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Resilient Information Science

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ABSTRACT

An information-resilient society requires the development of a resilient information science. Three different requirements for resilient information science are identified and a constructive contribution presented for each. First the scope and available resources need to be fully identified. Wayne de Fremery draws on his forthcoming book on the bibliographical foundations of information science to suggest how humanistic forms of bibliography can provide resources that support information science. Second, clarity in concepts and definitions is required. Michael Buckland draws on recent work to bring clarity to the centrally important but notoriously unclear topic of “relevance.” Third, concepts and techniques need to be articulated as new technologies emerge. A presentation on access to the evidence behind the news by Olivier Le Deuff will illustrate how the publication of articles can now be enriched with the publication of related evidence, now a critical need with the rise of fake news. A moderated discussion follows.

KEYWORDS

Resilience, Information science, Bibliography, Relevance, Fake news

INTRODUCTION

The conference theme of *Crisis, Transition, Resilience: Re-Imagining an Information-Resilient Society* implies a core focus on the development of a robustly *resilient* Information Science. This panel session addresses this challenge directly and draws on recent work from scholars based on three different continents. It is sponsored by the SIG History and Foundations of Information Science and the SIG Education.

Resilience can be understood as having three aspects or dimensions. The available *resources* for resilience need to be as complete as possible; *clarity* not confusion concerning all significant concepts and terminology; and actual and potential *relationships* need to be identified and articulated. The three speakers will draw on recent research to bring strength in each of these three dimensions: resources, clarity and the articulation of relationships.

STRUCTURE

This moderated panel session will have four parts: Three short presentations followed by a period for question, answer, and comments from participants.

The moderator will be **Robert D. Montoya**, M.F.A., M.L.I.S., Ph.D, Assistant Professor, Director of the California Rare Book School and of the Libraries, Justice, & Ethics Lab, at the University of California, Los Angeles Department of Information Studies, School of Education & Information Studies.

PANELLISTS

There will be three panelists in the following order:

Wayne de Fremery will be Professor of Information Science and Entrepreneurship and Director of the Françoise O. Lepage Center for Global Innovation at Dominican University (San Rafael, CA) beginning in August 2022. Previously, he was an associate professor in the School of Media, Arts, and Science at Sogang University in South Korea, where he has lived for twenty years. He currently represents the Korean National Body at ISO as Convener of a working group on document description, processing languages, and semantic metadata (ISO/IEC JTC 1/SC 34 WG 9). His recent research has concerned “Digital humanities in the iSchool” (*JASIS&T*, 2022), “Copy theory” (*JASIS&T*, 2022), “Context, relevance, and labor” (*JASIS&T*, 2022), as well as the use of deep learning to improve Korean OCR, for which he received a national citation of merit from the South Korean Ministry of Culture, Sports, and Tourism.

Michael K. Buckland is Emeritus Professor, School of Information, University of California, Berkeley. An English librarian who moved to the USA, Professor Buckland has had extensive experience as a librarian, as an administrator, and as an educator. He has written extensively on the history and foundations of information science. He has received the ASIS&T Award of Merit and the Watson Davis and Best Book awards. A former ASIS&T President and co-founder of SIG HFIS, he is the immediate past chair of the ASIS&T History Committee.

Olivier Le Deuff is assistant professor at Bordeaux Montaigne University, France. He is the author of several books, including *Digital Humanities: History and Development* (2018) and *Hyperdocumentation* (2021), essays and short stories. He has published about fifty scientific articles on several themes: information literacy, digital humanities, information epistemology, OSINT, and a blog *Le Guide des Egarés*. He is also the co-leader of the

HyperOtlet project reconstructing the social and intellectual context of Paul Otlet (1868-1944). He is currently leading two research projects with Rayya Roumanos. One concerns algorithms and journalism (*AlgoJ*). The other, a collaboration with the firm *Flint*, concerns the creation of a news quality indicator (*Dupin*).

PANEL PROGRAM

Robert Montoya, as moderator, will introduce the session and moderate its four components.

Resources for Resilience

Information science is closely associated with science, of course, but there is also a rich, neglected history of investigating information in the humanities. Understanding this history provides information scientists with theoretical and methodological resources for resilience. Documentation, the earlier name for information science, was initially called bibliography. The first presentation, *Bibliography, Information Science, and the Humanities*, by **Wayne de Fremery** will describe bibliography in the Anglo-American tradition during a period in the nineteenth and twentieth centuries when modern humanistic disciplines were rapidly evolving away from their philological origins. Drawing on his forthcoming book in the MIT Press History and Foundations of Information Science series, *Cats, Carpenters, and Accountants: Bibliographical Foundations of Information Science*, Professor de Fremery will suggest the humanities' long-established bibliographical concern for information and how humanistic approaches (poetic, philological, hermeneutic, phenomenological) to information can usefully inform methods in information science.

Clarity for resilience

Resilience is unlikely to be achieved without clarity of definitions. A notorious example of confusion in both theory and practice in information science is the notion of *relevance*, which is universally regarded as being of central importance. The term "relevance" is used to refer to a wide variety of phenomena, including topicality, lexical similarity, utility, and more. It is central to information retrieval evaluation and bibliometric analyses even though its conceptual underpinnings are known to be untenable. **Michael Buckland** will draw on recent and current work to present *Relevance: From Confusion to Clarity*. He will demonstrate how a narrow definition of relevance as documents in use productively clarifies a central term in information science.

Articulation for resilience

Resilience depends not only on resources and concepts, but also on understanding relationships between them and how they can increasingly be articulated by deploying emerging technology. In *Access to the Evidence behind the News* **Olivier Le Deuff** will illustrate this aspect of resilience by presenting a case-study centrally relevant to the conference theme: the use of hyperdocumentary techniques to innovation in journalism. Traditionally, journalists assembled evidence and then presented a narrative account to the public. With paper-based technology it was not feasible to also present the evidence itself. Dr Le Deuff will draw on his collaboration with Rayya Roumanos and others to show how contemporary developments in technology increasingly allow journalists to publish not only narratives (documents) but also related evidence (documentation).

CONCLUSION

An information-resilient society requires a resilient information science, which in turn has three different requirements: an understanding of available resources; clarity in concepts and definitions; and imaginative articulation in how resources can be applied to needs using emerging technology. From bibliography to documentation to information science, our legacy demonstrates resilience. The aim of this panel session is to show how, and how information science can be made more resilient and to provide the basis for a moderated discussion.

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