

**FOCUSSING ON THE FOREST NOT THE TREES: A CRITICAL REVIEW OF KNOWLEDGE AND  
LEARNING CONCEPTS**

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## FOCUSSING ON THE FOREST NOT THE TREES: A CRITICAL REVIEW ON KNOWLEDGE AND LEARNING CONCEPTS

### ABSTRACT

This paper presents a critical review on knowledge and learning concepts. Underlying philosophical assumptions were examined highlighting both embedded power and nature of knowledge issues. The examination pointed out similar problems in both bodies of literature. In most of the cases and excluding a handful of exceptions, both literatures either emphasise the objective dimension of knowledge overlooking its tacit dimensions, or recognise the subjective nature of knowledge, but little attention is given to the crucial role of power and politics. Additionally, research that agrees on the key role of power, does not agree on how to incorporate the power dimension into knowledge and learning concepts. In the conclusion, a research agenda blending knowledge and learning concepts with classic theories of labor and work was proposed in order to enlighten the current consensual-biased knowledge and learning literatures.

**Key words:** Critical management theory, power, knowledge transfer, learning organisation

Knowledge and learning management concepts constitute a living field since have evolved from different disciplines such as economics, psychology, anthropology, and sociology (Bell, Whitwell and Lukas, 2003; Easterby-Smith and Lyles 2005). Notably, those concepts constitute an emerging, untested, and highly contested field (Gray and Meister, 2003) where empirical validation is yet to be achieved. As such, many knowledge and learning concepts have been categorised as being in a state of 'pre-science' (Hazlett, McAdam and Gallager, 2005). In consequence, significant overlaps and limitations have evolved in knowledge and learning domains. Not only there are different perspectives, but also they have evolved in parallel (McKinlay, 2005) increasing the existing fragmentation of the field (Vince, Sutcliffe and Olivera, 2002). However, rather than providing a detailed description of the literature, the goal of this paper is to critically review knowledge and learning literature in order to examine underlying assumptions about the nature of knowledge and embedded power issues.

In this paper 'Learning' is short-hand for organisational learning and learning organisation concepts, whereas knowledge management and organisational knowledge ideas are included in 'Knowledge'. While those concepts have significant differences when examined with organizational lenses, they are very similar when seen through the power and politics perspective. Scarbrough and Swan (2005) pointed out that, on the one hand, knowledge management is practice-driven and

emphasises the use of information systems in order to capture, codify, store and transfer knowledge for improving organizational performance. Knowledge therefore is seen as a resource and independent of the context. Differently, the learning organisation literature looks for developing individual learning capabilities through training, empowerment and organizational culture change. Both literatures see knowledge as cognition that can be codified. Nevertheless, the learning organisation literature recognises a more sophisticated view of knowledge. Since knowledge can also be tacit and embedded in practice, context and uncertainty acquires a significant role. On the other hand, in both literatures the political dimension of knowledge, are overlooked. Because of the latter, our examination focusses on the knowledge and learning 'forests' rather than in the multiple 'trees' grown up in the organisational learning, learning organisation, knowledge management and organisational knowledge literatures.

Following the tradition of critical theory (Alvesson and Deetz, 2000), our insights and interpretation aims to highlight aspects of conventional knowledge and learning approaches that are usually taken for granted. By critically examining the literature and highlighting the underlying assumptions of the nature and limitations of knowledge and learning concepts, we recognise that to date, most of the studies in organizational knowledge and learning management have been uncritical (Ferdinand, 2004; Gordon and Grant, 2004; Ortenblad, 2002), presenting 'successful' experiences with short-term and objective outcomes, implicitly overlooking failures with long-term and subjective outcomes. This begins to indicate that philosophical and political issues are central, even if they are marginalised or denied (Alvesson & Deetz 2000). It also shows that knowledge not only plays a crucial role in society but also it is not value-free (Alvesson & Willmott 1998). Hence, knowledge and learning management, like the development of technologies (c.f. Noble, 1986), must be appreciated not as a neutral scientific development that followed rationalistic and natural selection processes, but as the product of decisions made by groups of individuals pursuing competing goals and shaped by contextual historical and cultural conditions. Primarily, this critical review of knowledge and learning literature exposes the assumptions that govern its utilization (Spender 2002; Swan and Scarbrough 2001). Theoretically, this review therefore helps untangle the diversity of knowledge and learning concepts, processes and approaches and, practically, may aid to facilitate the application of knowledge and learning concepts. We begin considering the nature of knowledge.

