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In pursuit of the individual in the field of knowledge management

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Abstract: The aim of this paper is to explore the focus on individuals in the field of knowledge management (KM). Through a meta-review of the KM literature, we identify a relative disregard of the individual in the KM literature while information technology (IT) oriented concepts are widely represented. Our review indicates the need for a greater emphasis on individuals in KM as knowledge is based on individuals' ability and willingness to create, share and transfer knowledge. We offer suggestions on how to integrate individuals into theorising and enacting KM and also identify some avenues for future research.

Keywords: information technology; individual; knowledge management.

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"KM suffers from the same challenges as many other management issues: it assumes that knowledge is a 'thing', which is amenable to being 'managed' by a 'manager'."

(Chen and Chen, 2005, p.31)

1 Introduction

Knowledge management (KM) has progressively gained attention both in academic research and in organisations as a business strategy (McAdam and McCreedy, 1999; Davenport and Prusak, 2000). The reason for this trend is that knowledge is increasingly seen as a vital organisational asset (Drucker, 1995; Liebeskind, 1996; Wiig, 2004), and as a strategy to enhance best practice and performance outcomes (Sveiby, 1999; Mertins et al., 2001). In this paper, we seek to review the extent to which individuals – the originators of knowledge – have been integrated into the discourse on KM. While the role of individuals is acknowledged in the organisational learning (OL) literature where the emphasis is on collective learning so that organisations could adjust to external changes (Argyris and Schoen, 1978; Kim, 2004), the focus in the present paper is on KM only; we will examine the extent to which individuals have been considered in the KM literature.

With a view to synthesise and understand previous research on this topic (e.g. Davenport and Prusak, 2000; von Krogh et al., 2000), and to develop and guide future research, we offer a meta-review of 16 previous reviews of the KM literature. The structure of the paper is as follows. In the next section we explain KM, its origins and why individuals are meant to be central to KM. We then outline our methodology used to identify the review articles, before presenting the findings and critical assessment. In the discussion section, we summarise our findings which support a multi-perspective based approach to KM which may help in integrating individuals into the theory and practice of KM.

2 Theoretical background: what is knowledge management?

In this section, we examine the origins of KM and the different approaches that have fed into the development of this discipline. We also assess the (currently assigned) role of individuals in KM and explain why the integration of individuals is crucial for KM.

2.1 *Origins of knowledge management*

Arguably the notion of KM came into contemporary discourse through Nonaka's (1991) work on the *Knowledge Creating Company*. According to Lambe (2011), the idea of managing knowledge was already discussed in social and economic theory some 50 years ago. The notion of KM has been studied from diverse perspectives, in fields as diverse as economics, intellectual capital, artificial intelligence, engineering and computing as well as organisation studies, strategic management, and human resource issues, learning and cognitive psychology (Swan et al., 1999; Baskerville and Dulipovici, 2006; Nie et al., 2009). Three main schools of thought developed thereafter, i.e. the technology-centric approach, enhancing knowledge sharing via information technology (IT) solutions (Harun, 2001; Huysman and Wulf, 2006); the organisational-centric approach where knowledge facilitation occurs through organisational restructuring (Becerra-Fernandez and Sabherwal, 2001; Earl, 2001); and the ecological approach focusing on enhancing knowledge flow through the contextual interaction of individuals, such as communities of practice (von Krogh et al., 2000; Brown and Duguid, 2001; Wiig, 2004).

2.2 *Definitions of knowledge management*

KM is described as a systemic and organisationally specified process to acquire, organise, and communicate tacit and explicit knowledge (Alavi and Leidner, 2001). It is “the generation, representation, storage, transfer, transformation, application, embedding and projecting of group and organisational knowledge” (Hedlund, 1994, p.76). KM is used to ensure that the right information is there for the right people at the right time (Petrash, 1996, p.370). It can further be understood as a process that assists to expose, map and organise the knowledge of an organisation generated through the work activities of employees, their behaviours, and organisational knowledge sources (Conway and Sligar, 2002). However, KM is also an activity concerned with strategies and tactics to manage the assets that are inevitably centred in individuals (Wright, 2005). To summarise the foregoing definitions, we describe KM as the practices and processes, involving systems and individuals, to organise, develop, manage and share both explicit and tacit knowledge within and between organisations, groups and individuals, so that the right knowledge is available to the right individual at the right time.

