MANAGEMENT, ORGANIZATIONAL AND SOCIOMATERIALITY ISSUES IN THE SOCIAL INTRANET ADOPTION AT PIRELLI

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Abstract

The increasing adoption of Social Intranets and other social technologies in organizations are transforming how people work together, share knowledge and learn. This, however, does not come without challenges since the impacts can be heterogeneous: employees' use behavior tend to be motivated by various aspects of factors such as organizational (e.g. leaders' sponsorship and support, organizational climate and culture); technological (e.g. relative advantage, ease of use, perceived security); social (e.g. perceived critical mass and subjective norms) and individual (e.g. reputation and personal attitudes). Also employees' underutilization has become one of the perennial issues. For this reason, several studies have been dedicated to social software adoption and implementation strategies. In this paper, the Social Intranet adoption in Pirelli is analyzed focusing on the co-constitutive entanglement between materiality and social action. This, examining topics like the role of corporate culture; path-dependence versus by design approach; learning capability; level of cross-functional interaction, and the organization's attitude towards the business proposition of Corporate Social Technology and how it can transcends the dualism between the symbolic and the material.

Keywords: Social Intranet, Social Technology, Change Management, Learning Capability, Social Business, Digital Collaboration, Organizational Culture, Organizational Behaviour, IT Adoption, IT Implementation Strategy, Socio-materiality.

1   INTRODUCTION

Organizations are investing in new Social Intranets and other similar tools to create a more efficient way of communication as well as managing and sharing knowledge. The increasing adoption of Social Intranets and other social tools in organizations has the aim of transforming how managing and operating business and achieve results, leading to a new type of business paradigm that is termed 'social business' (Vatrapu 2013).

The adoption of new social tools wants to facilitate and stimulate people to collaborate and share knowledge on a social and voluntary base, which leads to a completely new way of learning, working and organizing (e.g. Leonardi 2011; Treem and Leonardi, 2012, Majchrzak et al. 2013). A many-to-many communication approach is therefore materialized in the social technology thus contributing to the transformation work routines and patterns in the direction of both ordering (emergent practices) and disordering (previous processes) since countervailing processes can be characterized by agility or improvisation, backed by and informal networks. This, however, does not come without challenges since participation is self-organizing, it can take any direction, often with a communication style, in tone and language, far from that of the official and formal voice of the organization.

Since the impacts of corporate social tool usage are heterogeneous, individual employee use of Social Tools is a topic of growing interest (Leonardi et al. 2013; Treem & Leonardi 2012). Empirical studies suggest that employees' use behavior tend to be motivated by various aspects of factors such as organizational (e.g. leaders' sponsorship and support, organizational climate and culture), technological (e.g. relative advantage, ease of use, perceived security), social (e.g. perceived critical mass and subjective norms) and individual (e.g. reputation and personal attitudes, e.g. Denyer et al. 2011; Kügler et al. 2012; Wang et al. 2013). The success of a Corporate Social Tool implementation can be seen when the tools are physically-embodied in the organizational reality and therefore as a result of widespread user adoption. Nevertheless, employees' underutilization has become

one of the perennial issues (Denyer et al. 2011; Wagner et al. 2014).

For this reason, several studies have been dedicated to social software adoption and implementation strategies (e.g. Culnanet al. 2010; Majchrzak et al., 2009; Gallaugher and Ransbotham 2010; Sinclaire and Vogus 2011) examining topics like the role of corporate culture (e.g. Grace 2009, Richter et al., 2011, Rosen, 2009, Frappaolo & Keldsen 2008) and the adequate balance between voluntary participation and control (e.g. Buhse and Stamer 2008). However, according to Frappaolo & Keldsen (2008), no matter what the culture is before and how it will be changed (i.e. learning capability, level of cross-functional interaction, leadership and power spread around the organization, spontaneous or unscheduled interaction, relatively loose hierarchical structures and so on), the ultimate goal in this case should always be to estimate the organization's attitude towards the business proposition of Corporate Social Technology and how it transcends the dualism between the symbolic and the material, focusing on the co-constitutive entanglement between materiality and social action (Barad, 2003; Leonardi et al., 2012). This is linked, for example, with the role of management example by actually using the social tools adopted themselves (e.g. Riemer and Richter 2010) and by not seeing participative tools and open information sharing as a threat of losing control if they encourage learning, active participation and openness.

Furthermore, variables that affect the adoption can be the existence of different user groups - in order to avoid a paradoxical recreation of the silos of the physical organization in the online environment (Lu etal., 2011 Ebersbach and Glaser 2009), as well as "uncertainty avoidance" or "perceived usefulness" (Ribière et al., 2010; Saldanha and Krishnan, 2010). The references to some factors are still limited, such as cultural differences and organization size (Von Krogh, 2012, Saldanha and Krishnan, 2010). Since organizations are ever more investing in Social Intranets tools, an understanding of both prevalence of usage and non-usage among employees is necessary in order to provide organizational management with practical guidelines (Leonardi et al. 2013).

