

## Chapter 3.23

# Extending Sociotechnical Design to Project Conception: Knowledge Communication Processes for Situating Technology

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### ABSTRACT

Project management processes offer specific sites for understanding the interplay of the social and the technical. This article focuses on the connection between knowledge and technology through knowledge communication processes, cultural & rhetorical contexts in projects, and the iterative process of project conception rooted in sense-making by designers. The data comes from a Project management course in which the students were asked to design and plan projects to situate a mobile phone game in a social context. The course was taught simultaneously at the Helsinki School of Economics in Finland and the Aarhus School of Business, University of Aarhus, Denmark. The analysis demonstrates the potential of knowledge communication concepts for social technical design and highlights the cultural context of the

designers as a key factor to consider in socio-technical design.

### INTRODUCTION: EXTENDING SOCIO-TECHNICAL DESIGN TO PROJECT CONCEPTION THROUGH KNOWLEDGE COMMUNICATION

Knowledge communication theory offers a perspective in understanding the constraints and opportunities inherent not necessarily in the technology itself, but in the sensemaking and sensegiving processes of the people involved in project conception. Technologies have constraints and opportunities for users inherent in interaction design. However, these constraints and opportunities are not limited to the technology itself, but also emerge from the knowledge of people working with user-centered design. So, if people

working with interaction design have knowledge with constraints and opportunities, how can they understand this? To begin to answer this question, knowledge communication processes in project conception which can guide designers in reflecting on their own knowledge and engaging in a systematic approach to connecting interaction design with project conception will be explored.

The call for directing systems designers' attention to the interaction between systems and people using systems has been led by Suchman. Her anthropological approach to technology use in organizations uses knowledge as a concept in focusing on interaction design. Throughout her work, references to knowledge emerge through discussions about knowledge recognition, authority, and cultural underpinnings of knowing. For example, in 2002, she criticizes the practice of "design from nowhere" or the practice of anonymous designers creating technology though their license to professional knowledge for generic users. In exploring the alternative, notions of knowledges elsewhere, outside of the designers, Haraway's notion of partial, locatable, critical knowledges and responsibility for knowledges, and authoritative knowledges are discussed, leading Suchman to posit the question "What forms of knowing are recognized, by whom, and with what consequence?" (Suchman, 2002).

Another place where the term knowledge emerges from Suchman can be seen in a 1999 interview posted online (Sharmer 1999). Here, she explains the connection between human knowledge and technology through a definition of work as encompassing both manipulation of materials and knowledgeable judgment:

*Every form of work, from the most so-called routine to the most so-called knowledge intensive, is actually a mix of practical, tedious kinds of manipulations of materials, and thoughtful, knowledgeable judgment. The trick in designing information systems is to introduce bits of automation that will fit in to the work and do useful*

*things, and then make it possible for people to work with those bits of automation embedded in the systems while leaving them the discretionary space to exercise the kind of judgment they need to exercise to really get the work done.*

In the preceding quotation, Suchman highlights the role of human knowledge in systems design through the notion of knowledgeable judgment residing in people and their interaction with systems as bits of automation which aid them. Again, the notion of knowledge emerges in socio-technical design, insinuating that knowledge communication and knowledge management literatures offer fruitful directions for furthering our understanding of socio-technical design.

Due to the underlying connection between knowledge, culture and technology in Suchman's work, her anthropological approach is not only useful for designers of technology, this approach also implies that socio-technical design, as a field, can be fruitful for project conception practices. Given that project management is often used as a process for situating technology in organizations, the process of project conception offers project managers the opportunity to use project goals and objectives as a connecting force between the social and the technical. Thus, the description of the project defined through project conception processes functions as a means of communicating the project as both social and technical in nature. Project conception processes, in the form of goals and objectives, can work as a tool through which project managers and teams produce knowledge about the nature of the project and the situation in order to engage in the socio-technical connections necessary for completing technology projects effectively.

To argue for the use of socio-technical design not only in interaction design, but also in project conception, I will examine the iterative process of project conception through the use of knowledge communication theories to link the social and technical aspects of design. The data comes from

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