2.3 *Knowledge management and individuals*

Since KM consists of the terms ‘knowledge’ and ‘management’, it is important to understand the relevance of individuals to both of these terms. Knowledge is the “innately human quality, residing in the living mind [of] a person” (Myers, 1996, p.2). It is the product of individuals’ intellect, experience and communication skills. Knowledge is originally embedded in individuals and derived through individuals’ participation (Polanyi, 1998; Wiig, 2004).

If made explicit and transformed into tangible data, knowledge can be transferred and exchanged via IT systems. Most forms of knowledge are, however, tacit in nature, non-verbal and intuitive, making it difficult to articulate them and difficult to share them (Polanyi, 1998; Wright, 2005). Whether there is in fact a trend towards an IT centred typology in the KM literature, even though knowledge has roots in individuals, and whether that in turn implies a disregard of individuals in the discipline, will be examined here, but first we introduce the methodology used in this study.

3 Methodology

We base our review of the KM literature on a meta-analysis of previous reviews in order to assess the focus (or lack thereof) on individuals in the KM literature. Given that the role of individuals is at least to some extent acknowledged in the OL literature, we decided to exclude reviews on this concept as we don’t consider OL as synonymous to KM. However, if a review article focused on KM as well as OL or even intellectual capital management, it was included in our meta-review.

To identify relevant review articles, we started our investigation searching for two keywords, *knowledge management* and *review*, in the EBSCOhost and SCOPUS (only related to Social Sciences and Humanities) as well as ISI Web of Knowledge (Science

Citation Index and Science Citation Index Expanded – from 1970 till 2010) database. For better focus and classification, we required the term *knowledge management* to appear in the title of the article, while *review* might be stated in the article abstract.

Further, we also scanned the bibliographies of all selected articles to see whether they cited other articles reviewing the KM literature, not detected through the database search. Articles that reviewed books only were excluded. If an article reviewed both books and articles, it was to be included. We decided not to use a specific timeframe for this research, as we understand that the KM discipline came into being following Nonaka's work in 1991.

4 Findings

Our initial search in the EBSCOhost database resulted in 32 positive responses to the question: 'is this a review on the KM literature?' In the ISI Web of Knowledge, we found 13 reviews of the KM literature, the same number was found in the SCOPUS database. Many articles found in the three databases overlapped. Adding those found through searching the bibliographies of the originally detected articles resulted in 16 works reviewing the KM literature. Table 1 presents a summary of the reviewers' aims for reviewing the literature, the number of articles reviewed, as well as the focus of assessment. The 16 articles reviewed approximately 1832 articles (including the overlaps).

Table 1 Reviewers' research aims and foci of assessment

<i>Aim of review</i>	<i>Assessment focus</i>	<i>No. of articles reviewed</i>	<i>Author</i>
The development of KM theories and practices	Examine KM models	35	McAdam and McCreedy (1999)
	Analyse KM and OL literature observing the drift towards an IT typology	182 of 334	Swan et al. (1999)
Identifying KM and its emphasis	Examine the intentions and investment opportunities of KM	34	Earl (2001)
	How KM is understood and the problems that are inherited by the way it is used	58	Alvesson and Kaerreman (2001)
	Evaluate the role of IT in KM	99	Alavi and Leidner (2001)
Explore IT systems developed around KM	Observe technologies and applications of KM	234	Liao (2003)
	Examine assumptions made of IT concepts and models for KM	116	Kakabadse et al. (2003)
Analyse the trends in KM	Examine how practitioners understand KM	223 of 1539	Loermans and Fink (2005)
	Study KM performance evaluation methods	108	Chen and Chen (2006)
	Look at the leading publications in KM and IC	450	Serenko and Bontis (2004)

Table 1 Reviewers' research aims and foci of assessment (continued)

