

iSchools as bridges between Scientometrics and STS

Staša Milojević
Indiana University, Bloomington
School of Library and Information
Science
Bloomington, IN 47405
1-812-856-4182
smilojev@indiana.edu

Selma Šabanović
Indiana University, Bloomington
School of Informatics and Computing
Bloomington, IN 47405
1-812-856-0386
selmas@indiana.edu

Cassidy R. Sugimoto
Indiana University, Bloomington
School of Library and Information
Science
Bloomington, IN 47401
1-812-856-2323
sugimoto@indiana.edu

Phillip M. Edwards
University of North Carolina at Chapel
Hill
School of Information and Library
Science
Chapel Hill, NC 27599-3360
1-919-962-9978
phillip.m.edwards@unc.edu

David Hakken
Indiana University, Bloomington
School of Informatics and Computing
Bloomington, IN 47405
1-812-856-1869
dhakken@indiana.edu

Cory Knobel
University of Pittsburgh
School of Information Sciences
Pittsburgh, PA
1-412-624-9197
cknobel@pitt.edu

Keywords

Scientometrics, STS.

1. INTRODUCTION

Today, more than ever, science is perceived among the general public as a driving force behind the prosperity and well-being of individuals, communities, societies, and countries. Science itself has changed significantly over the last century, blurring the lines between pure and applied approaches. Efforts to foster innovation have led to even tighter relationships between major institutions that support science: universities, industry, and the government. The interconnectedness of social, technical and scientific problems has led to an increased focus on developing ways to work across and beyond disciplinary boundaries. The nature of scholarship has changed as well. In addition to publishing peer-reviewed research, scientists are now engaging in multiple forms of dissemination—including communicating informally online and publishing large-scale datasets for the public and other researchers. Collaboration in science has become more prevalent as well. Finally, the multiple types of scholarship that faculty members may produce—the scholarship of discovery, the scholarship of teaching, the scholarship of integration, the scholarship of application (cf. [1])—suggest that an on-going reinterpretation of the goals of academic life and research may be warranted. All of these changes are bringing science, and especially issues related to modes of scientific practice, science policy and science education, to the forefront.

Science has been at the core of interest of Information Science (IS) since its inception. Scientific publications were among the first materials to be represented, organized, and made accessible through information systems, and IS researchers have more recently developed an interest in scientific practices as well. Scientometrics, the quantitative study of scientific documentation, has historically found its stronghold in Library and Information Science Schools, especially those that are now part of the iSchool movement. In parallel, STS, with its historical, sociological and

anthropological approaches to scientific practice and situated methods for studying science and technology became of interest, particularly in regards to theoretical concepts and ethnographic methods, often finding an administrative home within departments of sociology, communication, science and technology studies, as well as iSchools.

During the late 1960s, IS researchers using quantitative and qualitative approaches to study science were exchanging ideas extensively, yet these two communities have drifted apart in the last twenty years. Recently, however, iSchools have been hiring faculty from both methodological camps. This movement presents a great opportunity for the expansion of our understanding of science, especially at the meso-level.

The role of this roundtable is manifold. First, the participating researchers want to highlight the importance of studies of science and scientific practice within iSchools and allied disciplines. Secondly, we would like to examine the various methodological approaches used in studies of science. We hope that the roundtable will start a collaborative discussion around a number of important themes:

-Articulation and refinement of basic concepts related to studies of science (e.g., discipline, interdisciplinary/multidisciplinary/transdisciplinary fields and research, communities of practice, epistemic communities, specialties, etc.);

-Critiquing existing theories and models of science along with new potential theories and models;

-Sharing of insights regarding techniques and methods used to study science and scientists;

-Discussion of innovative approaches for triangulation.

