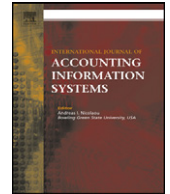




Contents lists available at ScienceDirect

International Journal of Accounting Information Systems

journal homepage: www.elsevier.com/locate/accinf

A further interpretation of the relational agency of information systems: A research note

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ARTICLE INFO

Article history:

Received 23 February 2013

Received in revised form 3 September 2015

Accepted 17 January 2016

Available online 4 February 2016

Keywords:

Actor-network theory

Agency of IS

AIS

Anthropocentric view

Performative approach

Relational view

Sociomateriality

Technocentric view

ABSTRACT

This paper proposes a reinterpretation of the agency of information system (IS) as relational. It explores how the agency of IS has been articulated in the extant stream of accounting information system (AIS) research and explains how a relational view of agency can enhance our understanding of IS in its organizational context. This reinterpretation highlights the limitation of viewing IS as technology (technocentric view) with predefined functionality and predictable effects. Attention is also shifted away from an anthropocentric conceptualization of IS; where the technology is seen as a tool and agency is attributed only to humans. We argue in the paper that both the technocentric and anthropocentric views of IS limit what can be learned about the agency of IS. Drawing on actor-network theory (ANT), this study conceptualizes IS as a relational network and proposes a relational view of the agency of IS. This relational view suggests that the social and material entities that make up IS have no absolute essence when viewed in isolation; rather, their collective force defines the agency of IS. The implications of the relational view of agency for AIS research are also highlighted.

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1. Introduction

Prior information system (IS) research has raised questions about the agency of IS in organizational settings. Agency is generally conceptualized as the capacity of an actor to act and to generate effects (Latour, 2005). Within the accounting information system (AIS) literature, questions about agency have focused primarily on the extent to which IS generates or contributes to organizational performance outcomes. Within the context of extant research, whether and how IS has the capacity to act remains a debatable issue. Some prior studies have argued that information technology (IT) does not matter as it is only an artifact and commodity-type of resource that does not generate competitive advantage per se (Carr, 2003; Mata et al., 1995). Other researchers have sought to explain the agency of IS by highlighting how IS (generally conceptualized in terms of technology) generates organizational capabilities through which organizations may improve their performance (Konchitchki and O'Leary, 2011; Melville et al., 2004; Wade and Hulland, 2004). While these prior studies have engaged with the concept of agency, there are at least two broad concerns with these conceptualizations.

First, they present an overly simplistic view of agency which stems from their technocentric or anthropocentric conceptualization of IS as well as their focus on a standardized functional view of agency (Orlikowski and Iaconno, 2001). Addressing this issue has been the primary concern of the sociomateriality literature but more needs to be done in order to further research

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area. For instance, while the sociomateriality literature highlights the importance of the entanglement of the human and the technological, the literature emphasizes the importance of technology in shaping human conduct: partly because of the agenda to encourage organizational scholars to consider technology more explicitly in discussions of organizational practices (see for example Orlikowski and Barley (2001) and Orlikowski (2007)). Also, in rendering the relational view, the sociomateriality approach elaborates, almost exclusively, how agency is exercised by (and in) a network of the human and the material with little or no attention paid to how this network acquires the agency or capacity to act. The capacity seems to be taken as given. More so, the argument for relationality in the sociomateriality approach remains at the ontological level and the methodological advances lag behind this ontological development. This paper seeks to extend the sociomateriality literature by arguing for the decentering of agency and focusing attention on the dynamic interplay between the technical and the human and the generation of agential capacity. The paper also discusses the importance the relational view places on the examination of both how agency is acquired and how it is exercised; and offers a methodological corollary to the relational view.

Second, prior research adopts an essentialist view of IS, which posits that IS has a predetermined directional effect on organizational performance. Such conceptualization of the agency of IS limits what can be learned about IS in its organizational context. Drawing on actor-network theory (ANT), we aim to reinterpret the relational agency of IS and to explain the implications of such a relational view of agency for AIS research. Reconceptualizing the relational agency of IS will help broaden our knowledge of the emergence and enactment of AIS and the consequences for organizations. IS has no absolute essence but takes its form, and acquires its attributes and agency, as a result of its relations with other entities. This shifts attention away from viewing IS as a technology or a mere aggregation of technical specification (materiality) and functionality to a more sociomaterial interpretation of IS. That is, that which comes to be labeled as IS is a patterned network of heterogeneous elements and practices. This patterned network is nested in wider organizational relationships that shape the agency of IS and within which IS simultaneously shapes the agency of other entities. This makes IS an interdependent actor whose agency can be understood primarily with reference to other sociomaterial entities and practices with which it associates. Such a shift further implies that the agency of IS is indeterminate (*i.e.*, no *a priori* set of factors can adequately explain the agency of IS) and the organizational effect of IS may flow in multiple and unpredictable directions.

The purpose of this research is to explore the agency of IS as it has been articulated in the extant streams of AIS research, and to examine the enhancements that would derive from a further interpretation of a relational view of agency. To achieve this objective, first the major thrusts in existing AIS literature are reviewed and the limitations of the technocentric and anthropocentric approaches to organizational studies of IS are identified. The discussion then highlights how the literature on sociomateriality seeks to address the technical and human divide in the literature through the proposition of a relational view. Drawing mainly from ANT, the paper then reinterprets the notion of relational agency of IS. Second, the methodological implications of conceptualizing agency in IS as relational are explained.

This study has important implications for encouraging and enhancing research on the relational agency of IS. The strategies and approaches used in developing a relational view as a guide to approaching future research examining the agency of IS are explained. The technocentric and anthropocentric approaches are critiqued in order to highlight the limitations of each in providing robust explanations of the entanglement of the social and material aspects of IS. The primary focus is on articulating the advantages of approaching research on the agency of IS through examination of the myriad of relationships surrounding and including the IS itself.

2. A further interpretation of the relational view of agency and implications for AIS research

This section seeks to critique the existing conceptualization and theorizations of the agency of IS and proposes a reinterpretation and extension of the relational view of agency. The focus is to highlight how the existing conceptualizations of agency limit what can be learned about AIS in organizations and to show how knowledge can be advanced when the agency of IS is conceptualized and theorized in relational terms.

2.1. Agency as theorized in the extant literature

The existing research has conceptualized and theorized the agency of IS with reference to either its technical components (technocentric view) or the human intervention in its 'use' (anthropocentric view). In the technocentric conceptualization of agency, IS is reduced to the technology that holds the information system together; and, attempts are made to understand the agency of IS with reference to the supposed functional properties of the technology (Arnold and Sutton, 2002; Benbasat and Zmud, 2003; Geerts, 2011; Alles et al., 2013). For researchers in this area, the technology is what acts and it does so in a number of ways including the following: simplifying and standardizing organizational work thereby making the actions and inactions of individuals visible, predictable, and controllable; enabling acts of engagement to be managed across space and time in an instant; determining organizational practices that are important; and engaging in knowledge fabrication. Technology design is often viewed as the solution to organizational problems (Hevner et al., 2004; Alles et al., 2013). In this technocentric view, theoretical primacy is given to the technological components and functions of the system; and, the research questions that are posed are generally influenced by the technology (Goodman, 2001; Gregor and Hevner, 2013). Much of this work has traditionally focused on technological determination from organizational study perspective (Leonardi and Barley, 2010).

In the anthropocentric conceptualization of the agency, the technological components of IS are reduced to inert objectives that are not capable of action on their own (Orlikowski, 2007). Rather the technological components of IS only serve as tools that are

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