<i>Aim of review</i>	<i>Assessment focus</i>	<i>No. of articles reviewed</i>	<i>Author</i>
Re-establish the meaning for KM	Review the most frequently cited articles in KM	20	Nonaka and Peltokorpi (2006)
	Observe how KM theories are adopted in its practices, processes, and evaluation	135	Baskerville and Dulipovici (2006)
	Look at the interaction of knowledge share, knowledge and organisational performance	80	Small and Sage (2005/2006)
	Reflect on the foundations of KM to analyse its development	57	Jasimuddin (2006)
Create an overview of KM	Observe the perception that have formed around measuring, managing and creating knowledge	93	Lloria (2008)
	What KM is, its origin, and implementation, applicability, its necessity and how to support it	1458 (keyword search based)	Nie et al. (2009)

5 Aims of the reviews

The aims of the papers reviewing the KM literature, as summarised in Table 1, appear in clusters according to the research focus. Swan et al. (1999) and McAdam and McCreedy (1999) focused on identifying trends in the KM literature. While Swan et al. (1999) had the role of individuals in KM in mind, studying whether the new discipline was drifting towards an IT focused approach, McAdam and McCreedy (1999) examined the applicability and relevance of KM theories.

Earl (2001), Alvesson and Kaerreman (2001) and Alavi and Leidner (2001) focused on the nature of KM. Alavi and Leidner (2001) analysed the conceptual foundations of KM; Alvesson and Kaerreman (2001) discussed the problems inherent to the term KM, evaluating the definition and the two components, knowledge and management. Earl (2001) focused on the intentions and investment opportunities for the discipline.

Liao (2003) and Kakabadse et al. (2003) focused their reviews on KM in relation to IT. While Liao (2003) explored technologies and applications developing around the discipline, Kakabadse et al. (2003) examined assumptions made on KM concepts and models. Serenko and Bontis (2004) reviewed the most frequently cited authors and publications in KM to determine the discipline's foundations. Loermans and Fink (2005) and Chen and Chen (2005) reviewed the measurement techniques developed for KM.

Baskerville and Dulipovici (2006) evaluated the theories used to establish KM and Jasimuddin (2006) studied if KM is a multidisciplinary field. Nonaka and Peltokorpi (2006) reviewed the 20 most frequently cited articles in KM to examine the assumptions developed within the discipline. Small and Sage (2005/2006) evaluated KM definitions and perspectives to establish that no distinctions are drawn between knowledge sharing and organisational performance.

The last cluster of reviews by Lloria (2008) and Nie et al. (2009) aimed to create an overview of the KM discipline. Lloria (2008) reviewed various perceptions of the schools

of thought that have formed around KM. Nie et al. (2009) reviewed six issues in the KM literature: “(1) why the research field is necessary, (2) what enables its birth or triggers actions on it, (3) what it deals with, (4) how to implement it, (5) how to support it, and (6) where it has been applied” (Nie et al., 2009, p.642).

6 Findings, conclusions and suggestions of the reviews

To assess the focus (or lack thereof) on individuals in the KM literature, we review authors' key findings, conclusions and suggestions based on previous reviews. Table 2 provides a summary of the findings with a focus on the role of individuals in the KM literature. The articles are organised according to their level of attention to the role of individuals in KM. The first cluster comprises those works that focused on the foundations and trends of KM. The second cluster of authors highlights the need for the integration of individuals in addition to the focus on IT. The third cluster consists of the works that noticed the disregard of individuals in the KM discourse.

6.1 Studies of KM are focused on IT while the foundations of KM are not

Even though there is a clear understanding of the importance of knowledge in a society, clarity about KM is lacking (Nonaka and Peltokorpi, 2006). The reason for this ambiguity is the fact that KM has emerged from various fields of studies. Nonaka and Peltokorpi (2006) argue that KM is a result of ‘idealistic theories’: theories addressing that reality is the result of experiences and constructs of the mind (Rescher, 1992). Nurtured by a rather heterogeneous range of interests, perspectives and issues, KM seems to be an ‘elastic’ discipline, not grounded in a specific ideology (Jasimuddin, 2006). The findings of this cluster show that the focus in KM is on IT, neglecting the role of the individual.

