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The Future of Information Studies: Reflections on Sociotechnical Imaginaries

Abstract: This article is the text of a keynote address on the future of information studies, given on November 2, 2018 at the Berlin School of Library and Information on the occasion of its 90th anniversary.

Keywords: Keynote, discipline, information studies

Die Zukunft der Informationswissenschaften: Reflexionen über sozio-technologische Vorstellungen

Zusammenfassung: Dieser Artikel ist der Text einer Grundsatzrede über die Zukunft der Informationswissenschaften, der am 2. November 2018 an der Humboldt Universität zu Berlin am Institut für Bibliotheks- und Informationswissenschaft anlässlich seines 90-jährigen Bestehens gehalten wurde.

Schlüsselwörter: Vortrag, Grundsatzrede, Informationswissenschaften

I want to begin by thanking my friends and colleagues at the Berlin School of Library and Information Science at Humboldt University for giving me this opportunity today. On this the 90th anniversary of this institution, we've heard about its past accomplishments and present endeavors. It's my privilege to reflect on next steps with all of you – not just on the future of this School, but on what the future of the field of information studies might look like as a whole.

Admittedly, it's been a big task. In thinking about how I might approach talking about my perspectives on what the future of information studies might look, my first instinct which was to come up with a tidy list of topics of that we'll all be researching and teaching and excited about in near future and beyond and present that list to you and talk about why they will be important. However, there were three problems with that approach. If I don't include someone's topic, I'm going to get some hard words. Secondly, I quickly realized I honestly don't know what the topics of the future will be. Third, and perhaps most important, it's a form of self-preservation. I know I don't want someone digging up this

presentation on the 180ᵗʰ anniversary of the School (if they can even find a program that will open it, of course) and saying, "Wasn't she silly and short sighted, that ancient scholar?! Look how naïve our ancestors were!"

So I decided to try another approach. Not long just before I got this invitation from Vivien and Elke, I was having a conversation with my research assistant. Stephen was working with me on a new project on the peer review process at Science Foundation Ireland, Ireland's largest funding agency. He is also finishing his PhD in science communication. We were talking about how funding agencies use the power of their budgets to shape not just the future of science and technology but also of the society they think they want (not always what the rest of us want, to be sure). At that point, Stephen mentioned that he is situating his own PhD work on frakking controversies and activism in a similar way – as a way that groups and organizations collectively envision the future and create it through their words, their visual images, and their actions. This chance conversation led me to thinking the same way about how to discuss a nebulous future. What I thought I could do was shape my talk today as one in which we, collectively, are envisioning the future through the institutional structures are building today.

And that's where the title of this talk came in: the sociotechnical imaginary and the future of information studies. The theoretical concept of the sociotechnical imaginary was originally coined by Harvard scholars Sheila Jasanoff and Sang-Hyun Kim in 2009 as a way to describe how nation-states use science and technology to envision and create their futures. They expanded upon their initial definition and in 2014 came up with this definition: "Sociotechnical imaginaries are collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology."

Heads of government and state, funding agencies and other government agencies are arms of nation-states and as such, have a great deal of power through their policy formulation, grant funding programs, and vision statements to create a sociotechnical imaginary. To give a specific example: in one of their articles, Jasanoff and Kim discuss the 2008 United States presidential campaign in which Barack Obama repeatedly referred to the Apollo mission in his speeches. For Obama, the Apollo mission was a kind of shorthand for the acclaimed US capacity to plan, cooperate, and successfully execute a massive technological feat as the inspiration for a similarly ambitious program to achieve energy self-sufficiency in ten years

(which seems almost laughably quaint now, but I digress). Such visions, and the public expenditures, policies, institutions, structures, and symbols built to make them happen, have the power to influence scientific and technological design and futures but also include or exclude citizens with respect to the benefits of said technological progress.

However, there are other institutions that have their own views of what the world should look like and how science and technology should be deployed to enact the futures THEY want. These include international bodies, powerful foundations, and other institutions, such as scholarly ones.

That's where I thought I wanted to begin today when I impulsively wrote the title and sent it in. I intended to think about the sociotechnical imaginary we are creating in our information studies departments, schools, and programs, as well as through our collective work in the iSchool consortium. To return to Jasanoff and Kim, I had intended to explore those "collectively held, institutionally stabilized, and public performed visions" of the desirable future of information studies, drawing upon my two decade career. I've been a faculty member in two I-schools in two countries, served as the Head of School for three years in one of them, and represented that one to the iSchool executive.

But that didn't happen. As I was drafting notes and thinking about this talk, I attended a workshop at ITU Copenhagen on disinformation and social platforms. Even as I and other scholars worried about the influence of social media and platforms in public life, studying those platforms is becoming more important but more difficult.. While we collectively worried about these influences, thousands of miles away, a man sent pipe bombs to numerous political figures in the United States. Also in the United States, another man walked into a synagogue and shot eleven people dead. My colleague at ITU waited for the list of the dead to be released because her PhD advisors attended that synagogue and she knew it well. In my adopted country, Ireland, a noble poet and activist was re-elected as Head of State even as one of his opponents took to social media to cast racist slurs on a particular Irish minority group. What connected these actions and activities, to my mind, was the very stuff of information studies - its past, present, and future.

