Understanding the Value of Reputation Systems in Enterprise Social Media (ESM)- Mutual Influence Between Online and Offline Performance

Research-in-Progress

Dorothy E. Leidner
Baylor University and Lund University
One Bear Place # 98005
Waco, TX 76798-8005
Dorothy_Leidner@baylor.edu

John F. Tripp
Baylor University
One Bear Place # 98005
Waco, TX 76798-8005
John_Tripp@baylor.edu

Sixuan Zhang
Baylor University
One Bear Place # 98005
Waco, TX 76798-8005
Sixuan_Zhang@baylor.edu

Abstract

One major concern that organizations face when deploying Enterprise Social Media (ESM) platforms is that of how to encourage employees' engagement within the system. Reputation systems that gamify the adoption process are incorporated into many ESM to inculcate employee engagement with the ESM. This study seeks to understand the dynamic between employees' online and offline performance by examining the research question: What are the impacts of reputation systems on the mutual influence between employees' online performances in ESM and their offline performances such as job performance? We take a performative view of online and offline identities and utilize "embodied entities" to connect the offline performance and online performance. The research will conduct a mixed-method case study to examine ESM and reputation system use in a large international organization. This RIP will present the motivations, theoretical framework, research model, and intended research design.

Keywords: Enterprise social media, reputation systems, online and offline performances, embodied entities

Introduction

When trying to coordinate the action of people who are geographically and temporally distributed, challenges emerge such as identifying, aggregating and utilizing valuable information, leveraging expertise, and generating innovative ideas from individuals (Maznevski & Chudoba, 2000). Some of the latest technologies that have arisen to address these challenges are open collaboration tools such as blogs, wikis, instant messaging and video conferencing. Increasingly these tools which were originally consumer-focused have been assimilated internally by organizations, helping to create an internal social collaboration platform for organizations (Kane, Alavi, Labianca, & Borgatti, 2012). While organizational adoption of these tools was initially distributed and organic, companies have recently attempted to create centralized, multi-functional social collaboration platforms that unify the social collaboration tools of the organization (Leonardi, Huysman, & Steinfield, 2013). These Enterprise Social Media (ESM) platforms are intended to support distributed work, virtual teams, and projects that span departmental, hierarchical and organizational boundaries (Majchrzak, Faraj, Kane, & Azad, 2013). According to Gartner, 50 percent of large companies will partially or fully adopt ESM by 2016 and 30 percent of organizations view this technology as quickly becoming as indispensable as email and telephones (Gartner, 2013).

One major concern that organizations face when deploying ESM is that of how to encourage employees' engagement with the system. Gamification is increasingly being used in ESM in order drive employee engagement (Farzan, DiMicco, Millen, Dugan, et al., 2008). ESM reputation systems assign different point values to different activities, tracks all the ESM activities conducted by each employee, and rewards employees with points and badges for their ESM activities (Farzan et al., 2008). Employees may participate in the ESM activities for the purpose of earning points and badges, competing with each other, or trying to climb to the top of a reputation leaderboard, which is visible to all users and management. In addition, organizations may also use the reputation system to encourage employees to conduct desired ESM activities (e.g. sharing knowledge) by assigning higher points and badges for desired ESM behaviors. (Thom, Millen, & DiMicco, 2012).

Organizations expect that employees who perform behaviors that are encouraged by the reputation system will also behave in similar fashion in their daily work (Hinchcliffe, 2011). For example, it is possible that employees who receive "Team Work Thanks Badges" from their colleagues for their cooperating behaviors in ESM will become more cooperative with their colleagues in offline daily work. Organizations also expect employees with high job performance to continue high online performance in ESM. For example, organizations encourage high job performance employees to share their valuable work knowledge and skills in ESM via online behaviors such as commenting on others' posted questions and uploading useful documents, both of which can be encouraged by the reputation system. Thus, it is possible that there are mutual influences between employees' online and offline behaviors and performance that are mediated by the reputation system in the ESM. This study seeks to understand the dynamic between employees' online and offline performance by examining the research question: ***What are the impacts of reputation systems on the mutual influence between employees' online performances in ESM and their offline performances?*** This research will conduct a mixed-method case study to examine ESM and reputation system use in a large international organization. This mixed - method case study will include analysis of actual system use data, survey data, and interview data, as well as employee performance evaluation data all from a single case organization. In the next section, the paper will present the theoretical frameworks and the research model that will investigate the research questions. In the final section, the current paper will provide the intended research design for the study.

