

# Managing Knowledge or Knowing in Practice?

## A Critical Review of Perspectives on Knowledge Management

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### ABSTRACT

The importance of knowledge to contemporary organizations is well understood but there is still an ongoing debate about how to conceptualise organizational knowledge in order to understand how it is created, shared and used and how information technologies are implicated in this. This review discusses literature from two contrasting perspectives: the techno-rational 'managing knowledge' view, which focuses on informing practice on how to maximise the value that organizations gain from their knowledge resources, and the social constructivist 'knowing in practice' view, which examines how the knowledge of organizational members is implicated in their work practices. It is argued that, although these views approach the study of organizational knowledge from different angles, the insights gained from both perspectives are complementary and valuable in achieving a deeper understanding of organizational knowledge and its relationship to information technology.

### Introduction – Perspectives on Organizational Knowledge in the 21st Century

The strategic value of knowledge to organizations has gained increased prominence in mainstream management thinking and practice, and it has come to be widely recognised, by academics and practitioners alike, that knowledge management (KM) is a crucial activity in the organizational quest for success and competitive advantage (Grant 1996; Land et al. 2005). Despite the significant efforts of academics from various domains, the fundamental issue of conceptualizing organizational knowledge remains a contentious one. This should come as no surprise, given that knowledge has endured as a topic of debate in philosophy since the discipline's early days in the classical Greek era. While its contemporary instalment is as multi-faceted as knowledge, its elusive subject, two contrasting schools of thought play particularly important roles in shaping both the academic discourse on KM issues and managerial practice in this field in the 21st century: the techno-rational '*managing knowledge*' view and the social constructivist '*knowing in practice*' view, characterised by their varying conceptualizations of organizational knowledge.

What can not be disputed is the growing importance of knowledge to organizations, in the context of what Castells (2001) calls the dynamic and turbulent "New Economy," and the consequential need for a

better understanding, both in theory and in practice, of organizational knowledge, how organizations can actively leverage its value and how information technologies are implicated in this. Due to the complex nature of organizational knowledge and its necessarily inextricable relationship with humans and human activity systems, a variety of complementary and contrasting perspectives, grounded both in the positivist and the interpretivist research traditions, are invaluable in achieving this.

The aim of this review is to explore the above argument by analysing and critiquing the effects of embracing different conceptualizations of organizational knowledge on academics' thinking about and approach to the study of the challenges that organizations face in 'harnessing' the value of knowledge. Schultze and Leidner's (2002) framework, an adaptation of Burrell and Morgan's broader paradigms of social and organizational enquiry, for categorizing approaches to studying KM provides a significantly more comprehensive overview of the field. This review limits its scope to the examination of the two contrasting archetypal perspectives introduced above – '*managing knowledge*' and '*knowing in practice*'. This particular debate revolves around the study of the relationship between knowledge, information technology and organizational change. The approaches are discussed in terms of their theoretical underpinnings and assumptions and how these are reflected in contemporary research. In conclusion the ways in which these two lenses complement each other in guiding the study of KM are summarized.

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## Managing Knowledge – Processes and Systems

“Knowledge Management refers to a systematic and organizationally specified process for acquiring, organizing, and communicating both tacit and explicit knowledge of employees so that other employees may make use of it to be more effective and productive in their work” (Alavi and Leidner 1999: 6).

The above words capture the central assumption that drives the *managing knowledge* view of KM: managers can deliberately manage knowledge in order to increase or even maximize the value that can be gained from it by their organization. With a strong focus on informing KM practice in general, and the use of knowledge management systems (KMS) to enable and support it in particular, this is an instrumental view that is grounded in the technical/rational tradition of IS research. It draws on several theories in order to provide a comprehensive framework to guide research and practice.