### **THE NATURE OF KNOWLEDGE**

As an abstract phenomenon, there is much to uncover about knowledge. It is widely accepted that knowledge is simultaneously constituted by explicit and tacit dimensions (Polanyi 1983). There is also agreement that the explicit dimension of knowledge can be codified and de-codified, making it independent of the environment or person (Ruggles, 1997; Davenport and Prusak, 1998). There is however, less agreement regarding the tacit dimension of knowledge. Critical views, have challenged

the idea that knowledge can be managed transferred and codified. The *raison d'être* is that the tacit dimension of knowledge is personal (Polanyi, 1958), relational (Nicolini, Gherardi and Yanow, 2003), situated (Tsoukas, 2000; Thompson and Walsham, 2004), emergent (Orlikowski, 2002) and possess semantic aspects related to the meaning given or taken from that specific knowledge (Weick, 1995; Tsoukas, 2000). It also involves feelings and processes of making sense of everyday activities (Weick, 1995; Svensson, Health and Luff, 2005). Tacit knowledge, therefore, "cannot be captured but only displayed and manifested, in what we do" (Tsoukas, 2005: 426). In other words tacit knowledge can only be learned through action (Revans, 1966).

Refining this notion of tacit knowledge, Styhre (2004) suggests that knowledge is made up of both intellect (analytic thinking) and intuition (synthetic thinking), excluding the idea of division among different forms of knowledge. Further to this argument, Ambrosini and Bowman (2001) show that knowledge has different degrees of tacitness; where some portions of knowledge are plausible of codification, some portions are not possible to codify, and in-between there are portions of knowledge that can be codified to different degrees. This complex nature of tacit knowledge needs to be considered when discussing the extent to which knowledge can be codified (Jacob and Ebrahimpur, 2001; Zack, 1999). While some commentators (Cowan, 2001; Cowan et al., 2000) argue that only a small amount of knowledge is tacit and therefore difficult to codify, other commentators (Ancori, Bureth and Cohendet, 2000; Roberts, 2000) argue the codification process is directly linked to context-dependent social, cognitive and political processes, making it very difficult to codify the 'tacit' portion of knowledge (Cohendet and Steinmueller 2000; Johnson, Lorentz and Lundvall 2002). Furthermore, not only does codified knowledge require 'tacit' knowledge in order to know how to use it, but also the codification process itself involves the use of tacit knowledge (Cowan and Foray, 1997; Saviotti, 1998). Because of intangible aspects, such as reputation and trust that permeate the deployment of tacit knowledge, soft issues (Guzman and Wilson, 2005) such as subjacent assumptions, unwritten rules, values and interpretative aspects need to be considered to understand the tacit dimension of knowledge.

In seeking to examine the nature of knowledge, it is important to highlight implicit assumptions underlying the various perspectives of knowledge as different disciplines have created different parameters in order to capture this inherent diversity of knowledge. Economists for example (Cowan, David and Foray, 2000) have developed a classification based on the extent to which knowledge is codifiable, whereas organizational theorists (Blackler, 1995) have developed a classification based on whether knowledge is mindful (embrained), embodied, encultured (in the environment), or represented in symbols (encoded). This diversity of taxonomies highlights the fragmentation within the knowledge literature, justifying the critical examination of underlying assumptions related to epistemology of knowledge issues implicit within knowledge and learning concepts that follows. Furthermore, there is an increasing trend to assume that knowledge has either a

high portion of codified dimensions overlooking its tacit dimensions as in a systems-structural perspective, or a high portion of tacit dimensions underestimating codified dimensions as in an interpretivist perspective (Empson, 2001; Hazlett, McAdam and Gallagher, 2005).