Jasimuddin (2006), reviewing the theoretical foundations of KM, identified four disciplines that influence the KM discipline: information systems, organisational theory, strategic management and human resources management. Baskerville and Dulipovici (2006) add intellectual capital theory and intellectual property theory to the list of theories affecting KM. Earl (2001) identifies three different schools in KM: the technological school, where the focus is on IT and management tools to codify knowledge; the economic school that treats KM as a revenue generator, here knowledge is seen as an asset; and the behaviour school, focusing on the ecological issues and so human elements in KM, emphasising on knowledge creation and share via organisational policies (Earl, 2001).

Publications on the diverse approaches to KM are, however, not equally distributed. Alvesson and Kaerremann (2001) and Lloria (2008) find that the majority of interest in KM lies in managing knowledge via technology (Hayes and Walsham, 2003; Benbya, 2008). Baskerville and Dulipovici (2006) identify potential cause for this development, as authors tend to cite works of the same research ‘family’ and less frequently use a mix of references in their research. Serenko and Bontis (2004) notice that Nonaka and Takeuchi (1995), Davenport and Prusak (1998), and Stewart (1997) are cited by 50% of KM scholars. The most frequently cited individual authors, and probably most influential, are Nonaka, Davenport, Bontis, and Takeuchi. Ma and Yu (2010) had similar findings. Lloria (2008) identifies Takeuchi’s work in 2001 as a benchmarking study for KM.

Table 2 Reviewers' key findings, conclusions and suggestions for KM

Category	Author	Findings	Conclusions	Suggestions
KM studies focus on IT while the foundations of KM are not	Earl (2001)	These are three main schools of thought in KM; the technological, the economic and the behaviour school	KM is more than an IT application	KM should be a social and not a technical tool organised to bring awareness to social meeting spots
	Alvesson and Kaerremann (2001)	There is a fundamental contradiction between the meaning of knowledge and management	IT is an obstacle to knowledge flow and creation	KM should support the process for learning with minimal management
	Lloria (2008)	KM perspectives have formed around measuring, managing and creating knowledge	There is confusion about the term KM. People issues are solely referred to as human factors	KM needs a common denominator with individuals at its centre
	Loermans and Fink (2005)	Techniques to evaluate KM projects are still developing, 70% focus on human capital, financial, process and customer	There seems to be a willingness to learn 'how' but not 'why' to use KM tools	KM measurement systems need to be more relevant and address individuals needs
	Nie et al. (2009)	KM is associated with intellectual capital, learning organisations, innovation and knowledge processes. Tacit knowledge appears only in relation with explicit knowledge	KM is 'one more means to exploit labour and reinforce unfair social relations' (p.639)	KM should enhance knowledge creation
	Jasimuddin (2006)	KM is a varied field rather than grounded in a specific ideology	It is still unclear what KM should imply	A multidisciplinary approach for KM is needed
	Baskerville and Dulipovici (2006)	KM derives from a wide range of disciplines is however merely associated with IT	Authors tend to cite works of the same research 'family' causing the mislead of KM interpretation	There is much more to KM than explored
	Nonaka and Pelokorpi (2006)	KM is 'not a development of, but rather a divergence from, the organisational learning literature' (p.74)	KM is looked at from the firm level, individual view is neglected	A multi-perspective based approach to KM is needed to address creativity
	Serenko and Bontis (2004)	Nonaka, Davenport, Bontis, and Takeuchi are the most influential authors in the KM discipline	None	None

Table 2 Reviewers' key findings, conclusions and suggestions for KM (continued)