2   THEORETICAL BACKGROUND

This article aims to contribute to the research stream investigating sociomateriality with a focus on information technology in organizations. To this end, we take a theoretical stance which follows the arguments advanced by Leonardi (2013) in favor of a theoretical foundation for sociomateriality based on critical realism (Archer, Bhaskar, Collier, Lawson, & Norrie, 1998) as an alternative to perspectives grounded on agential realism as well as structuration theory. As for critical realism, scholars in organization science (Paul M Leonardi, 2013; Mutch, 2009) as well as in the field of information systems research (Njihia & Merali, 2013) have identified the social ontology at the basis of the morphogenetic approach developed by Margaret Archer (Archer, 1995, 1998) as a suitable ground for i) a relational form of analysis theoretically holding apart agency and structure have to explore their development trajectories over time (Mutch, Delbridge, & Ventresca, 2006, p. 616), and ii) studying stratified connections of organizations and technology (Mutch, 2009; Njihia & Merali, 2013).

According to Archer (1998, p. 375) the analytical dualism of the morphogenetic approach is grounded on the following basic theorems: i) structure necessarily pre-dates action(s) which transform it; ii) structural elaboration necessarily post-dates the actions which have transformed it. Thus, in this perspective agents' interactions are bounded by the structure of the social system they live in, actually

developed from past interactions (*conditioning* at time T^1); consequently they and can only transform it and not produce it (through *social interaction* at time T^2 to T^3), leading to at structural elaboration (*morphogenesis*) or reproduction (*morphostatic*) of the social system (*transformation* at time T^4).

Considering technology, as pointed out by Leonardi (2013, p. 69) adopting the above perspective allows to assume that users are introduced to a technology having a preconfigured and stable

materiality, yet identifying a *material agency* ("the way the object acts when humans provoke it", p.70) predating and bounding social agency.

Furthermore, as noticed again by Leonardi (2013) the material agency of technology may be seen as the *function* of a given technological object, with *matter* and *form* one of key attributes of technology identified by Kallinikos (2012). Under his perspective, by function it is meant the purpose or purposes an object, or a set of objects, fulfills (Kallinikos, 2012, p. 70) and should be distinguished from routines, programs and operating procedures the object supports: for example, as pointed out by Kallinikos (2012, p. 69), a *clock* is a technology and a *schedule* is a program. Yet, together they can be seen as distinct elements of a structure that according to morphogenesis approach, through what Leonardi (2011) indicated as a gradual "imbrication", may reproduce or elaborate a new infrastructure.

Taking this issues into account, we contend that adopting a critical realism perspective on sociomateriality as the one discussed above may contribute to shed light on the drivers, constraints and emergent effects of different platforms for social learning, knowledge sharing and collaboration at corporate level, in particular observing the move from intranets to enterprise social networks. At the state of the art, studies have focused on the explanation of different adoption as well as user patterns of a social intranet and their consequence on social learning, knowledge sharing and networking benefits (Lüders, 2013) or on the role and effects of enterprise social networking technologies on communication visibility (Paul M Leonardi, 2014). However, the imbrication of human and material agencies in enterprise social learning, knowledge sharing and collaboration initiatives is still poorly explored through a general epistemology that "make determinations about how and why the separate "social" and "material" become the "sociomaterial" and persist that way over time", further identifying the implications for organizing (Paul M Leonardi, 2013, p. 74). Thus, the expected contribution is to add an empirical study to the streams of research adopting critical realism or morphogenesis identifying the emerging features of the adoption and evolution of information systems in organizations (Henfridsson & Bygstad, 2013; Paul M. Leonardi, 2011; Njihia & Merali, 2013). Furthermore, the focus on enterprise social networking and collaboration technologies aims to provide an empirical contribution to extend state of the art on their impact on organizational behaviour, with specific insights on learning as well as knowledge and change management practices. In particular, the article may contribute with further empirical evidence from the case of enterprise social networking technology initiatives in a global corporation to the argument by Leonardi (2011) that the routines and technologies are the infrastructure that the imbrication of human and material agencies produce, having characteristics such as flexibility a relevant role.