Theoretical Development

We preface our theoretical framework development with our research model illustrated in Figure 1. As shown in Figure 1, offline performance refers specifically to employees' job performance and process performance while online performance is defined as the extent to which employees engage in the ESM behaviors desired by the organization. Those behaviors are assigned a number of points in the reputation system. The construct that links an employee's online and offline performance is "embodied identity," defined as "who we are as a result of our interactions with the world around us with and through our bodies" (Schultze, 2014, p. 84). The concept proposes that human identities lie within individuals' bodies,

their minds and also in the artifacts with which they interact (Talamo & Ligorio, 2001). When adopting the concept to examine the mutual influence between individuals' online and offline performances, specifically to the ESM context, the concept presumes that the physical and digital identities of ESM users are "symbiotically united" and that their on- and offline performance will function together to shape the combined, embodied identity (Schultze, 2014). Both online and offline performance are likely to shape a user's embodied identity while the embodied identity also drives on- and offline performances. In other words, users' online performances are likely to influence their offline performances by shaping embodied identity, and vice versa. In this theoretical framework, ESM users are viewed as "cyborgs" (Haraway, 1987), as a hybrid of machine and organism in which users' existence has extended from the real world to digital world and their embodied identities are constructed and shaped by mundane practices both online and offline (Bell & Kennedy, 2000). Next, we will discuss the core construct in our research model – embodied identity -- starting with different views of online and offline identities.

Figure 1. Research Model
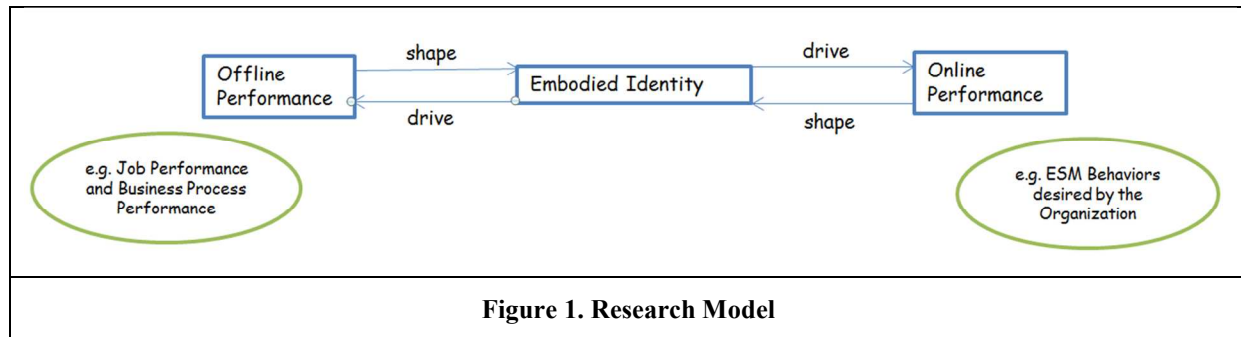
A Representative View of Online and Offline Identities

By assigning different point values to different ESM behaviors and publishing a reputation leaderboard based on employees' earned points, reputation systems may drive employees to conduct certain behaviors desired by an organization. Employees may intentionally carry out certain online behaviors which reflect their online identity in order to rank highly in the reputation leaderboard, build a high reputation and enhance their images. Such intentionality indicates that an individual's conscious self is intentionally directing his online behaviors (Schlenker, 1980) and a "representational" online identity is acted out by an active human agency to create certain images (Gregson & Rose, 2000). In other words, employees' online identities in the ESM are directed by their physical/offline identities. The above arguments are based on such a representative view of online identity (Schultze, 2014). ESM user's offline identities are represented but yet separated from their online identity. Users get involved in online identity performance in order to define who they are online and to reflect who they are offline (Harrison & Thomas, 2009).

The representative view of online identity implies a unidirectional relationship between ESM users' offline identities and their online identities with the ESM profile in the reputation system serving as a tool for the user to present himself (Schultze, 2014). In the initial adoption period of the reputation system, claims of such unidirection are tenable because users' online identity is immature and beliefs and perceptions from offline identity are needed to direct online identity performance. As users carry out more ESM behaviors encouraged by the reputation system, the virtual experience starts to deliver beliefs, attitudes, expertise and even personhood from the virtual to the real world and users' experience and behaviors in the real world will begin to imitate those in ESM (Schultze & Orlikowski, 2010). For example, users who are responsive in commenting and answering other users' questions in ESM will get an amount of "comments" points and "thanks-badges". Their high ranks in the "comments" leaderboard may indicate to others that they are helpful persons and those thanks-badges may make them more confident in helping others to solve work-related questions. Virtual experience in ESM and the reputation system may drive them to put more effort into helping other employees in their offline daily work. In such situations, an assumption of stable offline identity and fixed boundaries between online and offline identities is not held while phenomena of mutual fusion of people and technologies and inseparable online and offline identities are present (Barad, 2003).

