



Activity Theory in Information Systems Research

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Abstract: Activity Theory, based on the work of Vygotsky and colleagues, has developed into a contemporary social theory for studying work and social activity. In the last 20 years it has become internationalised and accepted in the Organisation, Management, Human Computer Interaction, Social-Psychology and Education fields; yet traditionally its use in IS has remained limited. In recent years there has been growing interest in its use in Information Systems (IS) research. This Special Issue aims to act as a compendium of outstanding research, focusing on the use, development and contribution of Activity Theory in IS research. It also aims to stimulate discourse and advance the use of Activity Theory in IS research.

Key words: Activity Theory, theory, information systems

Motivation

Activity Theory (or cultural-historical Activity Theory) is based on the concepts of the cultural-historical school of Russian psychology, which drew largely upon the works of Vygotsky (1978) between 1920 and 1930 (and others, including Luria, Illyenkov and Leont'ev). According to Vygotsky, the interaction between the human agent (the subject) and the world (the object) is mediated by tools and signs (Miettinen et al., 2009). Leont'ev built on the work of Vygotsky and proposed the concept of the *activity* as a specific form of the societal existence of humans, which is object-oriented and tool-mediated. Later Engeström (1987) added the *community*, the *division of labour*, and *rules/norms* to the activity structure. This became known as 'third-generation' Activity Theory and has helped drive activity analysis across multiple fields to better understand complex work and social activities.

It has been argued that one of the major contributions of the Activity Theoretic analysis for IS research is that it brings technology (tools) and the context together into the unit of analysis (the activity). Therefore, it does not privilege the social over the technical or overly emphasize technology (Allen et al., 2013), but rather offers a socio-technical perspective.

Activities are considered to be dynamic and changing, rather than static (Karanasios & Allen, 2013) and by examining how activities are interrelated, researchers can observe how activities develop and change and divide and become more complex over time (Spinuzzi, 2008). A key part of the Activity

Theory toolkit is the notion of contradictions and tensions. They are used to identify problems and clashes (Kuutti, 1999) within and between activities and by doing so illuminate upon opportunities for change, expansive learning (Engeström, 1987) and congruency within, and across, activities (Allen et al., 2013). Therefore it is useful for understanding, and driving, IS mediated change in organisations.

Beneath the level of activity, are actions (goal-oriented actions which help realise the activity) and operations (which are undertaken without conscious deliberation) (Allen et al., 2011). This structure has proven useful in informing the design of IS (Chen et al., 2013).

This Special Issue focuses on capturing the current state of the art in the use, contribution and development of Activity Theory in IS research. It also aims to stimulate discourse and advance the use of Activity Theory in IS research.

Development of Activity Theory in IS research

Over the last three decades Activity Theory has become increasingly internationalised and emerged as a founding theory for understanding change and development in work and social activity (Miettinen et al., 2012). In the fields of organisation (Engeström, 2000), management (Jarzabkowski, 2003), social psychology (Blunden, 2010), education (Roth & Lee, 2007) and Human Computer Interaction and IS design (Kuutti, 1999; Nardi, 1996) it has become particularly accepted as a contemporary social theory for framing studies and generating insights.

Mirroring its use and acceptance in other social science fields, there has been some development and exploration of Activity Theory in IS (Bertelsen & Bødker 2000; Crawford & Hasan 2006). In IS the focus of research has taken on several distinct paths: (i) understanding technology mediated change in organisational settings, contradictions arising from the introduction of IS, organisational learning and transformation of work (Karanasios & Allen, 2013; Kuutti, 1999; Ryu et al., 2005); (ii) framing studies on the patterns of use of IS (Karanasios & Allen, 2014; Wiredu & Sørensen, 2006); and, (iii) informing and guiding systems development (Chen et al., 2013; Korpela et al., 2002).

The context of its use has transcended public sector organisations, complex organisational contexts, disaster response, education, health and ICT for development. Scholars have also aligned Activity Theory alongside other philosophical perspectives and theories such as critical realism (Allen et al., 2013), institutional theory (Ogawa et al., 2008), complexity theory (Hasan et al. 2010) and structuration theory (Canary & McPhee, 2009) in order to generate novel insights.

Objectives and criterion for submissions for the special issue

The objective of this Special Issue is to highlight the contribution of Activity Theory to IS research by drawing on outstanding research. We seek relevant and rigorous submissions which address a combination of the following criterion.

