Social Technologies and Knowledge Sharing within and across Organizations

Mohammad Hossein Jarrahi
Syracuse University
School of Information Studies
Syracuse NY 13244, USA
+1 315 443-5504

mhjarrah@syr.edu

ABSTRACT

This doctoral research empirically investigates the role of various social technologies in informal knowledge sharing practices within and across organizations. Social technologies include both (a) traditional social technologies (e.g., email, phone and instant messengers) and (b) emerging social networking technologies commonly known as social media such as blogs, wikis, major public social networking sites (i.e., Facebook, Twitter and LinkedIn), and enterprise social networking technologies employed behind a firewall. Building from sociomateriality research, I study how these social technologies, as a suite of tools, are used in combination. The primary outcome of this research is a more complete conceptualization of the role and value of various social technologies for knowledge sharing in organizational contexts, which still remains understudied within the CSCW arena.

General Terms

Management, Human Factors

Keywords

Social technologies, Social media, Sociomateriality, Knowledge sharing, Informal ties.

1. INTRODUCTION

This research is motivated by the confluence of two broad phenomena: the importance of informal knowledge-sharing in organizations and the rapid rise in both the number of and users of social technologies. Organizations have long benefited from traditional social technologies such as phone and email, so there is an expectation that they are also likely to benefit from newer social technologies. The emergence of social media has encouraged new possibilities for organizational knowledge sharing. Recent studies have made it clear that social media uses offer opportunities for collaboration and social exchange, and are well positioned to augment and extend interpersonal social ties [7; 10].

Social technologies are increasingly pervasive in our personal life and are becoming ever more common aspects of corporate life. The push towards growth in social technologies usage has come from outside formal organizations, and much of the early use of these platforms was by young people and students. As a result, most research on the uses of social technologies focuses on non-organizational or explicitly social contexts, with a particular emphasis on teens and student's uses [e.g., 2; 6]. To date, few CSCW or organizational studies have investigated the adoption of these social tools in the workplace. Examples are studies of wikis [e.g., 4], blogs [e.g., 5], corporate social networking sites [e.g., 11] and public social networking sites such as LinkedIn and Facebook [e.g., 10]. These studies of organizational impacts of social technologies, however, have primarily focused on a single tool in isolation. While they offer insight into organizational implications of a specific tool, they tend not to investigate how these technologies are used in combination.

With the advent of diverse sets of information and communication technologies (ICTs), people increasingly draw on a suite of technologies, rather than a single tool [12]. Empirical evidence shows that in most organizations today people interact with multiple ICTs, and the interactions among people and tools and among tools themselves cannot be examined in isolation [1]. In this context, social technologies work in concert, rather than alone, to meet different communication and knowledge sharing needs. Addressing this gap in the CSCW research, this work seeks to raise our understanding of the role of social technologies as a suite of tools. In doing so, it explores how organizational members interact with different social technologies at their disposal. To this end, the primary research question is:

- How do knowledge workers use social technologies as a whole (or in combination) to support their informal knowledge practices?

2. THEORETICAL FOUNDATION

To understand the relationships between social technologies and knowledge-sharing practices, I build from the sociomateriality research that offers up a unique view on technological affordances. Central to this view is the thesis that technological affordances, what technologies achieve in practice, can only be understood by focusing on their material performance which is always enacted by humans in practice [9].

Sociomaterilaity view treats knowledge and practice as mutually constitutive. Following this focus on social practices, the unit of analysis for this study is knowledge practices. This focus enables us to explore "effective loop of insight, problem identification, leaning, and knowledge production." [3, p. 202].

3. METHODS

This exploratory effort is a field-based study focusing on the ways in which knowledge workers use social technologies to advance their work. The main source of data is interviews. Informants for

this study were selected based on the similarity of their work context and their ability and willingness to provide key information. To date, the interview informants are a purposive sample of 54 people who hold knowledge-intensive roles in a few large management consulting firms in the US. These organizational settings are considered extreme contexts as archetypes of knowledge-intensive environments which allow a better understanding of the use of social technologies in informal knowledge sharing and are better positioned for theory building effort. This is a form of theoretical sampling in which we choose cases which are likely to replicate or extend the emergent theory.

Through the interviews, the role and value of social technologies for organizational knowledge sharing were examined by focusing on the ways they may augment or extend organizational members' access to various sources of knowledge. I supplement these with secondary data collection that includes trace data of social technologies uses and relevant organizational and personal documents. The system level analysis allows me to observe the way informants employ public social technologies such as Twitter and LinkedIn in their knowledge practices. I particularly look at the user's postings and activities on these websites. The analysis of personal and organizational documents also offers an understanding about the way consulting firms regulate the use of social technologies, and relevant rules and policies.

