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# Reflections on Methods for applying Activity Theory to CSCW research and practice – The AODM Approach

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## **Abstract**

CSCW research and practice incorporates the design and analysis of computer-based tools as resources for supporting work-based activities. Within this remit, the design and analysis of these tools need to address mediational aspects of these resources in relation to the context of operation and motives of those engaged in work activity. In this regard, several researchers and practitioners have highlighted the suitability of activity theory in conceptualising the dynamics of tool and user interactions in context (Nardi, 1996; Kuutti, 1996; Bodker, 1991). However, variations in methodological perspectives on putting activity theory ideas into practice continue to trigger interesting debate regarding the feasibility of applying activity theory to the design and analysis of computer systems and tools for supporting work activities (Mwanza, 2001a, 2001b and 2001c). Towards this end, various methodological propositions have been put forward (Mwanza, 2002; Korpela et al., 2000; Kaptelinin et al., 1999). In the meanwhile, inadequate information about the usability and replicability of these methods makes it difficult to validate the feasibility of applying activity theory to the design of CSCW systems.

We propose to explore practical challenges in relation to methods for applying activity theory to CSCW research and practice by addressing the following methodological issues:

1) *How to decide on which concepts of activity theory to focus on?*

The framework of activity theory incorporates several fundamental concepts (Kaptelinin, 1996 and 1997; Cole 1999) on which design and analysis of a mediating tool could be based. Discussions will examine possible ways of applying activity theory concepts in relation to this consideration.

2) *Mapping theory onto design*

Discussions under this category will articulate methodological solutions to challenges of finding a suitable compromise between adhering to underlying theoretical concepts and demonstrating their technical transferability into design activity. For example, how to account for activity theory's emphasis on historically studying user practices in context whilst accommodating the

systems design traditional need to predict future behaviour when analysing user-tool interactions.

3) *Validating the methodology used to map theory onto practice*

This item will consider issues relating to how to show evidence or traceable mapping between theory and practice as part of an activity theory informed method. These discussions will also consider how to validate accuracy of the method in relation to underlying theoretical concepts.

4) *What part of design to focus on*

Systems design incorporates several processes e.g. requirements specifications, prototyping, evaluation, implementation, etc. Discussions under this category will consider what part of the design process can be appropriately supported by an activity theory informed method. In addition, issues relating to how to determine the level of analysis when investigating user domain will also be addressed.

5) *What form to present output or analytical findings*

These discussions will explore challenges of interpreting and communicating acquired insights to systems developers.

6) *Evaluating usability of an activity theory informed method*

Is the proposed method replicable? Can CSCW researchers and practitioners use it without difficulty? What criteria should be used to determine usability?

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