

## Virtualization and Institutions

### *Reflections on Recent Developments in Institutional Theory for a Multi-Level Analysis*

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**Abstract.** This panel explores the value of institutional theory in understanding ‘virtualization (in its varieties of meanings) and the impact on work practices, organizations and society.’ In 2001, Orlikowski and Barley made an initial appeal in this direction suggesting that IS research could benefit from institutional theory and that organization theory could also learn from IS research in taking the materiality of technology seriously. Since this earlier call, there have been significant developments in institutional theory from within organizational theory, particularly at the micro-level of analysis. However, apart from some notable exceptions at the macro-level, IS research is yet to explore the value of institutional theory for understanding virtualization of work practices. A particular focus of this panel, therefore, is to explore the potential of micro and macro level developments in institutional theory, and the value of a multilevel approach for the virtualization of work.

## 1 Introduction

Research on technological change has long recognized technology as an occasion for institutional change through temporal orderings between occupational groups and shifts in work practices [1]. However, as Orlikowski and Barley [2] note, IS research has been slower to examine how institutions influence virtualization—the design,

use, and consequences of IT for time-space distancing of work practices within or across organizations [3]. They note, along with others more recently, the strengths that institutional theory may offer to IS research by providing a lens to ‘simultaneously understand the role of human agency as embedded in institutional contexts as well as the constraints and affordances of technologies as material systems’ [4, p. 158]. However, to date little research in IS [5,6] has focused on the political/regulative, normative systems and cultural frameworks shaping the design, use and eventual institutionalization of information systems [7].

Institutional theory approaches to virtualization are useful at different levels and across levels of social analysis. The macro-level concept of *institutional logics* is helpful for examining change and stability in work practices and the challenges that virtuality poses within professions, organizations, and fields. Scott [8, p. 139] defines institutional logics as the “belief systems and related practices that predominate in an organizational field” and notes that systems of logic vary across fields in content, penetration, linkage and exclusiveness. A close examination of field logics can help explain the varying degrees of acceptance of virtual work practices within different organizational fields [3] and the potential conflict between systems of logic when virtual practices diffuse across fields, particularly into fields in which institutional logics have deep penetration and exclusivity. Such analysis is also useful to investigate the interplay of field-level and organization-level change [9] and the possibilities for innovation in virtual work practices within or across social levels.

Recent developments by organizational theorists on institutional theory at the micro-level provide a wealth of potential opportunities for IS research. In particular, institutional entrepreneurship has emerged to deepen our understanding of institutional change [10,11,12]. Institutional entrepreneurs are actors who mobilize resources to create new institutions or transform existing ones. Institutional entrepreneurship has also been recognized as a discursive activity which changes the discourses upon which institutions depend through the production of influential texts as a strategic activity [13]. Through such strategies they seek to increase their legitimacy, resources, authority, and centrality to produce new institutions and in the process de-legitimate existing institutions.

What can we as an IS community learn from these and other developments in institutional theory for understanding the ongoing innovations in the virtualization of work? In exploring the opportunities and challenges of utilizing institutional theory for research on virtualization at the micro and macro levels, our panel will also examine how a multi-level approach and analysis [14] may be adopted.

While panelists share a common view on exploring a multi-level analysis using institutional theory, they will present different positions, arguing either for a bias at the micro or macro level in order to stimulate discussion by contrasting viewpoints. We will seek to represent opposing points of view on the following issues:

- Should macro level concepts of institutional theory be given primacy over micro level aspects in exploring virtualization?
- Do micro level aspects of institutional theory have better explanatory power than macro level concepts in exploring virtualization?

- How would one develop a mixed level approach to institutional theory in exploring virtualization?
- What are the challenges and limitations in using institutional theory for examining virtualization?

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### About the Panelists

**Michael Barrett** is a University Senior Lecturer in Information Systems and Innovation at Judge Business School, Cambridge University. His research interests center on IS innovation and change, and the implications for work practices within and between organizations. Michael will emphasize recent developments at the micro-level on institutional entrepreneurship and the role of discourse in understanding virtualization. By drawing on a case study on telecommuting he will explore how such micro-level developments of institutional theory are valuable in understanding this phenomenon.

**Elizabeth Davidson** is an Associate Professor of Information Technology Management at the Shidler College of Business, University of Hawaii at Manoa. Her research investigates sensemaking in organizations around technology development and technology-enabled organizational change. Elizabeth will focus on the interplay of institutional logics that predominate in an organizational field and organizational-level sensemaking and action. She will draw on Scott's (1994) top-down and bottom-up process model for institutional creation and diffusion to explore the tensions between diffusion versus invention, imposition versus negotiation, and socialization versus interpretation of virtual work practices. Elizabeth will illustrate these institutional change processes with examples from her research on healthcare information technologies.

**Leiser Silva** is an Assistant Professor in Information Systems at the C.T. Bauer College of Business, University of Houston. His research interests concern issues of power and politics in the adoption and implementation of information systems. In addition, he is looking at managerial facets of information systems, specifically, contextual and institutional aspects. Leiser will draw on his current research that examines the profound impact of ERP on the way work tasks are distributed and controlled in organizations. The degree of control over distributed work make ERPs the archetypes of what Zuboff (1988) saw as the panopticon features of information technology in a virtual work environment. He will draw on macro-level aspects of institutional theory and a mixed level analysis to highlight ERP adoption and implementation as the result of mimetic and market forces, as well as discourses of legitimation. In so doing, he will shed light on situations in which theories based exclusively on individual perceptions could not explain the adoption of systems that are deemed as unfriendly and whose usefulness is questioned.

**Geoff Walsham** is Professor of Management Studies at Judge Business School, University of Cambridge. His research is concerned with the human consequences of computerisation in a global context, including both industrialised and developing countries. Geoff has worked with a number of theoretical approaches including structuration theory and actor-network theory, but is a relative newcomer with respect to institutional theory. However, he is currently exploring the use of institutional theory with particular reference to health information systems in developing countries. He will outline some of this work at the panel, and he will aim to draw from it to discuss some of the strengths and weaknesses of the theory as a way of conceptualising the virtualization of work practices.