### **A CRITICAL REVIEW OF KNOWLEDGE AND LEARNING CONCEPTS**

Within a systems-structural perspective knowledge is defined as something that can be perfectly defined and objectively managed. People follow pre-defined rules in a rational manner and the world is simplified by reducing its uncertainties. Within this scenario, concepts and tools are developed in order to assist organizations to create, acquire, diffuse and apply knowledge (Palmer and Hardy, 2000). Building on Noble (1986), it is possible to suggest that this perspective assumes an objective view of science, economic and market rationality. Thus, knowledge together with technology, can be portrayed “as an autonomous ... neutral technical process [as well as] self-regulating economic process... neither of which accounts for people, power, institutions, competing values, or different dreams” (p. 145). In contrast, the interpretivist position emphasizes interpretation of meaning within a specific culture. Here the focus is on the intangible and tacit elements of knowledge such as meaning, the processes that govern interpretation and, the role of culture. In this scenario, uncertainty is recognized, multiple interpretations are legitimate, ambiguity is inevitable and limited rationality is accepted. That is, learning or managing knowledge implies “... a form of meaning creation and sense-giving/making, rather than an objective set of techniques aimed at discovering the truth” (Palmer and Hardy, 2000: 213). It must be noted that while this latter view leaves room for uncertainty and contradictions, it does not clearly imply that power-related issues are considered.

Although these opposing paradigms each represent different, but overlapping (e.g. Vera and Crossan, 2003) discourses, they are critically interpreted here as one and another (both), rather than as mutually excludent (Burrell and Morgan, 1979) in order to illuminate knowledge and learning issues. Two arguments justify this. Firstly, Schultze and Stabell (2004: 554) suggested that a dualistic epistemology is “useful for studying contradictions and paradoxes because they consider opposing forces that act simultaneously on the same phenomenon”. Here, an exploration of underlying assumptions of the various knowledge and learning perspectives aims to enable a multidimensional appreciation of those perspectives. Secondly, Spender (1998) noted that practitioners follow both objective and interpretive approaches of knowledge depending on contingent conditions, supporting the view that pluralist epistemologies of knowledge are evident within knowledge and learning literatures (Beamish and Armistead, 2001).

**The learning literature** supports individual and organizational conditions for absorption, diffusion, generation and exploitation of knowledge (Staples, Greenaway and McKeen, 2001; ten Have, ten Have and Stevens, 2003). Up to the 1990s, it was mainly functionalist-oriented, prescriptive

and normative (Huysman, 1999). Learning processes were defined either as cognitive or behavioural or both (Bapuji and Crossan, 2004) and, as individual or organizational with little integration between those two views. While the individual-oriented research focussed on the cognitive aspects of learning implicitly acknowledging the subjective nature of knowledge, the organizational-oriented research generally viewed learning as a behavioural process ignoring nature of knowledge issues. In the 2000s, building on the work of Lave and Wenger (1991), the learning literatures approached knowledge as subjective, situated and contextual. That is, the key role of tacit knowledge, cognitive and contextual limitations as well as the dysfunctional aspects of learning started to be considered (Shipton, 2006). Additionally, the integration of individual, group and organizational learning levels of analysis was addressed (e.g. Crossan, Lane and White, 1999). However, as Easterby-Smith et.al. (2000) noted, 'learning' research uses a contingency approach to select its methodological and epistemological aspects. Finally, the learning literature treat knowledge in a generic form without differentiating forms of knowledge containing higher or lower portions of tacit knowledge. Thus the fragmented nature (Vince, Sutcliffe and Olivera, 2002), the multiple meanings, vagueness of the concepts and the still inconclusive evidence (Ortenblad, 2004) mean that learning organization can be better understood as a 'metaphor' to promote transformation (Starkey, Tempest and McKinlay, 2002) rather than as an empirically tested theory.

The **knowledge management literature** mostly follows a resource-based view of the firm and aims at developing both conceptual and information technology based tools to support knowledge creation, diffusion and application (e.g. Firestone and McElroy, 2005; Zollo and Winter, 2002). That is, knowledge is treated as an objective resource that can be codified and therefore stored and transferred, usually acknowledging but downgrading the role of the tacit dimension of knowledge. Empirical research on information technology-based knowledge management systems, for example, has verified the limitations of such approaches since they mainly focus on codification and storage (Gallupe, 2001), remaining silent on the tacit aspects of knowledge that are not codified.

