Google Books as Infrastructure of In/Justice

Abstract

To date, Google Books has scanned and made searchable more than 20 million books from library collections around the world. Proponents of the project tout its potential for promoting social justice and equality through increased information access. Critics, however, have argued that unresolved issues with regard to privacy, copyright, and censorship ultimately subvert the values the project claims to further. These controversies reveal Google Books as a rich example of the complex relations infrastructures establish between technologies, institutions, and individuals. Current debates, however, have concentrated on the interests of the project's stakeholders, overlooking Google Books as sociotechnical infrastructure—that is, as a set of relations mobilized in practice. Employing a practice-dependent account of social justice informed by the concept of "infrastructural inversion" (Bowker, 1994), this paper examines the interdependence between technologies and social practices organized by Google and inquires whether or not the "egalitarianism of information" touted by Google is rendered possible by the sociotechnical relations it mobilizes.

Keywords

Google Books, Infrastructure, Social Justice, STS

Introduction

Google launched its book scanning initiative in 2002, furthering the company's stated mission to "organize the world's information and make it universally accessible and useful," (Google, Inc., n.d.). Despite technological and legal challenges, Google has been largely successful in its efforts; today, the company has scanned and made searchable more than 20 million books, creating a digital library unrivaled in size and scope. According to proponents of the project, its success has not only been one of numbers, but also one of overall cultural and political impact; these proponents point towards the possibilities Google Books opens up for furthering important liberal ideals of social justice and equality—through, for example, an increased "egalitarianism of information" (Schmidt, 2005, para. 9) and as opening up new opportunities for widespread economic and cultural exchange. Critics of the project, on the other hand, have been quick to show that unresolved issues with regard to privacy, copyright, and censorship may ultimately subvert the liberal values it claims to further (Samuelson, 2009; Grimmelmann, 2010; Newman, 2011; Zimmer, 2012).

The controversies surrounding Google Books reveal it as a highly visible example of the complex relations information infrastructures establish between technologies, institutions, and individuals. Current debates on the ethics of Google Books, however, have largely concentrated on the interests of various stakeholders—from Google to libraries, publishers, and authors. Overlooked in these debates is Google Books as *information infrastructure*—that is, as a set of relations established between various components to organize and make available its resources in practice. This examination aims to interrogate according to a conception of justice the Books project as infrastructure. To this end, the author employs a practice-dependent interpretation of social justice in the Rawlsian tradition (Rawls, 1993; James, 2005; Sangiovanni, 2008; Ronzoni, 2009). Rather than depend on the most prevalent practice-dependent accounts of justice, however, the author proposes a new practice-dependent framework informed by the concept of "infrastructural inversion" (Bowker, 1994; Bowker and Star, 1999). A focus on infrastructure, the author argues, allows a close examination of the interdependence between technologies, individuals and social practices mobilized by the Google Books project. Such an analysis compliments established debates, as it inquires into whether or not the "egalitarianism of information" touted by Google is rendered possible by the sociotechnical relations organized by the Books project.

Google Books as Infrastructure

An infrastructure "…seeks to be a persistent set of resources that can also support the ongoing daily activities of heterogeneous actors" (Ribes & Polk, 2012, p. 254). These resources include some combination of the technological (tools and technologies), the technical (classifications and standards), and the social (work and communication practices). Infrastructure is not, however, merely a static thing or set of things—it only emerges in practice as a "when," not a "what," occurring "when local practices are afforded by a larger-scale technology, which can then be used in a natural, ready-to-hand fashion." (Star & Ruhleder, 1996, p. 4-6). Following Star and Ruhleder (1996), infrastructure occurs along a series of interrelated dimensions: embeddedness, transparency, reach or scope, learned as part of membership, links with conventions of practice, embodiment of standards, built on an installed base, and becomes visible upon breakdown (for a more detailed exploration of these dimensions, see Star & Ruhleder, 1996, p. 5-6). Using these dimensions as a guide, this examination seeks to articulate Google Books *as infrastructure*—that is, as a set of relations mobilized in practice. For example, Google Books is "embedded" in existing technological structures; it is "sunk" into and dependent upon other networks (technological, economic, and political). It also shapes and is shaped by communities of practice, as its scanning initiative is informed by the practices of its partner institutions—in particular, research libraries—and, in turn, informs and overcomes these localized practices by making collections accessible beyond the confines of a single publisher or library.

Practice-dependent Accounts of Justice and Infrastructural Inversion

In this work, the author relies on a practice-dependent account of social justice in the Rawlsian tradition (James, 2005; Sangiovanni, 2008; Ronzoni, 2009).[1] On a practice-dependent account, "existing institutions and practices…play a crucial role in the *justification* of a conception of justice rather than merely its *implementation"* because the "content, scope, and justification of a conception of justice depends on the structure and form of the practices that the conception is intended to govern" (Sangiovanni, 2008, p. 138). The practice-dependent interpretation commonly takes two forms: "cultural conventionalism" and "institutionalism." Cultural conventionalism seeks to understand how "social goods…acquire value and meaning from the culturally distinct practices through which they are distributed" (Sangiovanni, 2008, p. 138). These values and meanings, according to the cultural conventionalist, inform and constrain the development of principles of justice. Institutionalism, on the other hand, focuses not on cultural meanings but on shared social and political institutions. "Social and political institutions," the institutionalist argues, "fundamentally alter the relations in which people stand, and hence the first principles of justice that are appropriate to them" (Sangiovanni, 2008, p. 138).

This analysis, however, resists both the cultural conventionalist and institutionalist frameworks in order to advance a practice-dependent account of social justice that might best be called an "infrastructuralism." Following insights from social justice theorists as varied Hume (1777/1975), Rawls (1993), O'Neill (2000), and Sen (2009), the author argues that it is neither exclusively cultural convention nor institutions that give rise to obligations of justice, but *infrastructure*. To flesh out an infrastructuralist account, the author relies on the concept of "infrastructural inversion" developed by Geoffrey Bowker (1994) and designed to keep infrastructural elements at the forefront of empirical analyses (see also: Star & Ruhleder, 1996; Bowker & Star, 1999; Lee, Dourish, & Mark, 2006). Briefly, infrastructural inversion is "…a struggle against the tendency of infrastructure to disappear (except when breaking down). It means learning to look closely at technologies and arrangements that, by design and by habit, tend to fade into the woodwork…" (Bowker & Star, 1999, p. 34). This approach serves to keep morally relevant features of the sociotechnical system in question—in this instance, the Google Books project—from "fading into the woodwork" during the course of the analysis.

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[1] Importantly, this work takes practice-dependence as its starting point. In doing so, it sets aside debates between practice-dependent and practice-independent accounts of justice. Such debates are important, but fall outside of the scope of this paper.

Google Books as Infrastructure of In/Justice

Undertaking a practice-dependent analysis of Google Books according to a conception of social justice requires conceptualizing the project not as a "thing stripped of use," but as infrastructure. In the process, the focus shifts from one that conceives of the service as a "what"—that is, as a tool for information access—and, instead, towards understanding Google Books as a "when," occurring, following Star and Ruhleder (1996) "when local practices are afforded by a larger-scale technology" (p. 6). Consequently, this reconceptualization affords an examination into whether or not the "egalitarianism of information" touted by Google is rendered possible by the sociotechnical relations organized by the Books project. In doing so, the author advocates for conceiving of sociotechnical infrastructures not as mere tools, but as potentially just or unjust things that actively mediate issues of moral and political concern.

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