

“Working in parallel”: themes in knowledge management and information behaviour

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This paper brings together approaches, theories and research from two complementary fields: knowledge management and information behaviour research.

Against a background of knowledge management in Australia, the paper describes Standards Australia's recently published *AS 5037-2005 Knowledge Management - a guide* (of which one author was the Committee Chair) as an exemplar of the ways in which knowledge management theory and practice have evolved in recent times. This evolution is mirrored in a review of the literature of the field and manifests a growing recognition of the complex social nature of organisational knowledge cultures.

This is followed by a discussion of developments in the field of information behaviour research. In particular, we highlight that, as in knowledge management, an important trend in the field has been a growing awareness of the shortcomings of a focus on individual cognition and the emergence of a range of socio-cultural approaches to understanding information behaviour. These include a range of social constructivist perspectives which make social/discursive context the central focus of theoretical attention.

From this we identify areas of significant common interest between the fields of knowledge management and information behaviour research. A case study of the

development of a knowledge management research project linking universities and industry partners to explore organisational knowledge cultures highlights a range of theoretical and methodological challenges and opportunities. The research project (case study) draws on the divergent expertise of the authors – one with a background in information behaviour research, the other with extensive experience in the practice and teaching of knowledge management. The case study highlights that the information behaviour and knowledge management communities have much to learn from – and teach - each other.

The authors hope that this paper will contribute to further conversations and encourage other similar collaborative projects.

Knowledge Management in Australia

In Australia, as in other developed nations, the knowledge based services sector is a key driver of national wealth. Australian organisations in the private, public and community sectors recognise the importance of knowledge as a resource, an asset and a form of competitive advantage. The concept of ‘knowledge management’ has developed as a practice, an approach to managing organisations. It is a discussion in academic, business, government and the not-for profit sectors. In Australia the topic of knowledge management continues to fuel an active conference/workshop circuit, community based forums, journal articles, a growing pool of practical case studies and academic research.

The last four years have seen a maturing of knowledge management as both a management approach and as a research topic. There has been a move away from the

1990-2000 techno-centric approaches which saw major investments in “knowledge systems” to a framework which relates to building organisational cultures conducive to knowledge creation, sharing and use. The goal is to have sustainable knowledge enabled organisations that are agile and adaptive to changing environments.

Hasan and Handzic (2003) in their collation of recent knowledge management research in Australia explore ideas of models of KM, generation, transfer and utilisation of knowledge, socio-technological enablers, measurement and integration with business. The aim of the text is to highlight the relationship between research and practice in knowledge management. The final chapters consider issues and challenges for knowledge management in Australia and one of the conclusions is:

There is widespread recognition in the KM community of the importance of suitable research methodsthe question of which research methods are the most appropriate for knowledge management research still remains unanswered. This is because KM draws upon diverse research traditions. There is also a lot of tension and misunderstanding between proponents of different paradigms. (Hasan and Handzic , 2003,.550)

The authors argue that it is indeed the potential of the application of diverse research methods within knowledge management that will ultimately strengthen the field.

Knowledge Management Standard

A major development within Australian knowledge management has been the release of the world’s first national standard in the field. Standards Australia is recognised

through a Memorandum of Understanding with the Federal Government as the peak non-government standards development body in Australia. In October 2005, Standards Australia concluded a five year journey by releasing *Knowledge Management – a guide*, a national standard that describes an approach for Australian organisations to effectively leverage their knowledge to innovate, learn and respond to changes in an ever increasing competitive market place.

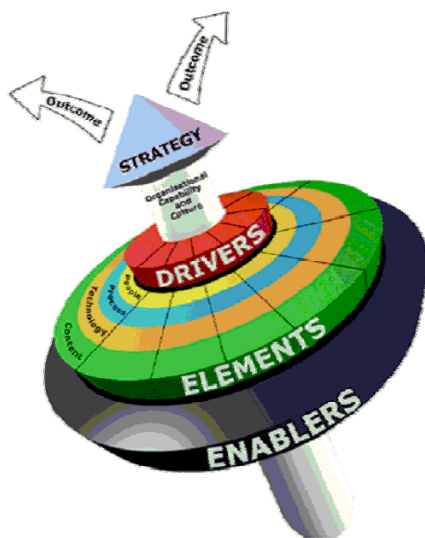
In 2000 Standards Australia assessed that knowledge management was a topic of interest with the emergence of pockets of understanding and growing expertise in a few organisations, while at the time, increased confusion in many others. Standards Australia began an informal consultative process to produce a handbook on knowledge management with the objectives of providing clarity and adding value to the Australian knowledge management space. This handbook, *A framework for succeeding in the knowledge era*, (Standards Australia, 2001) was well received and raised the level of debate within knowledge management in Australia.