The influential work of Nonaka and Takeuchi (1995) also embraced the objectivist view of knowledge. they not only treat tacit knowledge as knowledge to be 'articulated', but also posit that tacit knowledge can be codified through externalization, a claim that has been challenged. Clegg and Ray (2003) argue that the tacit dimensions of knowledge cannot be articulated and codified because of the embedded experiential meaning(s), which are socially constructed and contextually dependent. Supporting this view, Ribeiro and Collins (2007) replicated Nonaka and Takeuchi's (1995) bread-making machine pivotal experience and empirically demonstrated that there was no 'conversion' of knowledge from tacit to explicit. Instead, they found that tacit knowledge was still necessary but it was supplied by a set of people in which the machine environment was embedded: "At the end, the master baker's tacit knowledge has been neither explicated nor incorporated into the machine. Part of it was substituted by the tacit knowledge of the other actors brought to the automated bread-making scene,

such as the users at home, the workers in the factory and repair specialists, while the other part has disappeared entirely at the cost of a standardized set of products and procedures” (p. 3). In a similar way, the ‘absorptive capability’ approach (Cohen and Levinthal, 1990; Zahra and George, 2002), focusses on setting adequate organisational ‘inputs’ in order to support knowledge and learning ‘outputs’ treating knowledge issues as a black box. That is, the nature of knowledge is completely ignored by this literature. An important explanation for this shortcoming resides in the observation that the absorptive capability idea has a series of conceptual gaps and still its in its early stages (Van den Bosh, Van Wijk and Volberda, 2005). Thus, as Currie and Kerrin (2004) recognise, knowledge management literature equates knowledge with information, approaches knowledge as valuable, and privilege explicit over tacit knowledge. As a result, software tools are developed to store and communicate information, rather than to really aid people in the creation, acquisition, and use of knowledge. Given this recognition, Currie and Kerrin (2004) conclude that conventional epistemological assumptions within current knowledge management literature are misplaced. While knowledge having low degrees of tacitness (i.e. the so called explicit knowledge) can easily be understood and transferred, knowledge having high degree of tacitness, because is socially constructed, cannot be shared through a static repository since contextual meaning is necessary for its interpretation and application. In the latter case, knowledge cannot exist independently of people. Interpretation, situated decisions and reflection are needed to understand, apply, and transfer knowledge. Those elements nevertheless, are likely to emerge only in situations in which deliberate and trust worthy participation of people do exist.

In line with this recognition, clarification of a range of knowledge management perspectives was undertaken by Alvesson and Karreman (2001). By dissecting this range of perspectives in terms of the mode of intervention (type of control/co-ordination) and medium of interaction (social/technostructural), they identified four types of knowledge management approaches: the technology-oriented (focussing on information storage and exchange); the socially-based (focussing on social processes used to share ideas); the normative control oriented (focussing on the use of company culture and values to prescribe interpretations); and, an approach that focuses on the application of templates through technostructural control. An example of the first approach is the field of KMS. Social processes that permeate Nonaka and Takeuchi’s (1995) SECI model represent an example of the second approach, while an example of the fourth approach is Hansen, Norhia and Tierney’s (1999) codification strategy. Notably, the third approach seems to be the only exception that considers the subjective and tacit aspects of knowledge. Research connecting knowledge with emotions (Vince, 2001) and identity (Child and Rodrigues, 2005) are examples of this last strand.

What this begins to show is that to date, there is no unified theory of knowledge management. What exists is a multitude of knowledge management related concepts and models that throw light on these issues from different perspectives and backgrounds (Easterby-Smith and Lyles, 2005). As an

expanding field of research, and maybe not unexpectedly, there is considerable definitional confusion and conceptual variation (Spender, 2002), as reflected in the thin application of knowledge management concepts. Empirical research (McKinlay, 2002) for example, noted that the technical orientation of knowledge management projects was not matched by the re-structuration of social processes. Instead, knowledge management projects are argued to rely too heavily on labour collaboration where passive resistance is enough to limit its impact. This argument therefore calls for the incorporation of power aspects into the knowledge and learning discourse given that power issues affect the underlying truths that knowledge creates. As Gordon and Grant (2004) highlight, management of knowledge and learning operationally involves power struggles because of the impact of outcomes are interpreted within established and socially constructed context. Moreover, power has an overwhelming role in organizational life.

### **RECOGNISING THE POWER DIMENSION**

The power-knowledge relationship, as Alvesson and Deetz (2000) claim, is fundamental since all knowledge and learning processes are directly related to social relations that are permeated by dynamic power relations. In turn, this affects the way that knowledge is gained, portrayed and legitimated in the web of organizational control (Sewell, 2005). Yet, there is a relative lack of attention to the role of power and politics in the knowledge and learning literatures (Clegg and Ray, 2003; Easterby-Smith et.al, 2000; Ferdinand, 2004; Ortenblad, 2002).