<i>Category</i>	<i>Author</i>	<i>Findings</i>	<i>Conclusions</i>	<i>Suggestions</i>
KM cannot work solely on the bases of IT: Individuals need to be considered	McAdam and McCreedy (1999)	KM' origin is not in IT, but KM models are associated with IT	People and their learning issues should be central to KM	IT tools need to fulfil the demands of its users
	Alavi and Leidner (2001)	Knowledge is embedded in individuals, groups and organisations engaging in KM at any given time	The belief that KM can be solved by IT applications is misleading	KM is to facilitate knowledge flow
Individual is central to KM	Liao (2003)	KM technologies and applications are broadly explored while knowledge share tools are not	KM develops in ways that see KM as a problem to be solved, ignoring personal and behavioural factors	Clarity over the meaning for KM is needed and human behaviour and real-world situations need to be considered
	Kakabadse et al. (2003)	Practitioners see KM as processes that overlook the creation, distribution and use of knowledge. Academia see KM as anything related to business processes, IT, and individual behaviour	IT alone cannot enhance KM	A more philosophy-based approach is needed in KM to support the needs of the knowledge society
Individual is central to KM	Chen and Chen (2006)	Attention on measuring KM performance is shifting from financial indicators to non-financial indicators	Knowledge is assumed to be a 'thing', that can be 'managed' by a 'manager'	KM performance evaluation measurements need to be more flexible and focus less on KM as a problem that needs to be solved
	Small and Sage (2005/2006)	There are numerous models providing a framework to enhance and comprehend KM	Models and frameworks lack pragmatism and do not address the needs of knowledge workers	KM models need to consider knowledge workers and emphasis on knowledge sharing
Individual is central to KM	Swan et al. (1999)	KM is taking over the OL discipline; is however neglecting the people issues	The literature refers to individuals as intellectual capital	The individual is central to KM and should thus be included in its debate

Baskerville and Dulipovici (2006) find KM to be mislabelled as IT. Earl (2001) warns that KM is not “just another IT application” (p.229). However, Nonaka and Peltokorpi (2006) think the KM literature addresses a variety of issues, such as knowledge in organisations, knowledge-based theory, strategy, and knowledge creation. The focus is on the firm level appropriation and utilisation of KM, however, with little emphasis on the importance of individuals in KM. Alvesson and Kaerreman (2001) believe that the simultaneous focus on IT and the firm in KM is paradoxical, since knowledge is something flexible, loose, vague and intangible.

Loermans and Fink (2005), conducting a content analysis of KM literature, observe that “four factors made up 72% of the study’s findings: human capital, finance, process and customer” (p.125). Ironically, while authors speak of human factors, for example, in relation to studies on organisational culture, the role of individuals is still ignored (Lloria, 2008). Mathis and Jackson (2006) define human capital as “the collective value of the capabilities, knowledge, skills, life experience, and motivation of an organisational workforce” (p.570). Speaking of ‘human capital’ is indeed not equivalent to an emphasis on individuals; instead the focus is on the collective group. Nie et al. (2009) were also unable to find a keyword co-occurrence between KM and the ‘knowledge worker’, ‘the individual’ or ‘the person’ in the literature, even though the term ‘knowledge workers’ appeared 18 times within the *Journal of Knowledge Management*. The only term related to individuals found was ‘tacit knowledge’. ‘Tacit knowledge’, however, only appeared in co-relation to ‘explicit knowledge’ and not KM. Conversely, KM was found to be associated with terms such as intellectual capital, learning organisations and innovation; showing the disregard of individuals in the literature (Nie et al., 2009).

There is clearly a need for a “more multi-perspective based approach towards KM, and thus a mixed approach of subjective and objective perspectives” so that individuals’ role can be considered (Nonaka and Peltokorpi, 2006, p.81). For Alvesson and Kaerreman (2001), the “technocratic and socio-ideological types of management are predisposed to operate in a way that eliminates and substitutes knowledge, rather than maintaining and creating it” (p.1113). And since Earl (2001) sees a problem between the motivation of individuals and the technological and economical oriented schools of thought, he encourages an approach to KM that facilitates knowledge sharing (also in Wang and Noe, 2010).

Earl (2001) offers suggestions to facilitate knowledge flow and creation in organisations by linking KM to the business strategy. He argues that performance gaps in businesses need to be identified so that the ‘best fit’ KM strategy can be developed. Organisations are advised to take on a ‘knowledge vision’ going beyond IT (Earl, 2001). Jasimuddin (2006) suggests that organisations need to restructure and train the management to create a pro-knowledge culture in the workplace. Organisations can create social meeting places, what Earl (2001, p.226) calls ‘the street’ or ‘the knowledge building’, to enhance knowledge sharing, especially between individuals that would otherwise not meet. In particular, organisations need to realise that it is through individuals working in the firm that knowledge sharing and creation can occur (Lloria 2008; Nie et al. 2009; Wang and Noe, 2010).