The core is shaped by fundamental theoretical elements from the strategic management field, particularly the Resource-Based View and its elaborated derivative – the Knowledge-Based View of the firm. Thus, knowledge is conceptualized as “the most strategically important of the firm’s resources” (Grant 1996: 110) and this ‘reification’ has a series of implications. From a managerial point of view, thinking of knowledge as an organizational resource, albeit an intangible one with unique characteristics, suggests that it is subject to specific, controllable processes and supports the notion that, if managed appropriately, it can become a source of sustainable competitive advantage. Furthermore, these deliberate efforts to better leverage the value of the knowledge resource should occur beyond the everyday operations of the firm, as separate activities, through specific interventions and temporary or ongoing projects. Individual organizational members, given the right tools, and in the presence of the right motivating factors, can actively participate in KM processes that yield valuable new knowledge which can be “harnessed for increasing returns” (Garud and Kumaraswamy 2005: 10). What is taken for granted, however, are the learning processes that are at the heart of creating and sharing knowledge.

The resource-based view of the firm articulates a notion of intertwined organizational learning loops whereby generic resources can become capabilities which in turn can become strategically valuable core capabilities (Andreu and Ciborra 1998) but there is little consideration of the role of the individual and his/her immediate social context in these processes. Assuming that knowledge resources are made eas-

ily accessible, their appropriation and deployment in practice by individuals is seen as unproblematic.

The practical appeal of this view is reinforced by the capabilities information technologies possess in terms of storing, processing, and distributing information. Viewing knowledge as a resource or stock makes it easy to blur the line that distinguishes it from information, and technology can then be seen as a key enabler of KM processes – in practice, KMSs are in fact a central component of most of the projects and tools mentioned above (Alavi and Leidner 2001; Ruggles 1998). Fahey and Prusak (1998) argue that ignoring this distinction is a dangerous simplification that has led to a significant number of failed KM projects.

Adherents of the view refer to theory in order to address this issue. To manage the knowledge resource effectively, its characteristics must be defined. In this respect they draw on the ideas of an influential conceptual framework – a “taxonomic” (Tsoukas 1996) perspective of organizational knowledge, based on the seminal work of Michael Polanyi (1983), which proposes a distinction between explicit and tacit types of knowledge. Consequently, different issues and challenges, pertaining to the management of these two types are identified: for explicit knowledge the emphasis is on facilitating capture, storage and retrieval, while for tacit knowledge the focus should be on enabling the social connections and interactions that allow it to be communicated.

Finally, implementing KM initiatives ‘powered’ by information systems will necessarily lead to organizational change. In this regard, the line of reasoning embodied by this view closely resembles what Orlikowski characterises as the “planned change model” (1996: 64). The latter posits that organizational change is predominantly determined by management action. Thus, organizations are assumed to be generally stable and change is seen to be the result of a rational decision-making process implemented through planned interventions. Managers need to assess and understand the ‘state of knowledge’ in their organization and use this to establish a knowledge management strategy which can then be implemented (Alavi and Leidner 2001). Information technology, in turn, is seen as a resource that is picked from a generic pool and then customized to match the requirements of the specific KM initiatives. It is seen as given and research can thus focus on understanding behavioural and contextual factors which affect the willingness of individuals to use KMS to inform managerial interventions.

Alavi and Leidner’s (2001) extensive review of the study of KM at the turn of the 21st century has subsequently become very influential in guiding aca-

demic and practical pursuits. The authors show that knowledge management is widely recognized as a complex task that involves various cognitive and social processes at the individual, group and organizational levels. They propose that KM consists of four distinct but interrelated knowledge processes – creation, storage and retrieval, transfer, reuse. By untangling the complexity of organizational knowledge and classifying different aspects of KM into these analytical categories, their framework usefully permits the targeted consideration of how specific information technologies can be used to support each of these processes. Importantly, they suggest that as IT becomes increasingly sophisticated, its role in supporting KM may expand from its traditional focus on explicit knowledge to encompass tacit knowledge. While the authors acknowledge that these are a set of “socially enacted” and “dynamic and continuous” processes, the consequences of these characteristics are not explored any further.

