

Social and Distributed Cognition in Knowledge Management Systems

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Many organizations rely on information and communication technologies (ICTs) to provide solutions to the perennial problem of supporting individuals and groups, performing interrelated tasks, who need to coordinate what they know. Yet we have seen many limitations in the use of ICTs to mediate and coordinate distributed and dynamic knowledge sharing. Organizations must grapple with issues such as how partial knowledge is shared across functional and task-related application domains, how knowledge-work practices in different workgroups are defined and coordinated, and how knowledge is embedded in various forms of ICT. These issues are all related to distributed ways of knowing. The papers in this minitrack explore the complexities and synergies of collaborative work, viewed through the lens of distributed and socially-shared cognition.

The first paper in our minitrack, by Steven Haynes, Wendy Schafer and John Carroll, presents a theory of practical drift in the implementation of formal procedures in emergency response. Examples from two field studies demonstrate a knowledge disparity that leads to conflict between responders and planners, as responders adapt and evolve formal response procedures. The authors suggest ways in which collaborative

technology might be designed to mitigate the effects of practical drift. The second paper, by Ryan Baxter and Nicholas Berente, presents a case study of collaboration between various groups in architectural design, demonstrating the processes by which IT artifacts become embedded in the joint practices of collaborative knowledge work. It examines how a new design artifact is motivated, anchored, becomes trusted, and results in new design practices, when a new ICT system is employed. The final paper in our minitrack, by Jim Waters and Susan Gasson, presents a behavioral-attitudinal-social model of online learning success. Student participation at different levels of engagement is related to aspects of structure in course problem-setting, the encouragement of knowledgeable “thought-leaders”, and the strategies by which students locate knowledgeable sources of information with minimal effort to facilitate vicarious learning.

Taken together, these papers present three diverse but related studies of how knowledge may be coordinated and mobilized across various communities of practice and individuals.