In late 2001 Standards Australia established a technical committee (MB-007) to further develop thinking in knowledge management and move towards the development of an Australian knowledge management standard. Standards Australia practices a consensus based development process, and therefore the knowledge management technical committee consists of representatives from a diverse set of organisations, including academic institutions, professional and industry bodies and government. The intent was that the committee reflect the diversity and multidisciplinary nature of the field of knowledge management. It was recognised that

this standard would represent a new type of standard – one based around describing and clarifying, rather than about prescription and compliance.

February 2003 saw the release of an interim standard AS 5037 (Int). A proactive process to collect feedback from the public on the document followed this release. While this document began the development of a generic model to describe knowledge management feedback suggested areas for improvement. Feedback suggested the need for more guidance on how to implement knowledge activities, a continuance of the philosophies of embracing diversity of practice and the idea that “one size does not fit all”. The model, presented in the interim standard was perceived by some professionals as “too simplistic” and “rigid” – there was a sense in the knowledge management community that the final standard needed to “go further”. Figure 1 is the model of knowledge management from the interim standard (AS5037-2003 int)

Figure 1 Knowledge Management



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While acknowledging the role of organisational culture and capability as a key contributor to successful knowledge management the interim standard was described, in some feedback as “mechanistic” and “too linear” in its approach. The interim standard reflects an understanding of knowledge management at a time of change within knowledge management. The publication of the interim standard coincided with a maturing of the approach both in terms of the practice and intellectual thinking. Overall, the willingness of those in the knowledge management community to provide their ideas and opinions was encouraging, and the feedback gathered informed the development of the final standard.

In 2005 the final Standard was released and the major changes in the text highlighted a more fluid, contextual and socio-cultural vision of knowledge management.

The major changes in the revision were:

- an increased emphasis on how to understand whether an organisation is ready to adopt and/or expand knowledge management activities;
- a recognition that organisations are knowledge ecosystems – a complex set of relationships existing between people, process, technology and content;
- detailed guidance on how to implement the Standard within the context of an organisation's environment; and
- emerging issues and trends in knowledge management.
- The 2005 Standard aims to:
- provide an easy-to-read, non-prescriptive guide on knowledge management;

- help individuals and organisations deepen their understanding of knowledge management concepts;
- assist organisations to understand the environment best suited for enabling knowledge activities; and
- offer a scalable and flexible framework for designing, planning, implementing and assessing knowledge interventions

An area of debate in the development of the standard was the definitions of knowledge and knowledge management. For the purposes of the document the key terms are defined. There is however a disclaimer which recognises the contextual nature of both knowledge and knowledge management and encourages each reader to develop definitions that suit the organisational context in which they are applying knowledge management.

For the purpose of the Standard the following applies:

“Knowledge management is a trans disciplinary approach to achieving organisational outcomes and learning, through maximising the use of knowledge. It involves the design, review and implementation of both social and technological activities and processes to improve creating, sharing and applying or using knowledge.

Knowledge management is concerned with innovation and sharing behaviours, managing complexity and ambiguity through knowledge networks and connections, exploring smart processes and deploying people-centric technologies. (AS5037-2005, p.2)

The Standard has two major themes that show clearly the socio-cultural emphasis. The first is the recognition that an organisation is a knowledge ‘ecosystem’, which is characterised by connections and pathways between people, process, content and technology. Secondly, the way in which knowledge is activated in each organisation is driven by the context, culture and strategic intent of the organisation. This highlights that the socio-cultural dimensions of organisations have elements of uniqueness and therefore are a determinant for knowledge interventions, and indeed their success and failure.

Figure 2 is the visual representation of the knowledge ecosystem from the standard (AS5037-2005)

Figure 2 The Knowledge Ecosystem



It is important to gain an understanding of the interrelationships within the ecosystem – for example starting from the outer ring with the introduction of a technology enabler such as intranet is not recommended. “Technology and content that is devoid of content will not deliver a holistic knowledge initiative”. (AS5037-2005: 9).

The core of the knowledge ecosystem is

“organisational outcomes. These outcomes flow from the contextual environment (culture and strategic intent) and the manner in which an organisation operates within the business environment. A major aim of knowledge management is to stimulate and enhance collective organisational skills and competencies.” (AS5037-2005: 9)

To ensure a balanced approach to knowledge management, the Standard provides a three step methodology that encourages the experimentation and prototyping of interventions. This methodology of Map/Build/Operationalise is supported by a range of enablers.