2. PARTICIPANTS

Staša Milojević is an Assistant Professor in the School of Library and Information Science at Indiana University Bloomington. Her general research theme is the study of the formation, organization and development of modern scientific disciplines and practices. Her dissertation focused on nanotechnology as an example of a modern emergent field, and mapped its social and cognitive structures. This work evolved into the application of social network analysis methods to explore different modes of collaboration in science, and the use of advanced content analysis techniques to study the cognitive scope and evolution of the fields. She is also interested in scientometric methods in general. Her work is inspired by and founded in the theories and models originating from STS. Stasa is the co-director of the Semantic Web Lab at Indiana University. She received her Ph.D. from the Department of Information Studies at the University of California, Los Angeles in 2009.

Selma Šabanović is an Assistant Professor in the School of Informatics and Computing at Indiana University Bloomington. She studies the influence of cultural factors on social robot design and uses robots as test-beds for researching social cognition. Through participant observation and other ethnographic methods, Selma analyzes the construction of “hybrid knowledge spaces,” in which participants from different disciplines can collaborate on problem-, task-, or issue-based inquiry, and investigates the dynamic construction of disciplinary boundaries and epistemic cultures in scientific discourse and practice. She focuses particularly on developing concepts and methods that enable disciplinary traversals. Selma was a visiting researcher at the Carnegie Mellon University Robotics Institute and the National Institute for Advanced Industrial Science and Technology (AIST) in Tsukuba, Japan. She is currently co-director of the R-House Living Lab for Human-Robot Interaction Research. Selma has published in the social studies of science and technology, human-robot interaction, and robotics. She received her Ph.D. from the Department of Science and Technology Studies at Rensselaer Polytechnic Institute in 2007.

Cassidy R. Sugimoto is an Assistant Professor in the School of Library and Information Science at Indiana University Bloomington. She studies the concept of disciplinarity—how disciplines emerge, evolve, and interact. Her focus is on the role of the protégé in disciplinary formation and the creation of new knowledge. Cassidy has used multiple methods in her research, including citation analysis, co-occurrence analysis, interviews, and surveys. She currently directs the MPACT Project, an academic genealogy project devoted to defining and assessing mentoring as a scholarly activity, examining the emergence and interaction of disciplines, and identifying patterns of knowledge diffusion. She received her Ph.D. from the School of Information and Library Science at the University of North Carolina at Chapel Hill in 2010.

Phillip M. Edwards is a member of the faculty at the School of Information and Library Science (SILS) at the University of North Carolina at Chapel Hill. He studies the ways in which faculty members make decisions about where they publish or how they distribute the products of their scholarship. Most recently, he and his colleagues at SILS and the UNC-CH Health Sciences Library have been investigating the effectiveness of two on-campus programs designed to support UNC-CH faculty members’ publishing practices related to open access journals. In addition to his scholarly communication research, he also studies mentoring and identity development among undergraduate and graduate students.

David Hakken is a cultural anthropologist whose ethnography focuses on the ways cultures and automated information and communication technologies mutually shape each other. In 2004, he joined the Indian University at Bloomington School of Informatics as Professor in the Social Informatics group, where he regularly teaches organizational informatics, the social foundations of informatics, and the ethnography of information. For some time now, he had been studying various forms of computerized knowledge networking, recently including Free/Libre and/or Open Source Software projects. In addition to developing tools to support comparative studies of computing in use, he has promoted technologies that expand human capabilities rather than undermining them. His current work is focused on creating a proper intercalation of social and technical perspectives, via a collaborative project on Socially Robust and Enduring Computing. Hakken is past president of the Society for the Anthropology of Work of the American Anthropological Association and a past member of the AAA Board.

Cory Knobel is an Assistant Professor in the School of Information Sciences at the University of Pittsburgh. His research explores the relationship between constructing discourses of infrastructures and the challenges in designing and evaluating them, particularly in the context of systems and networks that support interdisciplinary scientific collaboration. He received his Ph.D. from the University of Michigan School of Information in 2010. His dissertation work analyzed a major digital library project in the 1990s, and in part its relationship to the emergence of iSchools.

3. REFERENCES

- [1] Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. New York: Jossey-Bass/Carnegie Foundation for the Advancement of Teaching.