1. Apply and develop Activity Theory in IS research, by demonstrating the empirical and theoretical contributions it offers.
2. Offer new contributions to Activity Theory, for instance extending Activity Theory or signalling how the IS field can offer a fertile landscape for expanding Activity Theory.
3. Offer in depth comparison of Activity Theory with other contemporary social frameworks (cf., Spinuzzi, 2008).
4. Blend Activity Theory with complimentary contemporary social theories.
5. Expand research design to include mixed and multi-method studies.

6. Critical studies on Activity Theory and papers that illuminate on the difficulties of applying Activity Theory.
7. Consider the origins of Activity Theory and the interpretation and misinterpretations of it in current research.
8. The application of Activity Theory in novel contexts, such as online and digital environments.

Submissions should broadly address or relate to the aforementioned aspects in their contribution to theory and practice. Submissions which merely employ Activity Theory for descriptive analysis and offer no contribution will not be considered for review. Ideally, submissions will provide new understandings of IS in work and social settings. Submissions will be evaluated using rigorous criteria associated with high quality academic research.

Submissions should:

1. Explain how they meet the Special Issue objectives.
2. Present insight and contribution based on empirical evidence (i.e. not be an opinion article, a speculative paper or be based on algorithmic analysis of secondary data). Review and theory development papers will be considered.
3. Be innovative in their contribution to IS theory and practice.
4. Ideally be applicable to a broad and/or prevalent range of contexts.
5. Meet criterion for reporting completeness, structure and research rigor required for ISJ.
6. Should not be research in progress papers.

Authors are encouraged to submit an extended abstract for early feedback. The extended abstract should not exceed 5-pages, including a cover page (containing title, keywords, and author details), an explanation of the rationale for the study/paper, an overview of the research and analysis undertaken, details of expected contributions, consideration of fit with the special issue, and a list of references. The extended abstract should meet the ISJ formatting guidelines and be submitted using the online submission system.

Timeline

Submission of extended abstract (optional): April 30, 2015

Full initial paper submission deadline: September 1, 2015

First review deadline: December 1, 2015

Revised paper submission deadline: June 1, 2016

Second review deadline: September 1, 2016

Submission details

- Follow the ISJ formatting guidelines at <http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291365-2575/homepage/ForAuthors.html>
- Submissions for the full papers must be made to the ISJ's Manuscript Central Account: <http://mc.manuscriptcentral.com/isj>, where you should select the Special Issue on Activity Theory as the submission type.
- All submissions will be peer-reviewed according to the standards of the ISJ.

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Biographies

Stan Karanasios is a Lecturer in Information Management in the Management division of Leeds University Business School.

His current research focuses on the interaction between new information communication technologies (ICT) and society, in particular, ICT for development and changing information practices. He is also interested in developing and extending Activity Theory in IS research. He has published in, among others, *MIS Quarterly*, *Information Systems Journal*, *European Journal of Information Systems* and *Journal of the American Society for Information Science and Technology*.

David Allen is a Professor in Information Management in the Leeds University Business School and director of the AIMTech Research Group (www.aimtech.org). Over the past 10 years, he has spent most of his time exploring information management practices and the influence of technology on organizational work practices in a range of interesting environments.

- Spinuzzi, C. (2008). *Network: Theorizing Knowledge Work in Telecommunications*. Cambridge: Cambridge University Press.
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This has been facilitated by over 45 externally funded projects conducted with colleagues in the AIMTech Research Group. During this period, David has explored the use of activity theory to theorize change and influence practice. His work has been published in *Journal of the American Society for Information Systems*, *MIS Quarterly* and *Technology, Information Systems Journal*, and elsewhere. His recent projects have focused on information practices in high velocity environments and understanding the information sharing practices and innovation process related to the development of novel new technologies.

Patrick Finnegan is Professor of Information Systems at the UNSW Australia Business School. He is a Senior Editor at the *Information Systems Journal* and at *Foundations and Trends in Information Systems*. His research on IS strategy, e-business, and IS innovation has been published in a variety of journals, including *Information Systems Research*, *European Journal of Information Systems*, *Information Systems Journal*, *Journal of Information Technology*, and *Journal of Strategic Information Systems*.