Building on Burrell and Morgan's (1979) radical view of society that recognizes structural conflict in social relations, power and knowledge are here considered as being a means, source and outcome of each other simultaneously (Fillion and Rudolph, 1999; Prichard, Hull, Chumer and Willmott, 2000). Power can be related to the mobilization of resources (Hardy, 1994) such as control of information and knowledge (Pfeffer, 1981), expertise (Pettigrew, 1973), and access and knowledge of social contacts (French and Raven, 1968). Power can also be used to provide meaning to specific events, through the use of political language and symbols (Edelman, 1977), or to reproduce State ideology (Ferdinand, 2004). Moreover according to Foucault (1977), knowledge and power can be unconsciously mobilised since it is embedded within organizational actions rather than constructed in any visible and/or measurable mechanisms, especially in knowledge-intensive organizations. In other words, power and knowledge is embedded in structures and dispersed in relational networks (Clegg and Palmer, 1996; Buchanan and Badham, 1999; Widder, 2004). Effectively, both knowledge and power can be used in several ways. It can be used as a means of creating community, social identity, and/or legitimation (Alvesson, 2004). Alternativley as Alvesson (2004) also noted, knowledge and power can be a means for obscuring uncertainty and counteracting doubt.

Extending the work of Clegg (1989), Hardy (1994) more specifically proposes that power is better understood if considered as the control of critical resources and a key to making decisions,

where power is a process that necessarily includes the examination of decision-making processes (not who but how); agendas, arenas and participants. Special attention is given to the non-decision-making laid down to protect status quo and reinforce existing biases in decision-making. In this way, power has an instrumental role, but a symbolic role at the same time. It helps to understand how symbols (i.e. language, rituals and myths) are used either to create and legitimate meaning of specific events or actions, or to change and delegitimize the meaning of events. According to Hardy (1994: 225), symbolic power is “the ability to shape values, preferences, cognitions, perceptions means that grievances and issues do not arise or, if they do, they are never articulated or transformed into demands and challenges”. However Hardy (1994) also takes a Foucauldian perspective in the recognition that systemic power is embedded in values, traditions, structures that are not only unconsciously accepted but also cannot be consciously mobilised. From this perspective, power is invisible, pervasive, unevenly dispersed and dynamic. According to Gordon and Grant (2004) therefore, power is potentially taken for granted and accepted without question. Thus, a research agenda in which participation, power, politics, autonomy, power struggles, conflict, accountability, rhetoric, political networks, influencing and collaboration are emphasized (LaPalombara, 2001; Alvesson, 2004; Chiva and Alegre, 2005) has significant potential to contribute to the further understanding of knowledge and learning issues. Before critically reviewing the learning literature, it is necessary to clarify that while power has a prominent role in knowledge and learning processes, it is not the only influence. Other aspects such as culture, leadership, work organization, technology and employee motivation, among others, certainly influence knowledge and learning processes. Yet all those aspects can also be shaped by the same power processes above discussed.

The orthodox organizational **learning literature** (e.g. Senge, 1990; Pedler, Burgoyne, and Boydell, 1991), up to the 1990s, overlooked power relations that permeate cognitive and behavioural processes (Coopley, 1995; Lahteenmaki Toivonen and Mattila, 2001) and adopted a bias towards a consensual view of the world (Swan and Scarbrough, 2001), implicitly adhering to a unitarist perspective (Burrell and Morgan, 1979) in which high trust and rational actions address organisational differences. Coopley (1995) argued that the avoidance of governance issues in the learning organisation literature weakens the model’s prescriptive value. In the 2000s, the role of power and politics was recognised. Lawrence, Mauws, Dyck and Kleysen (2005) advanced a theory connecting processes of organizational learning with political strategies. Coopley and Burgoyne (2000) posited that because learning is a social activity composed by meaning creation, power relations and the application of normative sanctions, only the use of political activity, in the form of an open political system, would enhance organizational learning in practice. While the above propositions agree on the need to integrate political analysis into the ‘learning’ theme, there is no agreement on how power and politics must be used to support the learning idea. On the one hand, Lawrence et.al. (2005) apply power and politics in a functionalist way, in order to overcome learning problems associated with

