

Introduction: Values, Power, and Politics in Digital Infrastructures

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Abstract

The papers presented in this mini-track explore themes of values, power, and politics in relation to the infrastructures that support digital data, documents, and interactions. The papers report empirical evidence of values, power, and politics in material properties, policy decisions and mechanisms of interoperability across a wide variety of infrastructures, including digital e-book repositories, mobile applications, online discussion forums, cyber-security and the Internet as a whole. Together, the papers (1) reflect the many and diverse ways that values, power and politics can influence digital infrastructure and (2) propose new theoretical perspectives on those relationships. Further, the research presented in this session illustrates the ways that human entanglements with infrastructure—whether user adaptations or professional interventions—impact the functionality of those infrastructures.

1. Introduction

This mini-track explores values, power, and politics in relation to the infrastructures that support digital data, documents, and interactions. This mini-track is paired with the mini-track on with “Critical and Ethical Studies of Digital and Social Media” and the Digital Methods Best Practices Pre-Conference Workshop.

The convening of this mini-track also owes a debt to its predecessor, the “Materiality, Documents and Work” mini-track. By considering how infrastructures – the underlying material properties, policy decisions, and mechanisms of interoperability that support digital platforms – are designed, maintained, and dismantled, the work presented at HICSS-50 in this mini-track contributes to ongoing work in infrastructure studies, which seeks to understand the social challenges, processes, and work of infrastructure [1].

This mini-track specifically ties infrastructure studies to questions of values in design: how values, politics and power intertwine with technological

objects and technological work [2]–[6]. Considering values in infrastructure contributes to debates about sociotechnical aspects of digital and social media, with a focus on data, knowledge production, and information access.

The papers in this session employ a diversity of methods, ranging from qualitative case analysis to linguistic analysis, to explore factors that influence the development of infrastructures and their use in practice. Authors identify and examine issues at the intersection of political agency, personal empowerment, social trust, policy, and technological innovation. In doing so they use the past and present to propose new frameworks for understanding the potential future impact of values, power, and politics on emerging digital infrastructures.

In “Resisting the Censorship Infrastructure in China, Kou, Kow, and Gui report on a qualitative study to understand Chinese citizens’ practices as they navigate the censored Chinese Internet. They found that individual practices for avoiding censorship mirrored individuals’ understanding of the censorship infrastructure, suggesting that lay knowledge of the technical infrastructure of censorship impacts how participants cope with the infrastructure’s limitations. Participants in the study demonstrated facility switching between public and private channels, communicated in ways considered less vulnerable to observation, and used search strategies to mitigate the impact of censored content. This paper demonstrates that, despite values ‘baked in’ to the Chinese internet, users find creative ways to enact their own values.

In “Safe Spaces & Free Speech: Effects of Moderation Policy on Structures of Online Forum Discussions,” Gibson explores censorship and infrastructure from a different perspective. Her paper proposes that moderation policies such as “safe spaces” (e.g., carefully monitored discourse) and “free speech” (e.g., open forums with little to no policing of language use) are design choices that establish distinct speech and politeness norms for online discussion spaces. She analyses word usage and word frequency in Reddit subcommunities to illustrate that these norms,

introduced and supported by digital infrastructure and work flows, not only impact who has the strongest voices in these communities, but can also reflect the ways in which users conceive of themselves in relation to the larger group. This paper highlights the critical role that policy can play in shaping infrastructure and infrastructural experiences.

In “How Do You Turn a Mobile Device into a Political Tool?” Acker and Beaton present a qualitative, design-focused study of software that attempts to turn mobile technologies into political tools. They studied mobile applications that enable new methods for engaging with political issues and new strategies for addressing power relations. Although they found that many of the political functionalities envisioned by these apps remain aspirational, their research shows that these apps enabled creative reframings of mobile hardware capabilities by users seeking to amplify their agency and voice. The paper sheds light on the ways in which the infrastructure of mobile applications express or enable new types of values and politics, and on the ways that rethinking the political purposes of hardware infrastructures can generate new creativity.

In “Risky Business: Social Trust and Community in the Practice of Cybersecurity for Internet Infrastructure,” Mathew and Cheshire use case studies to investigate the everyday practices of the people involved in maintaining the Internet’s security infrastructure. Using three cases, they demonstrate how fundamental aspects of network security are premised upon social trust formed between cybersecurity professionals. Their paper demonstrates that trust between people is as much a part of the infrastructure of the Internet as technical measures built into the underlying technologies.

Finally, in “The Dark History of HathiTrust,” Centivany explores the ways that values, power, and politics shape infrastructure development through a qualitative study of the HathiTrust digital repository project in the years preceding its public launch. The

paper focuses on the processes of sensemaking and decision-making among HathiTrust founders to explain how values, power, and politics played a central role throughout HathiTrust’s early history. The paper discovers that historical context—existing relationships, experiences, and institutional arrangements—were critical to shaping the form HathiTrust’s infrastructure eventually took.

Together, these papers provide empirical evidence of the role of values, power, and politics in digital infrastructure, as well as new theoretical perspectives on those relationships. And they illustrate the ways that human entanglements with infrastructure—whether user adaptations or professional interventions—impact the very functionality of those infrastructures.

2. References

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