ABSTRACT

Spanning boundaries has emerged as a key topic in the scholarship on distributed organizing. Nonetheless, most of the works are motivated by boundaries designated by static demarcations of time and/or place, while only recently there is some evidence emphasizing the dynamic aspects of boundaries and boundary spanning. Following the latter tradition, the present research attempts to examine the antecedents of boundary spanning in the context of e-collaboration. This is approached using a cross case assessment of two interpretive case studies. The results suggest that cross-organizational e-collaboration can be analyzed in relation to five constructs: (a) representations through which collaborative engagements are attained; (b) the affordances of the (social) medium for reconfiguring agency, both human and non-human; (c) boundary negotiating artifacts; (d) source of togetherness and sense of community; and (e) type of enacted cyber-structures. It turns out that these five constructs can be used to anchor and qualify a range of boundary spanning e-collaboration regimes.

Keywords: Boundary Spanning, Cyber-Structures, E-Collaboration, Principled Strategy, Virtual Work

INTRODUCTION

One prominent trend in organization research is the study of sociomaterial practices as enacted in increasingly distributed settings within and across organizations (Orlikowski, 2007; Leonardi, 2011). In this vein, the role of Information Technology (IT) is vital as it catalyzes digital encounters, but most importantly, it re-configures agency, either through new performative capacity or by inviting novel human intentionality such as collaboration across boundaries (Kock & Nosek, 2005). Nonetheless, most of the related scholarship tends to rely on a conception of IT as a black box (Orlikowski 2007) – discrete artifact with designated features, affordances and information-processing properties – thus offering partial and inconclusive insights into the technologies’ inscribed features that enable or constrain boundary spanning collaboration. This is also evident from recent empirical studies calling for more detailed treatments of the technology-embedded qualities re-shaping computer-mediated realities and more elaborate accounts of how such re-shaping implicates new capabilities for distributed organizing (Lanzara, 2010; Jarvenpaa & Lang, 2011; Bailey, Leonardi & Barley, 2012).

In line with these quests, the present research attempts to investigate intrinsic properties of boundary spanning e-collaboration in the context of increasingly ubiquitous environments where togetherness is not pre-existent or at best acquired in the process of and through co-practicing. This is approached by using a cross-case assessment of two interpretive case studies. The
first case study covers an information-based industry namely tourism and is illustrative of boundary spanning e-collaboration in a business/professional setting. The second case examines a network music notation lesson, anchoring boundary spanning e-collaboration in a learning/creative arts setting. Our objective is to synthesize empirical findings to advance a proposition for a principled strategy that anchors boundary spanning e-collaboration in relation to a set of recurrent themes and constructs that direct attention to both technology-inscribed and technology-enacted features. The value of the proposed strategy is demonstrated by briefly discussing how it was used to guide analytical inquiries into a regional virtual alliance in organic farming.

The rest of the paper is structured as follows. The next section reviews related work with the aim to assess current thinking and emerging trends in virtual teams, representations and collaborative practices. The emphasis is on identifying the theoretical and engineering gaps relevant to and motivating the present work. Then, we describe our reference cases and compare them using a common lens (or principled strategy) relying on qualitative data and experiences of recent ethnographic assessments. This helps identify intrinsic properties and the changing fabric of boundary spanning e-collaboration. In an attempt to assess the practical implications of the concepts developed, we discuss how the principled strategy has been recruited to inform the design of e-collaboration tools for a regional virtual alliance in organic farming. The paper is wrapped up with a summary of contributions and pointers to further research.

THEORETICAL FOUNDATIONS

There are two steams of research that are relevant to the present work. The first is related to constituents of e-collaboration which are either embedded in or enacted through technology, while the second stream addresses commonalities and differences of computer-mediated (and remediared) practices that span across proximity, thematic, intra- or inter-organizational boundaries. By reviewing related works, key principles are formulated to guide further analysis.

Constituents of E-Collaboration

In broad terms e-collaboration refers to “collaboration among individuals engaged in a common task using electronic technologies” (Kock et al., 2001, p. 1). In effect, it coins the entanglement of a range of digital technologies and human agency to serve designated social practices such as communication, knowledge sharing, networking, etc. Through such an entanglement, digital technologies (not only computers) are appropriated by humans to attain common goals (Kock, 2005), and as this appropriation takes place recurrently, it enacts different configurations of people, artifacts and social relations. Since e-collaboration is not a naturally occurring phenomenon, it may be considered as being amenable to design intervention. In this vein, there have been scholarships concentrating on the different aspects.

One fairly established thread of research concentrates on properties of team work such as unity of purpose, the team’s identity as a social structure and the members’ shared responsibility for outcomes (Cohen & Bailey, 1997 p. 241) aiming to assess their relevance in virtual settings (Jarvenpaa & Leidner, 1999; Powell, Piccoli & Ives, 2004) and in designated situations where geographically, organizationally and/or time dispersed team members are brought together to negotiate the accomplishment of meaningful work (Kock & Nosek, 2005; Jarvenpaa & Lang, 2011).

Another research path explores e-collaboration from an artifactual baseline attempting to qualify how knowledge is transferred across sites. Blau (2011) has examined different ways of exchanging knowledge in networks, focusing on exchanges within, between, and without institutions. Scholars in the field of Computer-supported cooperative work (CSCW) have also explored concepts such as boundary artifacts.