Drift and shift in the organizing vision career for personal health records: An investigation of innovation discourse dynamics

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ABSTRACT

Organizational information technology innovations develop and diffuse through the efforts of communities of stakeholders working in cooperation and competition to articulate, motivate, and diffuse an innovation. Community members' discourse can reveal competing interests and tensions that influence whether ideas central to the innovation coalesce, drift apart, or dissipate and thus the innovation's trajectory. To investigate these dynamics, we adopted the theoretical lens of the organizing vision framework and historical and discourse analysis methods to study developments with personal health records (PHRs) in the U.S. for over a decade (2003–2013). Our analysis revealed ongoing drift in PHR discourse across the innovation community despite concerted efforts by key stakeholders to promote an overarching vision. Shifts in discourse developed as four competing PHR versions coalesced around different institutional arrangements for health and health data stewardship, health data stores, and innovation community actors. This analysis furthers our understanding of career dynamics of an organizing vision and the implications of these dynamics for innovation diffusion. The study also highlights implications for health IT innovation research and for practice.

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1. Introduction and motivation

Technology innovations develop through the efforts of communities of stakeholders (Van de Ven, Polley, Garud, & Venkataraman, 1999). Firms, entrepreneurs, government agencies, and so on work in networks and partnerships – collaborative and competitive – to build the institutional and market structures necessary to support the development and commercialization of an innovation (Arthur, 2009; Hargrave & Van de Ven, 2006; Lusch & Vargo, 2014; Vargo, Wieland, & Akaka, 2013). For instance, standards are negotiated among industry actors for inter-organizational information systems (Markus, Dutta, Steinfeld, & Wigand, 2008; Markus, Steinfield, Wigand, & Minton, 2006) and market relationships are configured around new technologies and standards (Garud, Jain, & Kumaraswamy, 2002).

The discourse surrounding an organization IT innovation reveals much about how an innovation develops and diffuses through community efforts (Barrett, Heracleous, & Walsham, 2013; Bijker, 1995; Iacono & Kling, 2001; Nielsen, Mathiassen, & Newell, 2014; Prince, Barrett, & Oborn, 2014; Pollock & Williams, 2009, 2011; Swanson & Ramiller, 1997; Wang & Ramiller, 2009). For instance the actions, agreements, and negotiations of industry actors are reported widely in business and trade media (Wang & Swanson, 2007, 2008). Innovation discourse may also reveal how some firms orchestrate innovation networks through dialogical strategies to favor their own interests and strengths (Prince et al., 2014). Their attempts to legitimate their own accounts of an innovation are likely

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to be contested (Garud et al., 2002) as opposing actors "frame issues and construct networks in an attempt to introduce new institutional arrangements" (Hargrave & Van de Ven, 2006, p. 877). In these various ways discourse both reveals and shapes an IT innovation's trajectory.

In this study, we investigated community discourse dynamics related to an intriguing health information technology (HIT) innovation. Personal health records (PHRs) have been defined generally as internet-based, lifelong health records that are controlled by the individual and are meant to promote the individual's engagement in his or her health and healthcare. For more than a decade policy makers, academics, healthcare providers, technology firms and other health industry organizations debated, defined, and advocated the development and widespread use of PHRs (Archer, Fevrier-Thomas, Lokker, McKibbon, & Straus, 2011; Kim, Jung, & Bates, 2011; Nazi, 2013). Leading healthcare providers developed PHR-like systems, as did health insurers. IT firms like Microsoft and Google invested in and promoted PHRs. Despite the volume of discourse dedicated to articulating and promoting PHRs, ongoing interest among notable stakeholders and substantial investments in PHRs, and governmental promotions of PHRs, considerable confusion and disagreement remained about this innovation and little progress was made towards widespread use in over a decade (Nazi, 2013). Competing instantiations of PHRs took shape, while individual consumers' use of PHRs remained low (Archer et al., 2011; Kim et al., 2011; Lewis, 2011; Markle Foundation, 2011), adding to uncertainty about the future of this innovation (Spil & Klein, 2014).

