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### **Guest editorial: On sharing knowledge: sociotechnical approaches.**

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This is an electronic, author-formatted version of an article published in The Learning Organization, 14 (1). pp. 74-85, 2007. The definitive version in The Learning Organization is available online at:

<http://dx.doi.org/10.1108/09696470710718366>

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## **On Sharing Knowledge: Sociotechnical approaches.**

Alex Ramirez and Elayne Coakes

Sutton, (2001) in his article “*What is knowledge and can it be managed?*” warned practitioners of knowledge management about the philosophical and linguistic debates on the nature of knowledge, information and data indicating that these should be more than a mere academic exercise. In fact, he said (p. 86), “*information changes knowledge by adding to it, restructuring it or recontextualising it. Information and knowledge are context-specific in that they depend on the situation and are created dynamically in the social interaction between people.*” Regardless of what our understanding of knowledge is, by recognizing that knowledge is social, it is extremely important that we look at what the social sciences have to say regarding the implications of knowledge management technologies in organisations.

Sociology has considered the question of technology in general from two perspectives, the technological shaping of society, and the social shaping of technology. These views can guide the understanding of how knowledge management technologies are adopted in organisations. If we were to look at how knowledge management technologies will shape the organisations in which they are established, or at how the organisations in which these technologies are established shape the technologies, in both cases we have to start by acknowledging that at the core of these technologies there is the problem of how knowledge is shared. Without claiming that there is no value on answering the questions regarding the symbiosis of organisations and their technologies, knowledge management technologies have acquired such a predominance that practitioners are now looking beyond those questions and are working on solving specific problems arising from the technologies that have been adopted in many organisations all over the world.

This special issue on Solving Problems in Knowledge Sharing with Sociotechnical Approaches aims to help precisely at that level. The basic tenets of this issue are first, that knowledge is primarily social in conception and development. Secondly, there are technological solutions that can be adopted to facilitate the sharing of knowledge in organisations. Third, sociotechnical approaches are needed to solve some of the problems arising from the adoption of knowledge management technologies in organisations.

In recent years there has been an increased interest in using sociotechnical approaches to explain issues related to information systems. These efforts have incrementally provided an understanding on how people really shared practices, and knowledge (Allee, 2003, Clarke et al., 2002, Coakes et al., 2000, Coakes et al., 2002, Dixon, 2000, Nonaka and Takeuchi, 1995, Wenger, 1998). These efforts as well can be used to solve some of the problems that we currently face while adopting, designing, implementing, or managing knowledge management systems. With the intention to assist in the last of these problems, we conceived the idea of preparing a special issue that would put together, in one volume, some of the latest contributions of researchers working on solving problems in knowledge sharing using sociotechnical approaches.

Our first paper, “Knowledge Sharing: Developing from within,” by Keith Patrick and Fefie Dotsika, recognises and explores the gap between the technical and social approaches, highlights the importance of social computing, social software, and especially how Web 2.0 technologies impacts the milieu of social software applications. It also looks at the drawbacks of this approach, i.e., allowing ambiguity in the classification process either by allowing multiple meanings of the same term or by using synonyms that do not necessarily convey the same meaning. They look at ontologies as a way to reduce ambiguity by imposing formal semantics. Their major contribution is the recognition that developing from ‘within’ centres upon the location of key knowledge and the understanding of its requirements. To successfully share knowledge in organisations it is essential to put at the centre of this process the knowledge workers by getting them involved, engaged and empowered.

In their second paper - “Interactive Business Development, Capturing Business Knowledge and Practice: A Case Study,” with Gregor McKelvie - Fefie Dotsika and Keith Patrick, considers this latter point explicitly in the case of the organisation Mapa. They report their finding of an Action Research study to capture business knowledge and practice in a market research consultancy that specialises in competitor benchmarking within the online financial services industry. They found that the organisation under study is a knowledge-rich business in which most of the knowledge used is implicit, thus it can leave the organisation in a vulnerable position. At the moment of their report, they indicate that a wiki for knowledge sharing has been successfully incorporated into the operation of the firm; more and more users are adding and linking articles into it. It has become a central tool for collaboration. Recognising that there are still challenges ahead they indicate that wikis are definitely helping in the capturing of the organisation’s knowledge and practice.

In “Sharing Knowledge: Contextualising Sociotechnical Thinking and Practice,” Susanne Søndergaar, Micky Kerr and Chris Clegg, look at knowledge sharing enablers and barriers in an organisation. This is an empirical contribution that looks at knowledge sharing in a strategic context. They studied a UK-owned multinational engineering organisation by looking at leadership, organisational and individual factors theorised as having an impact on the sharing of knowledge. The contributions of this paper include an emphasis on having a process that will strategically change organisational knowledge sharing. They also recognise that trust, individual motivation and geographical location are identified as double-edged factors that act as both enablers and barriers on knowledge sharing.

Antonio Cartelli, in “ICT and Knowledge Construction: Towards New Features for the Sociotechnical Approach,” introduces a difference between two social levels in which the knowledge management technologies have been adopted: community and society. This difference is explained by looking at the knowledge that is constructed and shared at each one of these levels. At the community level, knowledge is both tacit and explicit while at the society level knowledge can only be explicit because the tacit aspect is lost when the members are not homogeneous, as is the case in a community. This allows Cartelli to recognise that the most relevant effect for knowledge management technologies influence

on those involved are an improvement in the knowledge construction and sharing, and the transfer of knowledge in the construction of scientific knowledge. Cartelli thus concludes that knowledge management technologies' most important role is that of improving scientific knowledge construction and transfer for the community under discussion. He also notes that his research is still in progress and that more research is needed to finally be able to understand how this difference impacts our knowledge management theories.

The final paper in this special issue belongs to Thomas Hermann, Kai-Uwe Loser and Isa Jahnke and is entitled "Sociotechnical Walkthrough: A means for Knowledge Integration." This paper introduces a method to help in knowledge integration. This method, the Sociotechnical Walkthrough (STWT), supports the design of sociotechnical systems as well as knowledge integration by having a communication-oriented approach. STWT is organised as a series of workshops in the organisation in which each step is documented in order to connect the communication process with the system under development. The model evolves in each workshop and is refined directly as part of the workshop. By doing so, different perspectives are introduced directly while participants are engaged in the workshop, so they are able to witness the impact of their contributions. The system becomes a tool to facilitate communication at the same time that it is being designed. Hermann et al enrich their contribution by presenting a report on two cases in which the STWT was used.

We hope that this special issue will become a starting point for a dialogue between practitioners and academics looking at knowledge sharing in organisations using sociotechnical approaches. This will be an excellent way to evaluate its contribution for our field.

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