Existing literature on identities in virtual worlds has already illustrated such a dynamic between online and offline identities. For example, laboratory studies by Bailenson and Segovia (2010) demonstrated the effects of virtual experience of "Doppelganger," a virtual version of the offline self which is independent of the users, on individuals' behaviors in the real world context such as health communication, marketing, and memories. Individuals' behaviors in real worlds mirrored their experience as Doppelgangers in a virtual world. Similarly, in her study of identity performance in virtual worlds, Schultze (2014) found that users in the virtual world intentionally represented in their online entities (avatars) some of the attributes of their offline identity (a *representative* perspective). Users' engagement in the everyday, habitual behaviors in the virtual world impact not only how they carry out other online performance but also how they perform in the real world (a *performative* perspective) (Schultze, 2014). Consistent with these studies, our paper will adopt a performative perspective to answer the research question.

A Performative View of Online and Offline Identities

A performative perspective views reality as being continually constructed by mundane practice (DeKoven, 2001). In such a view, the world is not composed of ontologically disjointed domains where independent entities with inherently determinate properties and fixed boundaries coexist, but of phenomena that construct certain relational and contextual domains, identities, and boundaries (Barad, 2003). More specifically, a performative perspective rejects virtual worlds as fixed and determined platforms through which people's offline identity is represented by online identity, instead claiming the fluid and concurrent intermingling of on- and offline spaces, entities, and experiences (Hardey, 2002). When studying information technologies, a performative perspective would shift the focus away from whether or how humans adopt technologies to pursue certain goals, to a focus on the mechanisms under which humans and technologies interact to generate certain dynamics. With its focus on practice, experience, fluidity, and enactment, a performative perspective may thus provide effective guidance for research on behaviors and performance in virtual and real worlds (Schultze & Orlikowski, 2010).

Recently, such a perspective has been gaining popularity in IS research to investigate identity performance (e.g., (Bailenson & Segovia, 2010; Campbell, 2014; Hardey, 2002; Schultze, 2011, 2014; Turkle, 2012). Scholars have indicated that a performative lens offers considerable analytical power in being able to view online and offline identity as not independent but as being constructed and shaped together by mundane, discursive and emergent practices. Following such a perspective, the "embodied identity" (Schultze, 2014) was adopted as the central construct in our theoretical framework (Figure 1). Such a construct is suitable for the current study because in the workplace, employees' online profiles in the reputation systems and the ESM are easily identified by others and correspond to their offline identities: employees use their real names and authentic photos in their accounts and input true information (e.g. an employee' job title, email address and professional skills) in their personal profiles. In such situations, the embodied identity construct is especially valuable to connect the users' online performance in the reputation system and the ESM system to the users' offline performance in the workplace, such as job performance and business process performance.

In order to better understand the ways in which embodied identity influences and is shaped by online and offline work performance, a mixed-method case study of the reputation management system in the ESM of a large, multinational organization that is a worldwide leader in the building materials industry will be undertaken.   The research design is presented next.

Research Design

Research context

With around 44,000 employees spanning 50 countries in North America, the Caribbean, South America, Europe, Asia, and Africa, the target company (ConstructCo) introduced its internal ESM in 2010. The ESM is based on the IBM Connections Enterprise Social Networking platform, and extends that platform's core capabilities to infuse social technology and capabilities into numerous business process contexts such as project management and project funding (Figure 2). The impetus behind the deploying of the ESM companywide was to meet the demands of a new type of workforce, one that is global, dispersed and empowered. The ultimate vision was to maintain ConstructCo's market leading position through a strong commitment to innovation and to building deeper relationships with, and between, its employees by letting employees with similar goals share ideas, information, experience, expertise and best practices.