Personal health records present a potentially valuable health IT innovation as well as an interesting and useful context in which to study IT innovation discourse dynamics. Our research goals were to investigate how the PHR discourse influenced the innovation's trajectory, how and why varied interpretations of PHRs developed, and how discourse dynamics contributed to PHR innovation outcomes. To investigate these questions we adopted the theoretical lens of the organizing vision (Ramiller & Swanson, 2003; Swanson & Ramiller, 1997, 2004) in a study of the discourse surrounding PHRs in the U.S. from 2003 through 2013. An organizing vision serves as a discursive resource for an innovation community (Swanson & Ramiller, 1997), and community sensemaking and actions related to an innovation are evident in ongoing organizational visioning (Nielsen et al., 2014).

Situating our study in the institutional environment of the U.S. healthcare industry (Chiasson & Davidson, 2004, 2005) and using historical and discourse analysis methods (Buhl, Müller, Fridgen, & Röglinger, 2012; Phillips & Hardy, 2002; Prince et al., 2014; Williams & Pollock, 2012) we assessed how innovation community members interpreted and acted on PHR innovation concepts. This analysis highlighted implicit assumptions about novel institutional arrangements for and challenges to existing arrangement for stewardship of personal health data. Examining how stakeholders navigated these challenges helped explain why the PHR organizing vision drifted for over a decade without widespread diffusion or market failure of the innovation and also shifted towards four competing versions of the overarching vision, each representing different assemblages of data stewardship arrangements and innovation community participants. Through this analysis we extended the analytical concept of an organizing vision career to consider how drift and shift may arise as liminal states in the career trajectory of an organization vision and the implications for innovation diffusion processes of these states.

In the following section we first review the study's theoretical foundations in the innovation discourse and organizing vision literatures. We then situate the study in the U.S. healthcare institutional field and describe the study's research design and application of historical and discourse analysis methods. In the findings and analysis we consider how the innovation community theorized an overarching PHR organizing vision, the challenges to institutional arrangements for health data stewardship this vision presented, and translations of the overarching vision into four assemblages that navigated around these challenges. This analysis informed our discussion of organizing vision career dynamics and *drift* and *shift* as two liminal states that may develop in an organizational IT innovation diffusion process. We conclude with a discussion of implications for theory and for practice.

2. Theoretical foundations

Acknowledging the importance of community discourse in the early stages of an organizational IT innovation, Swanson and Ramiller (1997, p. 460) define an *organizing vision* as "a focal community idea of the application of information technology in organizations … a vision for organizing in a way that embeds and utilizes information technology in organizational structures and processes." An organizing vision centers on the "business problematic" – well-recognized organizational issues or opportunities for which the innovation is a possible solution – and the core technologies and organizational practices brought together in the innovation; it is often characterized by buzzwords and metaphors that suggest its potential usefulness (p. 463).

The organizing vision concept has been used to study a variety of IT innovations (Currie, 2004; Ellingsen & Monteiro, 2003; Kaganer, Pawlowski, & Wiley-Patton, 2010; Ramiller & Swanson, 2003; Reardon, 2009; Wang & Ramiller, 2009; Wang & Swanson, 2008). These studies draw attention not only to the information technology (IT) components of innovation but also to the organizational practices and structures in which technology components would be embedded. For instance, the organizing vision for enterprise resource planning (ERP) envisions not only how databases and software could be integrated but also how operational practices across functional areas of a firm could be tightly integrated and coordinated (Pollock & Williams, 2009).

Beyond organizational practices, technology innovation and institutional arrangements are interwoven (Lusch & Vargo, 2014). The term *institutional arrangement* refers to the "schema, norms, and regulations" that organize and regulate social life in and between organizations within a socio-economic sector (Hargrave & Van de Ven, 2006, p. 866). Novel institutional arrangements or challenges to existing arrangements may be implicit in an innovation and its organizing vision. For instance, the development and diffusion of smart mobile phones entailed new institutional arrangements as well as technology artifacts between IT firms and wireless carriers to orchestrate data services and between IT firms and consumers for voice services, which have challenged existing arrangements between telecom firms and customers who have abandoned land-line phone services.