The suggested methodology is cyclical and includes three phases:

- Mapping context and culture
- Building experiences and linkages
- Operationalising initiatives and capabilities

The standard also includes practical notes from knowledge management implementations, a description of a range of enablers, measurement and evaluation and a section which covers six emerging areas: complexity, innovation, the creative economy, sustainability, working in a global culture and technology.

This new standard gives senior executives, business and government leaders a flexible and iterative approach to ensure the knowledge in their organisation is created, shared and applied to grow and strengthen the organisation. According to John Tucker, CEO Standards Australia, “this is an important document, it will help leaders make better sense of the world they operate in and it will help them do their business smarter.” (Standards Australia, 2005b)

Future publications from Standards Australia will develop and further explain the content of the Standard for specific sectors. A guide for knowledge management in small medium enterprises is planned for release in 2006. The Standards Australia Knowledge Management Committee believes that the 2005 Standard is a ‘living document’ that will continue to grow and change and reflect Australian knowledge management practice and thinking.

Knowledge management like the approach it describes is fluid and adaptive to the environment in which it is actioned. Therefore, there are a number of themes – could be described as issues or challenges that both practitioners and researchers are grappling with in the continuing knowledge management journey.

Knowledge Management Literature

A scan of trends and challenges in the knowledge management literature highlights the emergence of a socio-cultural perspective in the knowledge management sphere (e.g. Snowden, 2002; Wenger et al, 2002), along with a growing recognition of the shortcomings of many earlier knowledge management approaches. Whilst, as Wilson (2002) and Snowden (2002) have highlighted, first generation knowledge management was epistemologically naïve, grounded in an implicit assumption that knowledge was a ‘thing’ to be captured, recent developments are marked by a growing recognition of the complex social nature of organisational knowledge cultures.

Since its branding in the early 1990’s (Prusak, 2001) knowledge management has, as a term fuelled debate and scepticism. McKinlay states:

..KM cannot simply be dismissed as a passing fad. Inevitably, KM will prove to be ephemeral but the underlying objective of harnessing employee knowledge and creativity will remain of critical importance. (McKinlay, 2002:76)

While proponents of knowledge management might dispute the ‘ephemeral’ tag there is an acceptance of the limitations of the term “knowledge management”. In the last few years practitioners have preferred to use the concepts, among others, of enabling and/or facilitating knowledge yet the brand ‘knowledge management’ remains entrenched.

One key issue that any academic or professional endeavour in this area needs to address is that most fundamental of all issues: is it possible to manage, or even research, knowledge? Wilson (2002) in his review of the knowledge management literature to that point highlighted the atheoretical nature of much knowledge management research and practice. In doing so, he cast some much-needed critical light onto the question of the theoretical and epistemological underpinnings of knowledge management.

Wilson (2002) and Snowden (2002) have both highlighted the epistemological naivety of most early knowledge management approaches. Whilst the knowledge management literature in general has had remarkably little explicit discussion of the nature of knowledge, Snowden (2003) has pointed out that:

...mainstream [knowledge management] theory and practice have adopted a Kantian epistemology in which knowledge is perceived as a thing, something absolute, awaiting discovery through scientific investigation. (Snowden, 2002, 101)

Knowledge Management – the Socio-Cultural Perspective

The recent knowledge management literature has been marked by a growing awareness of the limitations of a techno-centric view of knowledge management. An important feature of this has been a growing appreciation of the importance of context. There is now a widespread acceptance among knowledge management practitioners that both knowledge and knowledge management are different for each

organisation. There is no one way “to do” knowledge management – no ‘one size fits all’ solution.

This has led to the development of an increasingly influential *socio-cultural perspective* – or rather perspectives: a range of approaches to knowledge management research and practice that recognise the central role of social factors, such as organisational culture and inter-personal interactions for knowledge creation dissemination and use. Socio-cultural approaches to knowledge management are both theoretically and methodologically diverse, drawing on ideas and approaches from a variety of other disciplines.

Evidence for the growth of the socio-cultural perspective can be seen in the growing influence of social network analysis, (e.g. Liebowitz, 2005; Schönström, 2005), and communities of practice (Brown & Duguid, 1991; Wenger, et al 2002). Both these approaches are focussed on the central importance of informal communication and social interaction between an organisation’s members.

