment, was, by consensus, the information-as-thing needed for the identification of a witch. Nowadays it would be denied, by consensus, that the exact same event constituted the information that it had previously been accepted, by consensus, as being. (Buckland, 1991, p. 357, emphasis added)

In addition to the important message that information and library professionals are mainly concerned with recordable information and knowledge (see also Bawden & Robinson, 2012), the above passage points to the normative, situational understanding of information; that is, whether a piece of evidence is considered information depends on the public understanding and interpretation of the phenomenon. Sometimes public understanding is influenced by religious beliefs and political interests and it can also change over time, e.g., whether a woman floats or sinks no longer informs us as to whether she is a witch.

The deluge of information about SARS-CoV-2 in preprints archives is a way to achieve understanding of the disease and, eventually, for devising preventive measures and treatments. In the scientific community, every bit of evidence is considered information until it is proven as not. Although there are the occasional fraudulent practices, most participate in the production and dissemination of information in good faith. The defeat of the disease is the ultimate goal. What can be considered as information is apparent and clear to the scientific community. The main challenge is to design a system to access and retrieve information efficiently and effectively. An old problem of information retrieval in a new situation when preprints archives and open science are becoming commonplace.

It is a trying time, however, when we consider the deluge of information on social media. The neutrality of library information and professionals is based on the understanding of cultural and social affordances that shape, in Buckland's words, the "*agreement or at least some consensus*" about what should be considered as information, that is, what is to be collected, stored, organised, and made accessible in a library or an information system. What happens when we do not or cannot find an agreement or a consensus as the society has become increasingly divided? Is representing all points of views still the right thing to do? These questions cannot be easily answered without ethical and moral considerations and debates we have yet to see. The question "What is Information?" highlights the importance of humanistic information science (see Feinberg et al., 2012) at this juncture of health crisis and a sea of cultural, social and political change.

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