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Digital innovation and transformation: An institutional perspective

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A B S T R A C T

In this conceptual piece we suggest that the institutional perspective is a prolific lens to study digital innovation and transformation. Digital innovation is about the creation and putting into action of novel products and services; by digital transformation we mean the combined effects of several digital innovations bringing about novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace or complement existing rules of the game within organizations and fields. We identify three types of novel institutional arrangements critical for digital transformation: digital organizational forms, digital institutional infrastructures, and digital institutional building blocks. From this vantage point, an institutional perspective invites us to examine how these novel arrangements gain social approval (i.e. legitimacy) in the eyes of critical stakeholders and their interplay with existing institutional arrangements. Questioning the disruptive talk associated with digital transformation, we draw on the institutional change literature to illustrate the institutionalization challenges and that existing institutional arrangements are pivotal arbiters in deciding whether and how novel arrangements gain acceptance. We close this essay with discussing the implications of an institutional perspective on digital transformation for policy, practice and research.

1. Introduction

Numerous scholars argue that there is a need for new theories in this age of digital innovation and digital transformation. Because innovation processes themselves are subject to digitization, the argument is that accepted theories of innovation are no longer applicable (Nambisan, Lyytinen, Majchrzak, & Song, 2017; Svahn, Mathiassen, & Lindgren, 2017; Yoo, Boland, Lyytinen, & Majchrzak, 2012). For instance, Nambisan et al. (2017: 223) say that “[t]here is a critical need for novel theorizing on digital innovation management” that deals more adequately with the rapidly changing nature of innovation processes in a digital world.

For Nambisan et al. (2017:224) digital innovation is the use of digital technology in a wide range of innovations: We understand the term “digital” as the conversion from mainly analog information into the binary language understood by computers. The malleability (e.g., re-programmability), homogeneity (e.g., standardized software languages) and transferability (e.g. ease of transferring digital representations of any object) is at the heart of technologies meshing digital, and often physical materiality, thereby enabling, constraining, but also interwoven with, human action (Altman, Tushman, & Nagle, 2015; Flyverbom, Leonardi, Stohl, & Stohl, 2016; Lakhani, Lifshitz-Assaf, & Tushman, 2013; Leonardi & Barley, 2008; Loebbecke & Picot, 2015; Yoo, Henfridsson, & Lyytinen, 2010). As such, digital innovation is about the concerted orchestration of new products, new processes, new services, new platforms, or even new business models in a given context (Nambisan et al., 2017; see also Hargadon & Douglas, 2001).

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But what constitutes novel theorizing? One important way of introducing new approaches into a field of study is to import ideas from other disciplines. Historically, for example, the extension of general systems theory into theorizing about organizations transformed existing approaches and led to completely new ways of thinking about organizations (Hinings & Greenwood, 2017). This paper argues that the well-developed institutional perspective has concepts and theorizing that are highly relevant to the study of digital innovation and especially when the range and depth of such innovations leads to digital transformation (for a similar approach see also Orlikowski & Barley, 2001). By *digital transformation* we mean the combined effects of several digital innovations bringing about novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace or complement existing rules of the game within organizations, ecosystems, industries or fields (Krimpmann, 2015; Loebbecke & Picot, 2015; Mangematin, Sapsed, & Schüßler, 2014).

Institutional theory emphasizes that organizations are not purely rational systems of producing goods and services, adapting to an environment of suppliers, consumers, and competitors. Importantly, they are themselves social and cultural systems that are embedded within an “institutional” context of social expectations and prescriptions about what constitutes appropriate (“legitimate”) behavior. For most organizations, the crucial context is that of the organizational field, and critical actors within the field include regulators, professional associations and the media. These actors, along with various events (such as conferences) constitute the “institutional infrastructure” that interprets, conveys, and monitors compliance with, the socio-cultural rules of the game (Hinings, Logue, & Zietsma, 2017). From an institutional perspective, organizations cannot be understood without taking account of the influence of this institutional context. Organizations are seriously constrained by social expectations and the social approval - legitimacy - of particular actions and ways of organizing (Deephouse & Suchman, 2008; Greenwood, Oliver, Lawrence, & Meyer, 2017; Meyer & Rowan, 1977).