In the past years, hearing and witnessing many successful stories by using the ESM to address business challenges through better collaboration, executives in ConstructCo have gradually realized the potential and power the ESM has in increasing value and improving the company's competitive edge. They are expanding the ESM network, encouraging use, creating communities, and making use of the functionality if offers. As a key component of their efforts, ConstructCo incorporated the reputation system with the ESM in 2012. The introduction of the reputation system has largely increased employees' use of the ESM with a steadily growing adoption rate from 2000+ active communities in Jan 2013 to 3692+ active communities in Mar, 2015 (Company Report: "ConstructCo Global Collaboration and Innovation Strategy," 2015).
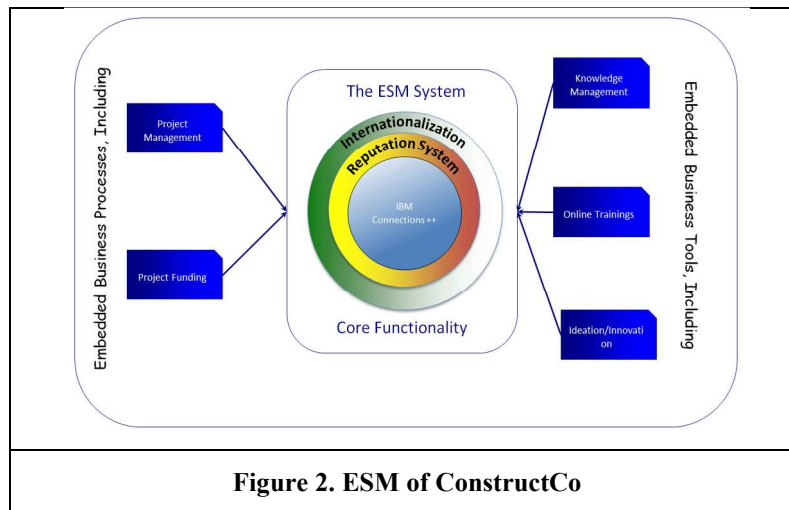

Figure 2. ESM of ConstructCo

Research Approach

The adoption of the "embodied entity" in the theoretical framework of our research question reflects a view of the online and offline world as interacting open systems. A primary focus of the current research is to use the empirical data from the observed or experienced events to identify the mechanisms that determine those events (Volkoff, Strong, & Elmes, 2007). That is to say, we will focus not only on causality from relationships among different events but also the process and conditions under which causality happens (Zachariadis et al., 2013). In order to answer our research question, a mixed method case study with users from the ESM and the reputation system in ConstructCo will be conducted. We utilize mixed methods combining qualitative and quantitative methods in the current study for the following reason: although we will collect quantitative performance measurements to identify mutual influence between employees' online and offline performance, qualitative data are needed to identify the mechanisms that determine the way in which ConstructCo ESM users' online performance and offline performance influence each other by shaping and constructing the embodied identity (Venkatesh etal., 2013).

A main goal of the current study is to identify the external and contingent factors under which employees' online and offline performance influence each other. Thus, before the primary qualitative and quantitative data collection process, interviews with a specific group of participants will be carried out and secondary data about the history and current situation of ConstructCo will be gathered in order to establish the extrinsic conditions such as a specific historical period or a particular geographical region and intrinsic conditions and qualitative variations such as cultural and technological changes (Zachariadis et al., 2013). Users' actual ESM use data, by defined time period, will be collected. More specifically, system reports that contain, by day, and by user, system usage data per the type of "action" that a user can complete in the system will be collected. In addition, reputation profiling "scores" and "ranks" of the ESM users, by defined time period, will be gathered. We will collect these data for a minimum of six months prior to the study, as well as the duration of the study. Such data will be used to represent employees' online performance. Furthermore, the participants' actual performance appraisal information and process performance tracking metrics will also be collected to represent employees' offline performance. We will request performance evaluation data for a defined group of members for the past three years. The data should be "overall score" as well as comments. Paired comparison will be implemented to illustrate the

mutual influence. Finally, a defined group of participants will be interviewed. Qualitative coding strategies such as open coding, axial coding and selective coding will be used to find the major categories and themes that help to identify the mechanisms.

Potential Contributions

This paper takes a performative view of online and offline identities and attempts to identify the mechanisms that explain the impacts of reputation systems on the mutual influence between employees' online performances in ESM and their offline performances. While previous studies have indicated that mutual influences may exist between individuals' online and offline performances, little attention has been paid to the factors that perpetuate mutual influences. A possible theoretical contribution of the current study is that we identify the impacts of online reputations as well as the design of reputation systems on such influences. In addition, a possible practical implication for companies that adopt ESM is that our findings will provide some guidelines on how to design a reputation system in ESM in such a way as to promote a virtuous dynamic between employees' online and offline performances.

Reference

Bailenson, J. N., and Segovia, K. Y. 2010. "Virtual Doppelgangers: Psychological Effects of Avatars Who Ignore Their Owners," in *W. S. Bainbridge (Ed.), Online Worlds: Convergence of the Real and the Virtual*, Springer London, pp. 175–186.

Barad, K. 2003. "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs*, (28:3), pp.801–831.

Bell, D., and Kennedy, B. M. (2000). *The Cybercultures Reader*, Psychology Press.

DeKoven, M. 2001. *Feminist Locations: Global and Local, Theory and Practice*, Rutgers University Press.