interpretation, integration and institutionalization. Similarly, the communities of practice approach (Brown and Duguid, 1991; Lave and Wenger, 1991) has been criticised since the role of power issues (e.g. control and resistance) associated with learning were overlooked, casting the communities of practice approach within a functionalist view of organizations in which trust, consensus, shared values and common goals are taken-for-granted (Contu and Willmott, 2003; Roberts, 2006; Huzzard, 2004). This means that the crucial role of power and politics for negotiating access and opportunity for participation in the community is simply ignored (Nicolini, Gherardi and Yanow, 2003; Handley, Sturdy, Fincham and Clark, 2006). On the other hand, Coopley and Burgoyne (2005) and Ortenblad (2002) suggest a radical perspective, proposing the application of power and politics in an emancipatory way. This would be possible only in learning spaces (Fulop and Rifkin, 1997) that tolerates differences of opinion and individuals have permanent appointments (Ortenblad, 2002). In summary, research (Coopley and Burgoyne, 2000; Ferdinand, 2004) pointed out that the political perspective might help organizations to learn given the adoption of an open political system at the organizational level aids to address some of the current tensions. More specifically, Easterby-Smith et.al. (2000) argue that obscuring the power and politics involved in organizational learning may inhibit the learning process. This examination hints to the diverse spectrum of ways of applying power and politics in the learning literature.

In a similar vein, the **knowledge literature** (e.g. Nonaka and Takeuchi, 1995; Szulanski, 1996), has dismissed the complexities related to power issues (Staples et. al., 2001). To date, very few studies focus on the role of power in knowledge and learning in an organisational context (Hislop, 2005). More recently, however, there is an emerging consideration of the socially constructed and subjective dimension of knowledge (Nicolini et.al, 2003; Tsoukas, 2005). At the individual level for example, Nonaka and Takeuchi's (1995) model has been highly influential in directing empirical research in this field. Nevertheless, their claims have not gone unchallenged. While Nonaka and Takeuchi (1995) claim universal validity, their propositions rest heavily on a tacit foundation of Japanese values and management practices. Yet as widely recognised, Japanese willingness to exchange knowledge via socialization, for example, is dependent not only on its collectivism (Hofstede, 1991) and cultural context (Hall and Hall, 1994), it is also a function of pervasive mutual obligation networks combined with highly intradependent firm networks as well as unique characteristics of Japanese employment systems, suppliers and banks (Clegg and Ray, 2003; Glisby and Holden, 2003). Clegg and Ray (2003) further argue that Nonaka and Takeuchi (1995) have mistakenly dismissed the crucial role of the vertically segmented Japanese society that enables knowledge sharing processes. As they explain, the long-term organizational links mean subordinates and superiors rise through the ranks in tandem, enabling tacit knowledge to be communicated in an almost telepathic manner. Nonaka and Takeuchi (1995)'s SECI model is also based on the assumption that organizational goals and values have been mutually agreed upon. However, this obscures how

power aspects shape the way knowledge is created, shared and diffused in the Japanese context.

From a different perspective but in a similarly critical vein, Gray (2001) argues that knowledge management systems are designed to facilitate storage and distribution of codified knowledge but instead redistribute power within an organization. As he explains it, employees contribute systematically to organizational knowledge increasingly become replaceable and therefore reduce their individual power. More than that though, the use of centralized knowledge repositories directs the analytical skill required to do a job, which reduces the power position of individual users. Empirical research in professional service firms (Heusinkveld and Benders, 2005; Suddaby and Greenwood, 2001) for example, showed the subtle, crucial and problematic struggle between employees and organisation for accumulating and maintaining key organisational knowledge. Management knowledge was 'commodificated' (i.e. reduced to a routinized and codified product) in order to colonize professional field. Thus, the systems-structural view of knowledge can be interpreted as another step of the capitalist division of labour (Marglin, 1973), since favours the appropriation of the tacit dimension of knowledge work. McKinlay (2005) suggested that the codification of knowledge work not only allows the storage and physical distribution of knowledge but mainly, its appropriation and control. This, in turns, supports both the achievement technical efficiency (e.g. get information from a data base) and simultaneously the strenght the dependent relationship between knowledge-workers and the organisation. Knowledge and learning management therefore possess both technical and political roles that need to be clearly explained.

Beyond the individual level, empirical research at the inter-organizational level has found a set of factors that support knowledge flows (Child, 2001; Dhanaraj, Lyles, Steensma and Tihanyi, 2004; Gupta and Govindarajan, 2000; Macharzina, Oesterle, Brodel, 2001; Lyles, 2001; Simonin, 1999). However, Foss and Pedersen (2004) argue that this research has devoted little attention to power related issues leaving many open questions regarding, for example, delegation of authority, monitoring and control of employees, distribution and control of resources, accumulation of tacit knowledge and the transfer of practical knowledge.