6.2 *KM cannot work solely on the basis of IT*

Authors reviewing the KM literature find that treating IT as a solution to KM is misleading. McAdam and McCreedy (1999) contest the technological school origins of

KM and argue that KM should not be built on IT only. KM theory derives from organisational and strategic theories (Alavi and Leidner, 2001); Kakabadse et al. (2003) argue that KM is shaped by IT but also by business processes and individual behaviour. Nonetheless, the dominant focus in the KM literature remains on IT (Liao, 2003).

Even though IT can facilitate data transfer and codified knowledge sharing, Liao (2003) sees a discrepancy in the literature on how IT can facilitate a successful KM strategy. The argument is that KM models are based on 'laboratory research' only, not considering how KM technologies will interfere with individuals and organisations in real-world situations (Liao, 2003). Also, it is not possible for technology to address tacit knowledge. Alavi and Leidner (2001) refer to the intangible knowledge base within an organisation as corporate brainpower, organisational knowledge, knowledge relationships, innovative processes, morals, and identity.

Alavi and Leidner (2001) warn that it is problematic to misinterpret IT as knowledge creator due to two reasons: firstly, there is no guarantee that individuals will induct their knowledge into an IT system, and secondly, it is equally uncertain whether individuals will use the system effectively. Successful knowledge sharing is dependent on behavioural factors and not only technological tools in organisations (Liao, 2003). KM may, therefore, not be treated as a mechanical tool but as a social system (McAdam and McCreedy, 1999).

IT can assist in organisational knowledge creation, storage, transfer, and application practices, yet only if addressing individuals' needs (Alavi and Leidner, 2001). The problem is that existing IT models ignore issues of human relations, such as trust (Kakabadse et al., 2003), knowledge sharing (Wang and Noe, 2010), knowledge workers' attributes and social relations (Alvesson, 2004, Small and Sage, 2005/2006). McAdam and McCreedy (1999) point towards a socially constructed model emphasising both IT and ecological perspectives of KM. Kakabadse et al. (2003, p.86) find that "some aspects of knowledge, such as culture, organisational structure, communication processes and information can be managed, [but] knowledge itself, arguably, cannot". The authors suggest a more philosophy-based approach to KM that can address knowledge in its dynamic nature (Kakabadse et al., 2003). Since knowledge is not "a 'thing', which is amenable to being 'managed' by a 'manager'", a more flexible and integrative approach to KM is needed (Chen and Chen, 2005, p.31).

6.3 Individuals are central to KM

Swan et al. (1999) were the only authors who directly addressed individuals in KM. The authors note that since 1995, increasing attention has been drawn to the concept of KM, while publications on OL have declined. They emphasise that the KM discipline should embrace ecological topics that have been considered within the OL domain, e.g. organisational development, culture, commitment, management development, and people management. However, Swan et al. also observed that 70% of the KM literature is devoted to IT. This explains why Nonaka and Peltokorpi found that "KM is not a development of, but rather a divergence from, the organisational learning literature" (2006, p.74).

In case individuals were mentioned in the literature, Swan et al. state, they were referred to as intellectual capital or in some cases as 'constraints on its effectiveness'. The authors alert that the KM "literature is biased towards a technological agenda, away

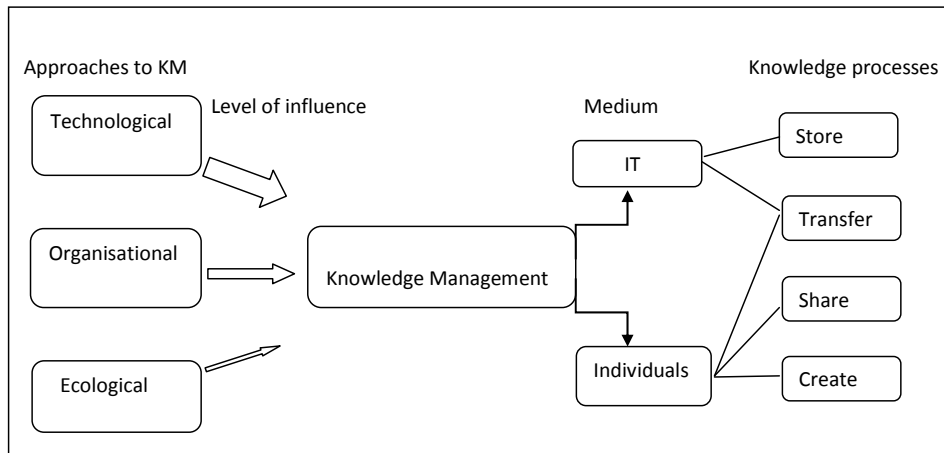
from wider organisational issues, specifically social and behavioural factors”, neglecting people issues even though individuals should be central to KM (Swan et al., 1999, p.669).

