

THE USE OF SOCIAL MEDIA TO DISSOLVE KNOWLEDGE SILOS IN GOVERNMENT

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Knowledge sharing in the public sector is mostly regulated through rules, a clear sense of hierarchy with fixed reporting structures, standard operating procedures, and laws that tend to restrict the free flow of information across organizational boundaries. The result is that information produced in one agency might not be available to entities in other corners of the overall system. This can and often does lead to reinventing the wheel and the fact that innovative knowledge is detained within knowledge silos (Noveck 2009). Consequently, ideas that might meet the knowledge needs of several similar stakeholders in government are prevented from spreading through the whole system.

Social media tools are challenging this traditional “need to know” information-sharing paradigm (Dawes, Cresswell, and Pardo 2009) and are increasing the degree of participation of all stakeholders in the process of creating, maintaining, sourcing, and sharing knowledge. The resulting—partially informal—emerging interactions between the public and government itself are creating opportunities for increased transparency, accountability, participation, and collaboration (Orszag 2009). Moreover, social media tools are potentially disruptive and might have transformative effects on knowledge sharing that have not been fully covered in the public administration literature (Mergel, Schweik, and Fountain 2009).

UNDERSTANDING INFORMATION SEEKING AND SHARING IN THE PUBLIC SECTOR

In the public sector, we are usually operating within traditional bureaucratic interactions bound to predefined federal, state, and local levels, and to departmental or even team boundaries, with very clearly divided tasks and reporting structures. The nature of the tasks to be accomplished is usually so complex that they need to be divided into fine-grained and independent components that can be treated separately while still contributing to the overall objective of the task: service delivery to the public (Simon 1982). As Blau and Scott (1962, 7)

point out, “The larger the group and the more complex the task it seeks to accomplish, the greater are the pressures to become explicitly organized.” This bureaucratization has led to very elaborate rules and regulations that every member of the organization must follow. The free sharing of information is restricted, and legal and policy constraints highly regulate distribution, storage, and usage.

Hierarchies have proven to be inefficient in many ways when it comes to searching for information: Hierarchical organizational structures restrict vertical information sharing to predefined categories within single entities of the traditional service delivery model (Blau and Scott 1962; Eggers 2005). Everything beyond structured information that is not systematically covered disrupts regulated information flows and needs to be absorbed by other information-sharing mechanisms, such as informal networks or market mechanisms (Powell 1990), and even ad hoc bazaars without any rules at all (Demil and Lecocq 2006). From the management literature we know that not all the knowledge needed to perform certain tasks and to solve problems confronted by government actors is readily available within a single organization. On the contrary: Knowledge is only codifiable to a certain extent—and not everything that an organization knows is searchable in databases, handbooks, manuals, and standard operating procedures, or by experts within the focal agency (Anand, Glick, and Manz 2002; Grant 1996). Especially when it comes to knowledge—that is, information that is relevant, actionable, and in part based on experience—its transfer is difficult and flows mostly through informal processes such as socialization and internalization (Morrison 2002; Nonaka and Takeuchi 1995, 1996).

Prior research on knowledge sharing and advice seeking has shown that seeking knowledge from others has clear informational benefits, such as access to solutions, metaknowledge, problem reformulation, validation, and legitimation (Cross, Borgatti, and Parker 2001). This is in part the reason why members of an organization often rely on knowledge from external third parties and must reach out to their informal network contacts (Anand, Glick, and Manz 2002).

Both informal and formal networks of professionals help to access knowledge to conduct the tasks within a professional environment that is not accessible in codified form due to its highly intangible and tacit nature (Cross, Rice, and Parker 2001; Kram and Isabella 1985; Morrison 2002). To break up the resulting knowledge silos, social media tools can help to support horizontal and vertical information-sharing needs.

TOWARD THE SOCIAL WEB: A NEW INFORMATION-SHARING PARADIGM IN THE PUBLIC SECTOR

In the public sector, we see more and more new types of information production and sharing tools that are emerging in form of grassroots developments:

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so-called social media, Web 2.0 tools, or the “Social Web.” These are tools that are used in digital environments in which contributions and interactions among all stakeholders are enabling a high degree of collaborative knowledge creation and sharing (for more detailed overviews, see, e.g., Chang and Kannan 2008; O’Reilly 2005; Sternstein 2006). These are Web applications that emerged in private settings outside any business or government context. They are rapidly making their way into the public sector (O’Reilly 2007). Among those tools are, for example, the photo sharing website Flickr; video publication sites like YouTube; social networking sites, such as Facebook or LinkedIn; microblogging tools, such as Twitter; and forecasting and prediction markets such as Intrade.com.

Especially during Barack Obama’s presidential campaign, these (usually free) applications showed that a traditional top-down approach was no longer needed—volunteers self-organized with the support of a knowledgeable campaign team and the use of collaborative social media tools (Eggers and Dovely 2008). Their success is attributed to bottom-up mobilization and the willingness to provide knowledge and insights with a minimum of regulatory and bureaucratic control mechanism (Surowiecki 2004). Supporters and new voters were reached “where there are”—on social networking services, instead of traditional town hall meetings.

