Researchers’ Information Uses in a Digital World: The Big Picture

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ABSTRACT
This panel is comprised of international scholars studying how the information practices of researchers have been changing both the habits of individuals and the research directions of disciplines as research is increasingly reliant on digital tools and data. The panel will include short presentations, followed by substantial time for discussion and interaction with the audience. Among the key themes to be addressed are the new research questions that emerge as information becomes digital, the continuity and persistence of disciplinary habits, and the risks of certain types of research being excluded because it is non-digital.

Sponsors
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Keywords
Social informatics, humanities, science, social sciences, information use, disciplinarity

INTRODUCTION
Dramatic changes in research practices have been identified over recent decades as research information is increasingly accessed in digital format and online. The ways that researchers engage with information varies considerably across the disciplines, but all are increasingly reliant on digital information. A number of recent studies, however, are trying to look beyond micro-level examples of changes in information practices to the big picture: what does the shift to digital information mean in terms of the kinds of research undertaken and the questions researchers ask?

Members of this panel have completed large-scale research projects over the last several years that examine how researchers’ information practices are adapting to interacting with information digitally, and what this shift means for the nature of their research. Richly drawn case studies from the humanities, sciences, and social sciences, including participants ranging from students through early career to senior researchers, draw a picture of largely consistent and widespread changes in research habits. The extent to which paradigm changing shifts in research topics and questions have occurred in various disciplines, however, is much more uneven. There are some headline examples of research that would not have been possible without computational approaches to information (such as work in corpus linguistics, physics, social network analysis, and others), but these examples are not consistent across disciplines.
The panel will begin with a short overview of recent research by each participant (7-10 minutes each -- see descriptions below) to frame discussion. Audience discussion will be organized by a set of key issues of particular interest to information scientists, such as how changing research practices both are driven by, but also drive, changes in the information environment.

**Key issues for discussion**

- We all see digital transformations happening, but what are the tangible effects in terms of new research questions, new practices, and new ways scholars think about themselves? What is really changing? Is everything just bigger, faster and easier, or are research practices and research questions qualitatively different?
- What is persistent and lasting for researchers, regardless of whether working with digital or analog information? What are the types of continuity that accompany the changes in the digital age?
- What is being left behind? Who is excluded? What kinds of research risk neglect? Do non-digital and non-digitizable forms of information risk becoming obsolescent, and what would the risks be if that is the case?

**PANELISTS**

The panel is comprised of researchers from the US, the UK, and the Netherlands. Each panelist has completed collaborative research into the changing nature of research as digital technologies have become ubiquitous.

**Christine Borgman**

Professor Borgman\(^1\) is Presidential Chair and Professor of Information Studies at UCLA. Her work includes six years studying data practices and building information systems for the Center for Embedded Networked Sensing, which is a large, National Science Foundation-funded Science and Technology Center; a monograph assessing the changes in research practices and infrastructure for eResearch, *Scholarship in the Digital Age: Information, Infrastructure, and the Internet* (MIT Press, 2007); participation in multiple UK initiatives; and chairing a Task Force for NSF on CyberLearning. She will discuss data practices across the disciplines, and how the role of data is allowing researchers to transform their research.

**Diane Harley**

Professor Harley\(^2\) is the principal investigator on large-scale empirical studies of university faculty and students’ use of emerging information and communications technologies. She currently directs the Higher Education in the Digital Age (HEDA)\(^3\) project at the Center for Studies in Higher Education at UC Berkeley. She is the principal investigator of Peer Review in Academic Promotion and Publishing: Its Meaning, Locus, and Future,\(^7\) and principal author, and co-principal investigator with C. Judson King, of Assessing the Future Landscape of Scholarly Communication: An Indepth Study of Faculty Needs in Seven Disciplines\(^5\) (both part of The Future of Scholarly Communication Project and funded by the A.W. Mellon Foundation). She will discuss the results of more than seven years of research on different disciplinary scholarly communication practices that intersect with tenure and promotion and academic values—including those related to peer review, publishing choices, sharing, and collaboration.

**Eric T. Meyer**

Dr. Meyer\(^6\) is a Research Fellow at the Oxford Internet Institute, University of Oxford. He has been the principle investigator on ten recent research projects, and a research on eight more. These include studies of researcher’s information practices in the humanities,\(^7\) in the physical sciences\(^8\) and the social sciences\(^9\). His recent report *Splashes and Ripples*\(^10\) synthesizes the evidence on the impact of various digital resources in the UK, and looks at how these digital resources are embedded in their communities. He is also currently writing a book on *Networks of Knowledge in the Digital Age* with his colleague Ralph Schroeder (MIT Press). He will use a social informatics perspective to discuss how the evidence from different disciplines can be compared to better understand the changing relationships between researchers and their technologies.

**Monica Bulger**

Dr. Bulger\(^11\) examines the information use practices of scholars in the sciences and humanities, focusing on how these skills affect their information collection, evaluation, and organizational practices. She is a Research Fellow at the Oxford Internet Institute where together with Eric Meyer and several international collaborators, recently completed a large-scale study of humanities’ scholars information use, *Reinventing Research*?\(^12\) She will discuss how scholars think about themselves and their research questions in light of digital transformations occurring in their work.

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\(^1\) [http://polaris.gseis.ucla.edu/chborgman/Chriss_Site/Welcome.html](http://polaris.gseis.ucla.edu/chborgman/Chriss_Site/Welcome.html)

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\(^3\) [http://cshe.berkeley.edu/research/heda.htm](http://cshe.berkeley.edu/research/heda.htm)

\(^4\) [http://escholarship.org/uc/item/1txv148c8](http://escholarship.org/uc/item/1txv148c8)

\(^5\) [http://escholarship.org/uc/cshe_fsc](http://escholarship.org/uc/cshe_fsc)

\(^6\) [http://www.oi.ox.ac.uk/people/?id=120](http://www.oi.ox.ac.uk/people/?id=120)

\(^7\) [http://www.oi.ox.ac.uk/research/projects/?id=58](http://www.oi.ox.ac.uk/research/projects/?id=58)

\(^8\) [http://www.oi.ox.ac.uk/research/projects/?id=62](http://www.oi.ox.ac.uk/research/projects/?id=62)


\(^10\) [http://www.oi.ox.ac.uk/people/?id=199](http://www.oi.ox.ac.uk/people/?id=199)

\(^11\) [http://www.oi.ox.ac.uk/our-work/using-and-accessing-information-resources/information-use-case-studies-humanities](http://www.oi.ox.ac.uk/our-work/using-and-accessing-information-resources/information-use-case-studies-humanities)
Smiljana Antonijevic
Dr. Antonijevic is a Researcher at eHumanities group of the Royal Netherlands Academy of Arts and Sciences (KNAW), and Assistant Professor of Culture and New Media at Roskilde University. With colleagues from KNAW, Smiljana has recently completed two large-scale studies on digital technologies use in humanities scholarship. Based on results of her research, Smiljana will discuss different paths of adopting digital technologies in humanities scholarship both at the level of individual researchers and research institutions.

http://www.smiljana.net/