3 RESEARCH METHOD

In this article we discuss a single case study from, whose rationale is to represent an exploratory case study (Yin, 2009). The study is the result of a qualitative research based on a interpretive approach to field study (Klein & Myers, 1999; Walsham, 1995), while having an ontological stance which refers to critical realism (Maxwell, 2010) . In particular, the study aims to produce an understanding of the imbrication of human and material agencies in enterprise social learning, knowledge sharing and collaboration initiatives, focusing on the interplay between structure and agency at multiple levels within the considered social context. To this end, we adopt the morphogenetic approach as theoretical framework for the study of socio materiality as discussed in previous Section. Specifically, we are going to develop the analysis coupling the three phases of the morphogenetic cycle (*structural conditioning*, *socio-cultural interaction*, *structural elaboration/reproduction*) as reported by Archer (1998), and the phases of the *retroductive methodology* used in critical realism research to reveal the mechanisms that produce a considered social phenomenon (Meyer & Lunnay, 2013; Zachariadis, Scott, & Barrett, 2013). As summarized by Zachariadis et al. (2013, p. 866) the first phase is the *description* or *appreciation* of the research situation, focusing on the identification of the different features of the phenomenon under study; the second phase concerns the *retroductive analysis* of the data, hypothesizing about the mechanisms or constitutive structures potentially causing/generating the phenomena under study; the third phase focuses on the *elimination of the alternative explanations*

produced and identification of the actual generative mechanisms or causal structure at work (Archer et al., 1998, p. 18); finally, the *action* phase circulates the research findings and verify the causal explanations uncovered with regard to an informed and expert "intended audience".

In the following Sections we first provide an overview of the case, detailing fieldwork and data collection. Subsequently, we discuss the main findings, contributions, and limitations of the research.

4   SITE AND DATA COLLECTION

Pirelli & C. SpA is a multinational company based in Milan. The company, the world's fifth-largest tyre manufacturer is present in over 160 countries and has 19 manufacturing sites. We chose Pirelli for the case study because we have a privileged relationship with the organization. This gives us a unique opportunity to explore how Pirelli implements and develops Pnet (Pirelli Social Intranet).

Pnet was launched in June 2012. Our study begins in October 2013. First, we reviewed the documents regarding the Pnet project (business cases, implementation plan, and governance policy). Between January- March 2014 we interviewed 32 people (30 face-to-face and 2 over the telephone in the case of managers operating in foreign locations).

The respondents included 16 top and senior managers, and 16 employees from Pirelli. The 16 managers are influential persons and thinkers at Pirelli, who have the power to influence Pnet development, while the 16 employees were identified as participating in the routine use.

The interviews were conducted in Italian and in English, depending on the language preference of each interviewee (the interviews averaged one hour with a semi-structured protocol.

The documents regarding the Pnet project and the interviews were subsequently coded and analyzed in parallel sessions by the two authors of this article with NVivo 10 and MAXQDA 12. The coding activities were structured following the sequence *open*, *selective*, and *theoretical* coding (Glaser, 1978; Urquhart, 2013). The coding activities were conducted to develop the first two phases of the retroductive methodology adopted, thus providing a structured *description* or *appreciation* of the research situation and a first *retroductive analysi*s of the data.

Other interviews will be made in March 2016 in order to keep trace of the Pnet development as well as pursuing further theoretical sampling, thus supporting a deeper *retroductive analysi*s of the data, the *elimination of the alternatives*, and verification with regard to an informed and expert intended audience.

5   MAIN FINDINGS AND CONTRIBUTIONS

Adopting a morphogenetic perspective and an imbrication framework we aim to explore how technology's functions and routines as material agency can be actually considered constitutive features of the structuring process apart from human agency, consequently viewing structure as the product of imbrication (see also Paul M. Leonardi, 2011, p. 165). Accordingly, we believe that capturing the sociomateriality factors related to a Social Intranet usage is a step ahead towards understanding the significant heterogeneity in both adoption costs and network benefits. So far, our findings underline some issues that we present here, in brief:

> *Governance*: organizations implementing a Social Intranet or other Social software should involve senior management and key users from various business functions, in order to enable Social Intranet absorption within the organizational culture and work processes and practices. Moreover, the most
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> attentive regard must be given to senior management views and attitudes towards the disruptive communication practices embodied in the social technologies;

Leadership: successful organizational change initiatives - such as Social Intranet
> adoption - necessitate a new genre of leadership to take account of a more open and
> transparent organizational ecosystem;
>> *Alignment*: linking Social Intranet usage to employees' goals, performance and reputation will also encourage people to adopt social tools to accomplish their work-related tasks;

Human resources: organizations should identify and empower active Social Intranets
'evangelists' as ambassadors and boundary spanners (Levina & Vaast, 2005) in order to enlarge the critical mass of users and facilitate social learning as well as a shared sensemaking;

Organizational climate: lastly, organizations should facilitate personal relationships between employees through the creation of online events. To boost a culture that values Social Intranet, organizations should create a welcoming and helpful climate for employees to openly share personal knowledge.

With our study we aim to contribute to the emerging body of literature concerning the adoption of corporate social networks. This raises the research question that this study addresses: What are the factors that facilitate of Social Intranet usage among employees?

The approach of this study to social business is organizational and strategic, and social technology is not understood in terms of any specific software or service, but rather as a way of working, learning and communicating with others. As our findings are based on Pirelli, a big-sized manufacturing company, we are cautious in generalizing the findings to other types of organizations and Social Intranet platforms

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