7 Discussion

In the light of the foregoing meta-review, it is clear that the KM publications are dominated by a focus on IT while generally neglecting the role of individuals in KM. That KM is dominantly associated with the technological-based agenda may be explained by the fact that the discipline came into fashion during the IT revolution (Garavelli et al., 2004).

Fahey and Prusak (1998) consider the treating of knowledge as external to individuals as one of the deadliest sins for KM. Knowledge is an inherent human quality, residing in the living mind of individuals (Polanyi, 1998). Individuals are the source of knowledge, and through their participation in KM, knowledge can be created, shared and transferred (see Figure 1). IT can assist in the transfer and storage of explicit knowledge, yet as illustrated in Figure 1, individuals’ participation is needed to manage knowledge in its fullest form. The three main approaches that lead to KM are technology based, organisation centric and ecological. IT-oriented paradigms of KM have the strongest impact on how KM is theorised and practiced, while the ecological approach (even though studied by some well-known authors in the field, e.g. Nonaka, von Krogh, and Wiig) is much less discussed. The organisational approach focuses on organisational structures and routines to enable the creation and sharing of knowledge. The influence of different approaches to KM is indicated through the arrows in Figure 1.

Figure 1 A multi-perspective based approach to KM via IT and individuals



IT tools can assist organisations to enhance communication, e.g. via telephone, email and online chat (Benbya, 2008). Most knowledge that is transferable via IT is, however, explicit knowledge and may be classified as information, not knowledge (McDermott, 1999). Tacit knowledge can be shared by individuals interacting on a face-to-face basis

only (von Krogh et al., 2000). Figure 1 shows that IT may facilitate the storage and transfer of explicit knowledge; however, organisations need to focus on individuals, encouraging and assisting them to engage in knowledge processing.

Our findings are consistent with Polanyi (1998) who suggests that knowledge originates from individuals and that all knowledge has a tacit base. While KM is meant to address both tacit and explicit knowledge, our meta-review suggests that the tacit knowledge base is not integrated in full since the focus is dominantly on IT.

Organisational knowledge processes are dependent on individuals' ability and willingness to create and share knowledge. Organisations are, therefore, advised to interpret KM not as a tool or a problem to be solved, but as a process of knowledge facilitation, assisting individuals to engage in knowledge-related activities. IT can assist individuals in knowledge processing, yet it should remain an instrument for KM and not be treated as KM itself.

For knowledge sharing and creation to take form, individuals need to interact in, for example, organisational 'streets' (Earl, 2001). Providing space for socialisation will allow individuals to engage in community and knowledge creation (McDermott, 1999). If the corporate culture is knowledge oriented and built on the concepts to create, share and innovate, individuals are more likely to engage in knowledge processes (Davenport et al., 1999; Huan and Ghauri, 2008). This may call for a corporate restructuring into what Morgan (1997) calls an organisation as a brain or culture. This may then lead to the creation of what Nonaka et al. (2000) describe as '*ba*': a space for knowledge creation.

Organisations might consider retraining their leaders as knowledge motivators, and to integrate knowledge facilitators, coaches and mentors (Politis, 2001). Adopting a coaching and mentoring approach may help in facilitating knowledge sharing behaviour so that the individual and organisational aspirations to KM may be aligned (Garvey et al., 2009). An apprenticeship model may be considered to enhance a knowledge sharing culture (Becerra-Fernandez and Sabherwal, 2001).