By emphasizing the socio-cultural aspects of organizing, institutional theory has developed a particular approach to understanding change and innovation. There are two aspects to this approach: one is to hold in tension the relationship between stasis and change, seeing continuity and homogeneity as well as change and heterogeneity amongst organizations (Greenwood et al., 2017). The other is to understand change and stasis as an outcome of structures, activities and actions at multiple levels of analysis, societal, field, organization and individual (Scott, 2014). These two approaches produce a richness and a complexity to understanding innovation at the level of new products, services and processes, but also, and perhaps more importantly, an emphasis on issues of digital transformation or radical change (Greenwood & Hinings, 2006).

The rest of the paper examines what institutional theory can contribute to our understanding of digital innovation and digital transformation, in particular, through the ideal of radical change.

2. An institutional perspective on digital innovation and digital transformation

The early history of institutional theory provided a particular version of change and stasis, namely, that organizations come to look more and more like each other because of the strength of legitimacy and socio-cultural pressures (Meyer & Rowan, 1977). A central process is that of isomorphism, that is, that organizations come to look more and more alike through normative, mimetic and coercive pressures (DiMaggio & Powell, 1983). This early account of change was first illustrated by Tolbert and Zucker's (1983) study of municipal civil service reform in the US. They showed that initial adoption of an organizational innovation could be explained by the characteristics of a city, e.g., socio-economic structure, size, influx of immigrants. In this sense, early adoption follows a contingency style argument (Van de Ven, Ganco, & Hinings, 2013) – i.e., as a rational response to issues that a city faced. However, further adoption by other municipalities was not related to these kinds of characteristics but because civil service reform had become accepted as the right way to do things – it had acquired social legitimacy – even though the reforms might not offer any performance improvement. The reforms had become the appropriate way of conducting affairs and were prescribed and policed by the institutional infrastructure.

Adoption becomes a way of demonstrating organizational legitimacy through copying other organizations (mimetic isomorphism), or is legislated because of that societal legitimacy (coercive legitimacy) or is diffused as the appropriate professional standard (normative legitimacy). This speaks to the impact of socio-cultural beliefs on the adoption of innovations and consequent organizational change. This two-stage model of diffusion with its emphasis on the increasing homogeneity of organizations was central in the following decades of institutional studies (Greenwood, Oliver, Sahlin, & Suddaby, 2008).

There has been considerable questioning of this model, primarily on the grounds of its lack of any account of agentic action, its inability to address circumstances of institutional complexity, and evidence of differing organizational responses (Boxenbaum & Jonsson, 2017; Oliver, 1991, 1992). Nevertheless, continuing compliance with existing norms and practices together with their ‘taken-for-grantedness’ remains at the heart of institutional theory (Meyer & Höllerer, 2014). How organizations are influenced by socio-cultural prescriptions, we suggest, has important implications for the study of digital innovation and transformation.

Studying digital innovation and transformation from an institutional perspective is about how digitally-enabled institutional arrangements emerge and diffuse both through fields and organizations. The question for an institutional theorist becomes: How do these new ideas gain legitimacy? How are they conveyed and spread within and through organizational fields? Of particular concern here in examining digital innovations and their suggested radical nature, is the interplay between existing and new, emerging institutional arrangements (Dougherty & Dunn, 2011; Hargadon & Douglas, 2001; Vermeulen, Büch, & Greenwood, 2007). For example this can be new institutional arrangements replacing or complementing existing ones as with Airbnb and traditional hotel chains coexisting in the tourism industry and organizations working with crowd-based organizations to solicit innovative ideas from outside or outsource routine tasks. But the existing institutions can enable new ones, e.g. the Uber platform is a new organizational form that disrupts the taxi industry, yet this digital innovation that creates a novel form of organizing taxi services through leveraging

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