On the basis of this framework, several studies (Gee-Woo et al. 2008; Kankanhalli et al. 2005; McLure Wasko and Faraj 2005; Subramanian and Pek-Hooi 2009) examine the problem of IT-enabled knowledge sharing at the individual level using predominantly quantitative methods grounded in the economic or administrative rationalities. For instance, Kankanhalli et al. (2005) model the processes of knowledge transfer as a social exchange, assuming that individuals weigh up the costs and benefits of sharing knowledge to make rational decisions about whether or not to contribute their explicit knowledge to Electronic Knowledge Repositories (EKR), a widely used type of KMS. Their study provides useful prescriptive insights, particularly in terms of which specific factors encourage knowledge contribution. The assumptions behind modelling this as a social exchange allow them to quantify individual behaviour but necessarily ignore political, cultural and historical factors which could have profound effects on EKR usage in a particular organization. Managers may encounter these factors as significant barriers to the success of KM initiatives.

Garud and Kumaraswamy (2005) take a broader scope in their analytical study of KM practices at a leading international IT services firm to understand how knowledge and learning processes operate at and across individual, group and organizational levels and the challenges that this poses for “harnessing knowledge”. Rather than attempting to generalize from a sample to a population, they adopt an inductive case study approach to develop a theory to better understand the dynamics of KM initiatives. They use a qualitative, longitudinal research methodology to observe the consequences and evolution of such initiatives over time. A sophisticated view of distinct and interrelated knowledge processes

occurring at different analytical levels allows them to appreciate the complexity of the task of managing organizational knowledge. Framing their results using systems theory leads them to make a differentiated conclusion. They show that management plans and actions – in this case trying to kickstart a ‘virtuous circle’ of KM – are only the start of a systemic process characterized by “dynamic complexity” that can subsequently degenerate into ‘vicious circles’ and lead to the failure of the whole initiative. Rather than making specific practical recommendations, they propose that, above all, managing knowledge requires an unorthodox, holistic mindset that “recognizes the web of mutually causal processes constituting the knowledge system” and that such non-linear thinking is best achieved by a team of “individuals with diverse epistemic leanings” (Garud and Kumaraswamy 2005). While the authors maintain emphasis on the agency of managers, their choice of research method and theoretical lens allows them to appreciate the dynamic nature of organizational change and recognise that emergent events can have profound impacts on rigorously and rationally planned and devised KM initiatives.

All of the above studies attempt to include an appreciation of the social context of organizational knowledge in different ways. This suggests that, even in the reductionist world of rational thought, there is a sense that knowledge comes with a ‘social baggage’ and that purely instrumental reasoning can not account for the consequences of this state of events. The wholly different perspective discussed below may be useful in forming a deeper understanding of such issues.

### Knowing in Practice – Actors and Practices

“We must see knowledge as a tool at the service of knowing not as something that, once possessed, is all that is needed to enable action or practice” (Cook and Brown 1999: 388).

There are several prominent proponents of what Newell and Galliers (2006: 442) characterize as the “social constructivist view of knowledge”, which challenges a number of the above assumptions about KM. It is informed by a colourful ‘palette’ of theories from different reaches of social science, including Giddens’s (1984) structuration theory, Lave (1988) and Suchman’s (1987) anthropological studies of professional work, Wenger’s (1998) research into ‘Communities of Practice’ and Cook and Brown’s (1999) invaluable insights from their experiences at one of the world’s premier research and development laboratories. Through this lens, knowledge is seen as being constituted recurrently in the “ongoing and situated actions of organizational members as they engage the world” (Orlikowski 2002: 249)

and perform their work.

In an analytical paper, evocatively titled "Knowing in Practice", Orlikowski (2002) makes her case for the value of such a conceptualization of organizational knowledge. Eschewing a distinction between explicit and tacit knowledge, the author sees knowing and practice as inseparably intertwined. Furthermore, the knowledgetability and reflexiveness of human actors is emphasized and learning happens as they go about their tasks, monitor the consequent ongoing flow of action and obtain new knowledge or adjust and update their existing knowledge according to these new experiences. Based on an exploratory study of the work practices at a successful global software company, the author argues that competences or capabilities – knowledgeable practices that are valuable to firms – should not be taken for granted as given 'fixed stocks' that organizational members can readily 'deploy' as and when necessary. Instead they should be considered as actively and recurrently accomplished in the everyday practices of actors.