A prominent example in the public sector is Intellipedia, often called the Central Intelligence Agency’s Wikipedia (Lawlor 2008b; Andrus 2004), which was started by the Office of the Director of National Intelligence and is designed to collaboratively capture all knowledge available by content area across all sixteen intelligence agencies in the United States. Users have access on three different security levels, and knowledge areas are connected to knowledge specialists using a design component called “bread crumbs” in order to identify experts, access a wider knowledge pool more efficiently, and ultimately reach a more informed level of decision accuracy. The goal is to integrate knowledge created on the vertical as well as the horizontal levels across different agencies within government to break up knowledge silos and build a basis for improved decision making using a wiki application. The information-sharing environment is supported by a host of Web 2.0 applications, such as iVideo, blogs, shared documents, collaboration spaces, and photo galleries.

Similarly prominent wikis include Diplopedia in the State Department (Cohen 2008), and Techpedia in the Department of Defense. U.S. Army soldiers in the battlefield have implemented wiki technology to speed up peer-to-peer information about battlefield conditions and the initial concerns by higher-level officers about the break in chain-of-command information flow or the loss of control over the message. Other social media tools include online social networking sites, modeled on Facebook or LinkedIn. NASA launched a social networking site for employees called Spacebook (Mosquera 2009), and the intelligence community is using A-Spaces to connect their employees (Shaughnessy 2008). These examples of increased collaboration in

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unlikely environments such as the highly regulated and compartmentalized command-and-control culture of the intelligence community can serve as a model for other cross-organizational collaboration and might move government from a need-to-know to a need-to-share information paradigm.

The Obama administration is promoting a new Open Government Initiative that allows the public to use data sets produced by the federal government (www.whitehouse.gov/open), and it has produced a few remarkable initiatives (e.g., data.gov and the IT Dashboard to monitor information technology expenses, it.usaspending.gov). Data provided there can be used with Google Maps to be mashed up with public transit schedules (McGray 2009), or flu search terms on Google can be used to predict virus epidemics and help to inform the public (Ginsberg et al. 2008; see also www.google.org/flutrends). Recently, social media tools have proven to be helpful in aggregating political information during the Iran election protests (Morozov 2009a), or the so-called Twitter Moldova Revolution (Morozov 2009b). In addition, more and more government agencies are using the multiplayer tool Second Life for online meetings in order to reduce travel and coordination costs. Second Life is also used as an informal collaboration space for municipal chief information officers (e.g., see MuniGov2.0 on CitizenServices.gov 2009).

These examples show that social media tools in the public sector create opportunities to enhance transparency, communication, and collaboration in government, and might promote deeper levels of civic engagement (Hinchcliffe 2006). This technological transformation is challenging the existing bureaucratic information paradigm. Social media tools can help to serve as organizational anchors for a higher degree of integration and inclusion of alternative knowledge sources and information acquiring techniques. So far new knowledge has mainly been created by a small number of early activists, and the trend can therefore still be labeled as a grassroots movement, following the Rogers (1995) diffusion curve to create public value. These new forms of information sharing open up possibilities for further research to understand the behavioral aspects of why public-sector employees on all levels, but also citizens, are willing to share their knowledge.

CRITICISM OF THE CURRENT STATE OF PUBLIC ADMINISTRATION

The current trend of social media applications and the rising expectations of citizens is pressuring government into understanding the implications for the existing ways knowledge is created and shared in the public sector. The current trend of social media applications and the rising expectations of citizens are pressuring government to understand the implications of the new ways in which knowledge is being created and shared in the public sector.

As with all new trends and initiatives, there is the potential for unknown outcomes, including the creation and diffusion of unexpected practices and underestimated relationships between evolving practices and policy requirements. So

far, the public administration literature has mainly focused on (large scale) e-government projects and their contribution to increase the reach and performance of electronic service delivery. Research on e-government itself is still at an early stage and has so far not supported many of the expected outcomes (cost savings, downsizing, etc.) that the claims of the e-government literature has promised (Moon 2002). The public administration literature has not yet picked up on the new wave of social media tools in the public sector. The examples mentioned above clearly show advantages for collaborative participation to improve efficiency and service for citizens and for the potential for a higher degree of transparency and collaboration (Lawlor 2008a). Ethical issues have to be considered when using social media tools in unanticipated contexts. Public participation in knowledge creation through blogs, wikis, and the use of publicly available data creates additional problems of data handling complexity, privacy issues, and responsibility of data provision and usage and records management that might be underestimated and need to be addressed in appropriate ways.

RECOMMENDATIONS FOR THE FUTURE OF THE FIELD

So far, relatively little research has been conducted in public administration to understand how intra-, inter-, and extraorganizational informal knowledge-sharing tools are applied and effectively used for information-sharing purposes in the public sector. New research needs to focus on the emerging interactions and the content of interactions in order to understand what technological structure might support what kind of knowledge-sharing needs (Morris and Moon 2005). The traditional bureaucratic context is currently extended with a parallel technological structure in which public-sector employees as well as citizens are voluntarily engaging to create and share public knowledge—and the managerial implications and challenges are slowly emerging.

The social media phenomenon has created a need for innovative research approaches in public administration to understand the underutilized resources of these emergent interactions and voluntary contributions in which citizens and public-sector employees are engaging (Surowiecki 2004; Watts 2007; Mergel, Lazer, and Binz-Scharf 2008). Social science itself is lagging behind in collecting and analyzing large-scale behavioral data, such as information created on political blogs or the content and contacts created on social networking sites (e.g., government Facebook groups). New forms of research, such as social network analysis, can help us to explain these informal dynamic structures and their content (Borgatti et al. 2009; Lazer et al. 2009). This will help scholars in public administration understand the empirical phenomena, become more expedient in interacting with students and practitioners, and stay relevant as researchers.

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