Since knowledge is resident in individuals, their personal commitment to the organisation and the knowledge processes is important (Wright, 2005). It is crucial for organisations to communicate (Hedlund, 1994), support and commit to KM being about exploring new grounds for knowledge creation through individuals participation, and not about, what Kakabadse et al. (2003) call, exploiting individuals through KM. At the end of the day, individuals are free to leave organisations, taking their knowledge with them. It is therefore equally important to build trust and a psychological contract with individuals (Guest, 2004). This can only be done if it is acknowledged that individuals are the true owners of knowledge.

Ignoring the role of individuals in KM and focusing on IT and the firm alone is not viable. Job security is scarce in today's economic climate (Burchell et al., 2002), and individuals are unlikely to share their knowledge without trust and safety (Ford, 2003). It may be in organisations' own interest to encourage individuals to create knowledge freely and not under strict guidelines, and acknowledge individuals' contribution to knowledge processes and the organisation at large.

We recommend that organisations take on a multi-perspective approach to KM, integrating individuals into knowledge processes. Organisations may reflect on the space provided to individuals to create, share and transfer knowledge. They may also reflect on the extent to which the organisational culture supports knowledge creation, and how

trustworthy the organisation is for individuals to willingly engage in knowledge processing. It is important that organisations realise that KM is much more complex than IT tools and that doing KM needs to be ingrained into the corporate culture.

Further research may bring insight into various approaches to KM with a potential to enhance tacit knowledge sharing and creation. We see the exclusion or neglect of individuals in KM as problematic and recommend future research to understand what individuals need to feel at ease to engage in knowledge processes. Studies on how an organisational environment can facilitate or impede knowledge creation may be useful. Evaluating individuals' attitudes towards interventions designed to facilitate KM may assist in understanding diverse attitudes of individuals, both employees and managers. This may bring useful insight into the antecedents and consequences of KM and how corporate strategy may be adjusted to aid the success of KM.

Knowledge is private and individuals' level of trust and motivation will affect the success of KM. There is a need to bring awareness to manage not only organisational goals for KM, but also those of individuals. Scholars may wish to investigate KM at the level of individuals and how the corporate structure, culture and attitude towards KM may enable individuals to willingly engage in knowledge processes. Addressing individuals' needs is what we see as the missing link for the success of KM. For academic research, this means to link KM with individual motivation and empowerment. For practice, this means to identify how individual employees and managers understand KM and how they believe KM ought to be practised.

Furthermore, it could be useful to study how changes in working arrangements and flexible working contracts may affect knowledge sharing behaviours. To what extent is the notion of KM built on the organisation of the past and does not fit the present and future environment? Also, to what extent does the outsourcing of organisational activities impair the organisational knowledge bases and competitiveness? It has to be asked to what extent companies should emphasise on outsourcing and project work when they want to capture knowledge into systems that is not theirs, and is instead produced or used elsewhere.

Since this study is based on a meta-review, we are aware of its limitations. The study is obviously limited by the respective limitations of the individual reviews selected in this research. For example, the reviews' methodologies varied in their approach to integrate or neglect individual related themes in the respective review. We acknowledge that the very focus on the role of individuals has led to the exclusion of other findings. Also, we excluded non-English sources and book reviews from the present review. We do hope, however, that the present study has shown that there is a relative lack of focus on the role of individuals in KM and that, for KM to be successful, there is a need to integrate individuals into the KM discourse.

8 Conclusion

The aim of this meta-review was to investigate the extent and nature of focus (or lack thereof) on individuals in the field of knowledge management. Our preliminary assumption was that KM as a strategy for competitiveness is, to date, dominantly directed towards enhancing KM via IT, while the role of individuals is neglected. This was proven to be the case in our meta-study, which is also in line with some of the previous reviews (e.g. Swan et al., 1999; Nonaka and Peltokorp, 2006; Nie et al., 2009). Our

review shows that the effectiveness of KM is dependent on individuals and their willingness to engage in knowledge processes. Accordingly, there is a need for organisations to adopt a more multi-perspective based approach to KM that integrates individuals in the theorising and implementing of KM.

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