So that's where we are.   What is the future of information studies? Let me go back to those "collectively held, institutionally stabilized, and publicly performed visions of desirable futures."
What vision of a desirable future do we collectively hold? What is written on the iSchool Website is a good place to start. It tells us that we share a fundamental interest in the relationships between information, people, and technology. We are interdisciplinary, it goes

on to say, and we want to maximize the potential of humans. Our field will be recognized for creating "innovative systems" and designing innovative systems that benefit individuals, organizations, and society. We will have "profound impacts on society and on the formulation of policy from local to international levels". So let's start from there and unpack that vision.

Interdisciplinarity is part of that future. The world is full of complex, thorny, problems that need more than one discipline or approach or stakeholder. The future of information studies will require we collaborate with other disciplines and practices and each other, even more than what we do now. Yes, computer science (technology keeps cropping up), but also law, literatures, religion, and the visual and performing arts. We need to find ways of speaking across disciplinary and institutional chasms, what my friend and colleague Mary Gray calls "holding space for the hard questions". In our field, the challenge I hear expressed most often (and experience) is the challenge of working with others in a way that is fruitful for all. How can we maintain our own identities such that our knowledge and tools are honoured? It's worth trying, in spite of discouragement. Such rich collaborations will give us a wide variety of ways to understand how people have envisioned and shaped their societies all over the world (and how those societies shape them). Creative practices are cultural and social memory practices, thing we are familiar with in information studies.

Secondly, creating innovative systems. I argue that what will be truly innovative is bringing to those systems a sense of moral imagination and empathy as well as a keener attention to our own history. So many of the challenges we are confronting as societies are ones that derive from diminishing global resources. Our research and teaching can help us understand how earlier societies and cultures faced (or didn't) disinformation, marginalization, migration – none of challenges are new. As a field we will need to develop new "tools to think with" and to think critically about the implications of our information system creations.

Third, our students. You may have noticed that that policy makers, media, politicians, and business leaders seem to be clamouring for more Science/ Technology/Engineering/Maths research and graduates (STEM). Many of our information studies researchers and graduates fit that space, but we offer more. When we look at all of the challenges facing our world, we need students and colleagues and teaching and research that can outfit people with knowledge and skills and experience who can help us tackle the many thorny issues that confront us as a species and as a planet. These issues transcend disciplines and degrees, agreed, but I would argue that we are well placed in information studies to deliver..

Lastly, policy and social impacts. One of the keys to the future of our field is critical engagement. We are going to have to examine systems more closely and encourage others to do so for the values and ethics we build into them, the implications and effects of their designs. We will have to come up with new principles of design and deployment beyond the merely instrumental "does it work, is it efficient?" It's not enough to be "rational" and expect that "providing the right information to the right person at the right time" is a goal in and of itself. We will need to figure out how to tackle misinformation and disinformation through "just telling people how to be critical consumers". In fact, worryingly, all of our studies point to the opposite effect – the more you engage in disputing "alternative facts", the more people believe them.

In early 2018, it was revealed that Facebook, data broker Cambridge Analytica, and a researcher from University of Cambridge, exposed and sold the data of millions of people without their knowledge.   In the wake of that scandal, I was speaking with a professor in the School of Computer Science in my department, who said to me with no little horror, "Our students could have been those engineers who said, 'Ethics aren't my concern. My job is to create efficient systems that work'". I didn't have the heart to tell him that some of his colleagues had said to me a few years earlier, "In data analytics, we've taken care of the privacy problem; I don't know what other ethical considerations we need to concern ourselves with. "

I was a bit smug, I admit (I believe the German word "Schadenfreude" is apt here), but I believe this is where information studies will shine. We must continue to create institutions that support our visions. Within our individual schools and departments of information studies, there are many flavors– librarianship, informatics, data science, human computer interaction, critical information studies, digital curation, ad infinitum. But I hope we share, and will continue to share, a sense that the study of information in all its technical, social, cultural, legal, and philosophical glory is vital to solve many of the problems we are tackling and the democratic deficits we are facing.

The last few weeks, months, years, have left me and many people I know tired and sad and frustrated but unable to look away from horror, not knowing what will happen next. Many of the very dimensions of our field that we care about have been co-opted or their importance diminished or belittled. On my worst days, I admit I'm not optimistic. Too often we are Cassandra from the Iliad: condemned to predict the future, unable to stay quiet about it, but never to be believed.

But there are always better days. Our field HAS been ahead of its time in thinking about the design and information and data and technology in society for decades and many DO value our contributions as a discipline. We have been tireless activists for information as a constitutive force in society. We speak up for the voiceless and the marginalized. We research, we teach, we advocate. So what is the future of information studies? It is hope.

Thank you.

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