In moving forward, I will begin a set of micro-studies to better understand daily practices of consultants and their uses of social technologies. To do this, I will shadow several participants by spending multiple hours observing them do their work. My observations will focus on their knowledge sharing activities and the use of social technologies in their work.

Data analysis is ongoing and inductive as I look for interesting concepts, leads, and issues. As these themes take shape, it will also be informed by concepts from sociomateriality research, providing me with a basis for capturing the informal knowledge practice enabled by the use of social technologies.

4. PRELIMINARY FINDINGS

Findings to date highlight five knowledge practices: (1) expertise locating, (2) expert locating, (3) reaching out, (4) socializing and (5) horizon broadening. Each practice is identified based on an underlying knowledge problem, and supported by multiple social technologies. In this way, for conducting each knowledge practice, people commonly have multiple technological options; therefore the affordances of each social technology for different knowledge practices are meaningful only in relation to other options.

Two significant dimensions of the relationships among the social technologies are *competition* and *interoperability*. The social technologies compete with one another for relevance as organizational members constantly evaluate their functional capabilities and perceive one more effective in supporting interactions. In addition, while various social technologies are often articulated as independent and discrete technologies, the interoperability of these tools in day-to-day practices makes such distinctions less meaningful. In the face of certain knowledge problems, people may take advantage of the differing capacities of various social technologies. These combinatory uses could be concurrent or sequential, meaning that knowledge workers may pair technologies simultaneously and sequentially.

5. CONTRIBUTIONS

My dissertation will make two contributions. First, findings provide holistic understanding of roles and uses of social technologies in supporting informal knowledge sharing within and across organizations. This study advances our conceptual insight regarding the affordances of different social technologies as a suite, delineating how their uses are enacted relative to other technological options. Second, this work advances the current conceptual status of ICTs relative to interpersonal social networks. Within the CSCW domain, most studies have traditionally focused on the group level analysis. This work contributes to the CSCW scholarship as it focuses on personal networks. Several researchers have highlighted the importance of the assemblage of people found through personal networks and informal practices in studies of collaborative technologies [e.g, 8].

6. REFERENCES

[1] Bélanger, F. and Watson-Manheim, M.B., 2006. Virtual teams and multiple media: Structuring media use to attain strategic goals. *Group Decision and Negotiation 15*, 4, 299-321.

[2] boyd, d., 2008. Taken Out of Context: American Teen Sociality in Networked Publics University of California-Berkeley.

[3] Brown, J. and Duguid, P., 2001. Knowledge and organization: A social-practice perspective. *Organization Science 12*, 2, 198-213.

[4] DeLuca, D., Gasson, S., and Kock, N., 2006. Adaptations that virtual teams make so that complex tasks can be performed using simple e-collaboration technologies. *International Journal of e-Collaboration 2*, 3, 65-91.

[5] Efimova, L. and Grudin, J., 2007. Crossing boundaries: A case study of employee blogging. In *Proceedings of the HICSS* (2007), 86-86.

[6] Hewitt, A. and Forte, A., 2006. Crossing boundaries: Identity management and student/faculty relationships on the Facebook. *Poster presented at CSCW*.

[7] McAfee, A., 2006. ENTERPRISE 2.0. *MIT Sloan management review 47*, 3, 21.

[8] Nardi, B., Whittaker, S., and Schwarz, H., 2002. NetWORKers and their activity in intensional networks. *Computer Supported Cooperative Work (CSCW) 11*, 1, 205-242.

[9] Orlikowski, W.J. and Scott, S.V., 2008. Sociomateriality: Challenging the Separation of Technology, Work and Organization. *The Academy of Management Annals 2*, 1, 433-474.

[10] Skeels, M.M. and Grudin, J., 2009. When social networks cross boundaries: a case study of workplace use of facebook and linkedin. In *Proceedings of the GROUP'09*, ACM, 95-104.

[11] Steinfield, C., DiMicco, J.M., Ellison, N.B., and Lampe, C., 2009. Bowling online: social networking and social capital within the organization. In *Proceedings of the The fourth international conference on Communities and technologies* (2009), ACM, 245-254.

[12] Turner, T., Qvarfordt, P., Biehl, J.T., Golovchinsky, G., and Back, M., 2010. Exploring the workplace communication ecology. In *Proceedings of the CHI* (2010), 841-850.