The growing recognition that an effective knowledge management strategy needs to facilitate an organisational culture which facilitates creativity and knowledge sharing has led to the development of a range of approaches to examining and ‘mapping’ an organisation’s knowledge culture. These range from the structural equation modelling of Lopez et al (2004) to Boreham & Morgan’s (2004) socio-cultural analysis of organisational learning.

The growing sophistication of socio-cultural perspective can be seen in the development of approaches grounded in complexity theory (Snowden, 2002; Snowden & Kurtz, 2003; Sbarcea, 2003). Approaches such as Snowden's 'Cynefin' framework move away from the simplistic linear thinking that has contributed to KM implementations to date. They recognise that organisations need to be viewed as complex adaptive social systems.

Schultze (1999) offered a well thought out analysis of the shortcomings of the prevailing functionalist paradigm, as well as the interpretivist assumptions underpinning the influential work of writers such as Brown & Duguid (1991) and Weick (1995). She argues that neither of these approaches neglect key aspects of the role of social context in shaping knowledge cultures – in particular that they pay little attention to the of power relations for knowledge management and the practices of knowing. Schultze argues for the adoption of a critical paradigm drawing on the discourse analytic theories of Foucault.

Postmodern theorists, such as Foucault (1972; 1980) and Lyotard (1984), have as yet had relatively little impact on knowledge management, although there are some notable exceptions such as Chay-Németh (2002) and Sbarcea (2003). However, with the growing influence of socio-cultural approaches and an increasing recognition of the importance of power-knowledge relations, we argue that poststructuralist perspectives can make a valuable contribution to knowledge management research and practice.

This change in knowledge management towards a socio-cultural perspective are well illustrated in the previous discussion about the development of Standards Australia's *AS 5037-2005 Knowledge Management - a guide*.

Information Behaviour Research

Information behaviour research is a field whose historical origins can be traced to library and information systems evaluation research (Wilson 2000). However over the last two decades, with the increasing acceptance of a “user-centred paradigm” (Dervin & Nilan, 1986), research has moved away from a narrow focus on information systems use towards a more holistic person-centred investigation of the ways in which people need, seek, interpret, understand and use information. Contemporary information behaviour research is a diverse and multi-disciplinary field, drawing theoretical and methodological insights from a range of other disciplines including philosophy, sociology, cognitive science, communication theory and linguistics.

It is important to note that, in contrast to the knowledge management literature, where it has been a common-place to associate the word ‘information’ with artefacts (documents, records, literature etc – the contents of information systems), information behaviour research, heavily influenced by cognitivist and constructivist approaches (e.g. Brookes, 1980; Dervin & Nilan, 1986) has adopted a much broader definition of the term: ‘that which informs’ whether a text, a lecture, a conversation or personal reflection. In other words, information behaviour researchers have for many years been examining many of the same phenomena that are of central interest to knowledge managers.

Parallel Growth: Socio-Cultural Perspective in Information

Behaviour Research

The shift in focus in knowledge management away from mentalist ‘knowledge capturing’ towards a greater interest in culture and social context, parallels a somewhat earlier (and consequently better established) shift in information behaviour research:

Approaches to studying information behaviour that focus on social context emerged slowly during the early 1990s and are becoming more prominent.social approaches were developed to address information behaviour phenomena that lie outside the realm of cognitive frameworks. (Pettigrew et al. 2001, 54).

These social approaches to the study of information behaviour have included phenomenological and phenomenographic work by e.g. Wilson (2003) and Limberg (1999); Pettigrew’s ‘Information Grounds’ (1999); and social network analysis research as undertaken by e.g. Williamson (1998) and Sonnenwald (1999).

Further, the last decade has seen the emergence of social constructivist approaches to information behaviour research, including Chatman’s ‘life in a small world’ and ‘life in the round’ (1991; 1999); the more recent developments of Dervin’s Sense-Making (1999); Savolainen’s (1995) use of Bourdieu’s ‘Mastery of Life’ and the discourse analytic work of Talja (2001), Given (2003), McKenzie (2003) and Olsson (2004; 2005). These approaches consider social context not only as a factor influencing the

individual information user's cognitive processes but as the primary focus of theoretical attention.