Farzan, R., DiMicco, J. M., Millen, D. R., Dugan, C., Geyer, W., and Brownholtz, E. A. 2008. "Results from Deploying a Participation Incentive Mechanism Within the Enterprise," in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, New York, NY, USA: ACM, pp. 563–572

Gartner, 2013. "Gartner Says 80 Percent of Social Business Efforts Will Not Achieve Intended Benefits Through 2015," Jan 29, 2013. Retrieved from http://www.gartner.com/newsroom/id/2319215

Gregson, N., and Rose, G. 2000. "Taking Butler elsewhere: performativities, spatialities and subjectivities. Environment and Planning D," *Society and Space*, (18:4), pp. 433 – 452.

Haraway, D. 1987. "A manifesto for Cyborgs: Science, technology, and socialist feminism in the 1980s," *Australian Feminist Studies*, (2:4), pp. 1–42.

Hardey, M. 2002. "Life beyond the screen: embodiment and identity through the internet," *The Sociological Review*, (50:4), pp. 570–585.

Harrison, R., and Thomas, M. 2009. "Identity in Online Communities: Social Networking Sites and Language Learning," *International Journal of Emerging Technologies and Society*, (7:2), pp. 109–124.

Kane, G. C., Alavi, M., Labianca, G. (Joe), and Borgatti, S. 2012. *What's Different About Social Media Networks? A Framework and Research Agenda*, Rochester, NY: Social Science Research Network.

Law, J., and Singleton, V. 2000. "Performing Technology's Stories: On Social Constructivism, Performance, and Performativity," *Technology and Culture*, (41:4), pp. 765–775.

Leonardi, P. M., Huysman, M., and Steinfield, C. 2013. "Enterprise Social Media: Definition, History, and Prospects for the Study of Social Technologies in Organizations," *Journal of Computer-Mediated Communication*, (19:1), pp. 1–19.

Majchrzak, A., Faraj, S., Kane, G. C., and Azad, B. 2013. "The Contradictory Influence of Social Media Affordances on Online Communal Knowledge Sharing," *Journal of Computer-Mediated Communication*, (19:1), pp. 38–55.

Maznevski, M. L., and Chudoba, K. M. 2000. "Bridging Space Over Time: Global Virtual Team Dynamics and Effectiveness," *Organization Science*, (11:5), pp. 473–492.

Mingers, J. 2004. "Real-izing information systems: critical realism as an underpinning philosophy for information systems," *Information and Organization*, (14:2), pp: 87–103.

Schlenker, B. R. 1980. *Impression Management: The Self-concept, Social Identity, and Interpersonal Relations*, Brooks/Cole Publishing Company.

Schultze, U. 2011. "The Avatar as Sociomaterial Entanglement: A Performative Perspective on Identity, Agency and World-Making in Virtual Worlds." *ICIS 2011 Proceedings*. Paper 11

Schultze, U. 2014. "Performing embodied identity in virtual worlds," *European Journal of Information Systems*, (23:1), pp. 84–95.

Schultze, U., and Orlikowski, W. J. 2010. "Research Commentary—Virtual Worlds: A Performative Perspective on Globally Distributed, Immersive Work," *Information Systems Research*, (21:4), pp: 810–821.

Social Media and Workforce Collaboration: A Checkpoint - Dion Hinchcliffe's Next-Generation Enterprises. (n.d.). Retrieved from http://www.ebizq.net/blogs/enterprise/2011/11/social_media_and_workforce_col.php

Talamo, A., and Ligorio, B., 2001. "Strategic identities in cyberspace." *CyberPsychology & Behavior* (4:1), pp: 109–122.

Thom, J., Millen, D., and DiMicco, J. 2012. "Removing Gamification from an Enterprise SNS," in Proceedings of the ACM 2012 Conference on Computer Supported Cooperative Wo*rk*, New York, NY, USA: ACM, pp. 1067–1070.

Turkle, S. 2012. *Alone Together: Why We Expect More from Technology and Less from Each Other*, Basic Books.

Venkatesh, V., Brown, S. A., & Bala, H. 2013. "Bridging the qualitative-quantitative divide: Guidelines for conducting mixed methods research in information systems," *MIS quarterly*, (37:1), pp: 21-54.

Volkoff, O., Strong, D. M., and Elmes, M. B. 2007. "Technological Embeddedness and Organizational Change," *Organization Science*, (18:5), pp. 832–848.

Zachariadis, M., Scott, S., and Barrett, M. 2013. "Methodological Implications of Critical Realism for Mixed-methods Research," *MIS Quarterly*., (37:3), pp: 855–880.