By developing and building on the 'epistemology of practice', a notion introduced by Cook and Brown (1999), the paper presents an elegant argument which highlights the vital role and value of 'knowing' to professional work and brightly illustrates the limitations of the 'managing knowledge' view. For all of its evocative power in that regard, it is unfortunately relatively limited in exploring the consequences of these insights for the role of IT in enabling and supporting KM. In a later essay, Orlikowski (2006) goes to some length in filling this gap by providing a brief but inspirational account of technology as a substantial element of the ongoing and emergent changes that happen as knowledge and practice continuously reconstitute each other. Inevitably shaping practices and knowing, all information technologies – even post-it notes (Topi et al. 2006) – that organizational members come into contact with and utilize in the course of accomplishing their work become KMSs. The uses of technology are shaped, in turn, by these practices, and organizational change emerges from this constant reflexive interplay rather than from the plans and intentions of managers. ICTs take on a more passive role, one of facilitating the accomplishment of knowledgeable practice and its diffusion, by becoming embedded in communities and allowing for interaction and collaboration across spatial and temporal boundaries (Brown and Duguid 1998). Obtrusive technologies which require people to make substantial changes to their work practices to share knowledge, such as EKR, may in fact inhibit knowing in practice (Newell and Galliers 2006).

Shifting the focus of enquiry from the actions of

managers to the everyday practices of individuals has significant implications for the study of KM. If knowledge emerges through practices and 'evolves' in a dynamic learning process, it is highly contextual, "provisional" and "virtual" (Orlikowski 2002: 253) and can not be stored, transferred or reused per se. Rather, recognizing in which contexts such skillful practice is more likely to be accomplished and identifying and understanding the collective practices that allow humans to enact their knowing in different contexts becomes more important.

## Conclusion – The Value of Diversity

The managing knowledge view reflects the dominant epistemology of Western culture, what Cook and Brown (1999) refer to as the 'Cartesian view', in emphasizing the explicit and individual forms of knowledge and giving information technology a central role in the KM process. Knowing in practice suggests that, in order to understand organizational knowledge and the processes pertaining to it, we need a more sophisticated conceptualization, particularly in terms of its relationship with work practices. It also implies a more subtle role for technology, as more of a facilitator than a driver.

The insights gained through these lenses are complementary in enriching our understanding of organizational knowledge. Studying knowledge as an organizational resource has, among other things, provided many important lessons about how ICTs can be used to improve KM activities and has facilitated the development of efficient approaches to the management of explicit forms of knowledge. Nevertheless, the observation that many recent studies attempt to integrate significant contextual and social elements suggests that a purely techno-rational perspective is insufficient on its own. By virtue of its more fine-grained theorization of knowledge, the social constructivist approach lends itself to analyzing issues related to the management of other forms of knowledge which are no less important than the explicit one (Cook and Brown 1999). It is however, more difficult to directly translate the insights from studies in this vein into specific instructions for the development of KMS. Van den Hooff and Huysman's (2009) recent survey of knowledge-intensive organizations provides a good example of how an 'intellectual interaction' between the two perspectives can in fact constitute a more effective overall approach to KM.

As information technologies that facilitate distributed communication and collaboration, particularly the 'social' ones that are commonly collectively referred to as Web 2.0 applications, become more sophisticated, less obtrusive and diffuse into organizations to be deeply integrated into work practices,

both perspectives have important roles to play in guiding, informing and understanding their implications for the management of organizational knowledge. The industry seems to be convinced that such tools are the future of KM (Spanbauer 2006). An intelligent approach to knowledge management, which draws on both perspectives (and those 'in-between') and avoids uniformly favouring the epistemology of possession over that of practice, could enable organizations to become the knowledge-creating entities that Nonaka et al. (2000) speak of. This would be a promising future indeed.

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