Social constructivists reject both the positivist/Kantian notion that information systems/artefacts can capture and record an objective reality, as well as the Cartesian separation of the physical and mental spheres (Frohmann, 1992). They argue that both information artefacts and individual's sense-making processes should be seen, not in terms of an objective/subjective divide, but rather as 'intersubjective':

Our experience of the world, upon which our thoughts about the world are based, is intersubjective because we experience the world with and through others. Whatever meaning we create has its roots in human action, and the totality of social artifacts and cultural objects is grounded in human activity.
(Wilson, 2003, 71)

This approach has therefore focussed its attention on exploring the role of socio-cultural factors such as shared practices, values and beliefs in shaping people's relationship with information. Influenced by Foucault's (1980) theory of 'power/knowledge' (*pouvoir/savoir*), Dervin (1999) and Olsson (2004) have called for greater recognition of the role of power relations in shaping information behaviour.

Common Ground

So we are now at a point where parallel development means that members of the knowledge management and information behaviour research communities have more

in common than ever before. Furthermore, both communities have a great deal to offer one another.

The theoretical perspectives and empirical approaches developed by information behaviour researchers can make a major contribution to overcoming the shortcomings outlined by Snowden (2002) and Hasan & Handzic (2003), and are well suited to examining a range of issues, such as sense-making, collaboration and informal information/knowledge sharing practices, of strong interest to knowledge management practitioners.

Collaboration with the knowledge management community offers information behaviour researchers the opportunity to further develop their ideas and research methods in a variety of different organisational settings – to expand their understanding of the role of context and information/knowledge culture/s by working with a practitioner community which shares their interests. And, in contrast with information behaviour research's perennial struggle for acceptance among IT professionals and systems designers, knowledge managers are already aware that there is more to the information/knowledge world than information systems!

Collaborative KM-IBR Research: the University of Technology Sydney (UTS) 'Knowledge Cultures' Project

The Information and Knowledge Management Program at UTS is currently involved in the planning of a research project to develop an innovative and practical

methodology for assessing and potentially benchmarking the knowledge focus in organisations.

Currently in both the theory and practice of knowledge management there is a significant gap in tools and techniques for organisations to understand, assess and benchmark their knowledge focus. The challenge for organisations is to understand and assess their knowledge environment /ecosystem. Reflecting on case studies and comparative data will assist them in making decisions about where to direct effort in knowledge management strategies.

The challenge in the research is to combine a quantitative survey tool with a qualitative approach that considers the analysis of case studies of knowledge interventions within an organisational construct. Understandings and methodologies for knowledge management and information behaviour will be used. By adopting a multi-faceted research approach, the research aims to look beyond ‘canonical work roles’ (Brown & Duguid, 1991) and organisational policy to examine the everyday experience – the information/knowledge life-world (Chatman, 1999) – of members of the partner organisation/s. The research aims to identify patterns and groupings, within a variety of organisational contexts as to what constitutes a ‘knowledge culture’. While it can be argued that every ‘culture’ is unique the proposed research seeks to identify the patterns that emerge and give insights into the likely outcomes from knowledge interventions. (British Standards Institute, 2003).

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The research approach will consider the socio-cultural elements holistically in terms of the organisational context. The methodology developed will seek to explore:

- Communications - modes, stories and meanings
- Practices, behaviour, actions, ‘the way things are done’
- Material culture, objects artefacts, symbols
- Communities, networks, alliance, associations, relationships
- Understanding of time and space

(adapted from British Standards Institute, 2003: 5-6)

In adopting a longitudinal approach over time, the effect of knowledge activities can be “measured” and indicative effects within the knowledge culture can be identified.

The research will focus on developing an understanding of the partner organisation’s knowledge cultures by tapping in to the ‘insider’ knowledge of participants. This approach will enable the study to examine not only organisational procedures and systems for knowledge sharing, creation and use but also the less visible (but vitally important) area of informal communication/knowledge sharing amongst and between communities of practice. The research will not only examine participants’ actions/work practices but the shared values and beliefs that underpin their behaviour – and the cultural practices within the organisation by which knowledge culture/s are shared, contested and changed.

Methodologically, the research draws on the research traditions of both information studies and knowledge management – and adopts/adapts methods and approaches from communication research, discourse analysis, sociology and ethnographic

research. A key aspect of the methodology will be the use of the Sense-Making Time-Line and Life-Line interviewing techniques developed by Dervin and her collaborators as a means of developing a holistic understanding of the communication/information life-worlds of participants (Dervin 1992, 1999).

Conclusion

With their parallel development of socio-cultural perspectives, the areas of common interest – and thus the opportunities for mutually beneficial cooperation between knowledge managers and information behaviour researchers has never been greater. We hope that in presenting this paper here at Information Seeking in Context, the premier conference in information behaviour research, that others might also be encouraged to ‘bridge the divide’ and also develop joint projects that will increase the understanding (dare we say, the knowledge?) of both communities.

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