The Other as a Research Agenda for Information Science

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ABSTRACT
Examining any topic in isolation offers very limited possibilities for significant insights. In contrast, a strikingly rich and fundamental research agenda opens for Information Science when “the other” is considered. Three presentations will demonstrate some of these possibilities.

Every operation on information moves it further from its prior context. What are the consequences of this? Lai Ma will examine the fundamental effects of bibliographical operations on data sets and raises questions about the consequences of repeatedly adopting “the other” as we move further into data-intensive work.

Every knowledge organization system reflects a perspective in its design. How could we design for multiple perspectives? Charles van den Heuvel will draw on the efforts of Paul Otlet to use new media to achieve multidimensional knowledge organization hospitable to differing points of view.

Every advance in science and most of our daily lives, depends on the work of others. Michael Buckland will argue that our academic need to know the work of others and everyday dependence on “second-hand knowledge” constitutes a much-needed rationale and strategic framework for Information Science itself.

KEYWORDS
Theoretical foundations, historical conceptualizations, research agenda Information Science, documentation.

THE PANEL
After a brief introduction by the moderator, Kathryn La Barre, each panelist will speak. Following the presentations there will be a 30 minute discussion period during which the speakers will address the question:

*What are the implications of historical/theoretical studies of “the other” as a research agenda for Information Science?*

**Kathryn La Barre, Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign**

Kathryn La Barre is an Assistant Professor at the Graduate School of Library and Information Science and Chair of the Special Interest Group for History and Foundations of Information Science. (SIG/HFIS). She is interested in knowledge organization and access systems (historical and contemporary), and has published on these subjects in the *Journal of the American Society for Information Science and Technology* and in the *Annual Review of Information Science and Technology*.

**Lai Ma, Doctoral Candidate, School of Library and Information Science, Indiana University**

Lai Ma is a Ph.D. Candidate at the School of Library and Information Science at Indiana University-Bloomington. Her research interests include foundational concepts, methodology, and standards in library and information science. She has published in the *Journal of the American Society for Information Science and Technology* on the concept of information and mixed methods.

**Michael Buckland, School of Information, University of California Berkeley**

Michael Buckland is Emeritus Professor, School of Information, and Co-Director of the Electronic Cultural Atlas Initiative, University of California, Berkeley. He has professional experience as a librarian and information science educator. He has written on the history, theory, and design of information services and served as ASIST President in 1998.

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Charles van den Heuvel, Royal Netherlands Academy of Arts and Sciences.

Charles van den Heuvel is Head of Research of History of Science at the Huygens Institute for the History of the Netherlands of the Royal Netherlands Academy of Arts and Sciences. He is interested in the history of classification and visualizations of knowledge and has published in the *Journal of the American Society for Information Science and Technology*, on historical interfaces.

EXTENDED ABSTRACTS

In and Out of the Database: Changing Nature of Information. [Lai Ma]

The term “information” is often used to represent objects, expressions, or events, as well as representations of objects, expressions, or events in information retrieval systems. The systematic storage of information, however, detaches “information” from lifeworld contexts: on the one hand, “information” is no longer used in its original context and is represented in a different form; on the other hand, what may be stored in information systems is usually determined by professional organizations, private organizations, and government institutions, while consultation with the public—“the other”—is limited or omitted. In a bibliographic database, both objects and persons are flattened to machine manipulable “records” or strings of symbols that are created according to professional rules and standards. In other words, the constitution of information in the bibliographic database is not co-determined by the public who uses it, but by the authority who produces it. The negotiation of the meaning of “information” is thus decontextualized from day-to-day contexts. Traditional bibliographic databases suggest what may be “information,” data infrastructures and data-driven research configure what may be “reality” of our physical environment and our society. It is necessary for us to understand the social processes of decontextualization and recontextualization of data and information that shape how and what we may be informed.

From Book to Database: Changing the Classification of Knowledge. [Charles van den Heuvel]

In the first decades of the 20th Century, Paul Otlet (1868-1944), Belgian pioneer of knowledge organisation, presented a series of lectures on substitutes for the book. These included both alternative forms, such as visual encyclopaedias and more technical solutions such as “microphotographic books.” Otlet realized that these substitutes required new ways of organizing knowledge. Fundamental to Otlet’s knowledge architecture is his notion that the book is an imperfect container for ideas that could be more effectively conveyed in other forms. The focus of this presentation is upon the impact of the *Universal Book of Science* (1913), a large information system of bibliographical cards created by a global scholarly society. This approach integrated the latest technology and protocols for processing and publishing information with new concepts of documentation. An illustrated manuscript of 1908: *Theorie schematique de classification* and a poster of 1916 *Elements de schematique* visualize future experiments including a mechanical, rotating card system that, according to Otlet, could simultaneously handle multidimensional classification and schematic abstractions of knowledge (“schemes fondamentaux”). Otlet gradually became aware that multidimensional data could not be easily classified in a single system. In 1928 he began to develop a shadow system, called “Structure and Classification of Knowledge” to temporarily handle and classify inconsistencies and overlaps between different viewpoints in order to allow them to be merged into one unique classification system at some point in the future.

The work of others and the purpose of Information Science. [Michael Buckland]

Efficiency and cost-effectiveness in scholarship depend on making use of the work of others. Sharing the same workspace with the right other is ideal but generally impractical for many reasons (distance, cost, institutional constraints, and timing), is inflexible, and does not scale. In practice we depend instead on the documents of others. Assembling selections of documents ad hoc for any given purpose allows us to create a kind of surrogate (virtual) collaborative environment. It may be a poor substitute for direct, personal collaboration, but ad hoc selections of documents have properties that respond elegantly to the difficulties of shared work environments. Scientific research and documentary editing are scholarly examples. But the problem of interdependence based on records and documents (what Patrick Wilson called “second-hand knowledge”) goes much further and pervades our daily lives – increasingly in modern society. The creation of documents needs to be complemented by mechanisms for access (publication) and selection (discovery and retrieval). The history of “information technology” can be seen a continual evolution of better ways to deal with distance and cost. Even after publication there are diverse obstacles to effective use: discovery, location, permission, currency, compatibility, description, and trust. Addressing these diverse barriers to achievement has been the concern of bibliography, documentation, librarianship, and could provide a valid purpose for Information Science.

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