The above overview suggests that power aspects embedded within knowledge and learning have received little attention. This was empirically verified by Gordon and Grant (2004) with their meta analysis showing less than 5% of articles using the term power, with the majority approaching power as a resource and only a very small fraction approaching the relationships between knowledge, learning, and power as problematic. This means that they viewed the use of power issues as a strategy to achieve specific aims. In contrast, Currie and Kerrin (2004) reviewed the critical research focusing on power-related issues, and noted distinctly different interpretations. Some present utopian ideals for knowledge and learning supporting employees emancipation in order to make knowledge and learning feasible initiatives (Alvesson and Karreman, 2001; Ortenblad, 2002). Whereas others argue that managers control knowledge and learning initiatives in order to maintain their hegemonic power and

guarantee employee consent (Sewell, 2005). The paradox of this situation, is that on the one hand, knowledge and learning activities are likely to flourish in high-trust emancipatory environments. On the other hand, the systems-structural perspective of knowledge attempts to sell the idea that almost all knowledge can be codified –implicitly downgrading the role of tacit knowledge—assuming an unitarist view that all employees will be keen to participate in knowledge transfer activities, even if this implies in the appropriation of part of their knowledge (McKinlay, 2005). This process therefore, can also be seen as part of an historical process of managerial control over labour, which likely reinforces oppressive and inequitable organizational relations rather than any form of emancipation (Marglin, 1973).

### CONCLUSION

This paper has highlighted the underlying assumptions about the nature of knowledge and power related issues of the knowledge and learning management literatures. The critical review pointed out similar problems in both bodies of literature. In most of the cases and excluding a handful of exceptions, the literature either emphasise the objective dimension of knowledge overlooking its tacit dimensions, or recognise the subjective nature of knowledge, but little attention is given to the crucial role of power and politics. Additionally, research that agrees on the key role of power, does not agree on how to incorporate the power dimension into knowledge and learning concepts. Two crucial questions emerge from this statement. First, if it is well known that knowledge have both codified and tacit dimensions, why practitioners do continue to follow the positivistic view? Second, if it is acknowledged the critical role of power in knowledge and learning processes, why do academics continue to overlook power issues embedded in knowledge and learning processes? While the full answer to those questions goes beyond the scope of this paper, in this conclusion a research agenda focussing on these two issues is proposed. There are several alternatives.

One alternative can be the fusion of knowledge and learning concepts with post-Braverman labour process theories (e.g. Thompson, 1983; Knights and Willmott, 1986). Because knowledge and learning concepts can be applied either as a strategy to control users' actions/behaviour or to distribute information, it would be useful to know how the implementation of the codification strategy (Hansen, et.al., 1999) influences work organisation. Specifically, the codification strategy can be approached as part of a mass production strategy aiming at standardising and simplifying tasks and therefore requiring less skills. This potentially facilitates outsourcing of service and/or knowledge work to low-wage countries. On the other hand, this might also create resistance by end-users to follow the codification strategy because of fear of losing their job.

Other alternative is to analyse knowledge and learning issues blending the strategic choice (Child, 1972) perspective with power theories. While decision making is crucial, in knowledge-intensive

organisations the power to make decision usually is more related to who posses the required knowledge and information rather than with who has the formal duty to make decisions. This means that, as knowledge is usually distributed, it would be wonderful to know how knowledge-based political coalitions interact with hierarchy-based political stances in order to either support or constraint the sharing of knowledge.

An additional alternative is to look at context similarity between sender and receiving units, one of the key aspects that shapes the transfer of knowledge (Argote, McEvily and Reagans, 2003). However, it is proposed to add to the examination the role played by external non-controllable aspects such as different industrial and employment relations systems, labour and product markets. It must be noted that while those factors are 'given', the decision to use them in order to organise and control knowledge transfer processes is a management prerogative and as such, power-related issues are connected to the knowledge transfer process. All those factors are specially relevant in the case of cross-border knowledge sharing but have been neglected by the knowledge and learning literature. A good starting point can be the work of Pignon and Querzola (1972) that examined the role of competitors, customers and 'new' organisational forms on the organisation of work in the manufacturing industry.

Another idea is to take a fresh view to the old 'skilling-deskilling' debate (Wood, 1989). Skilling and deskilling processes can be approached as part of the implementation of the codification strategy. User's knowledge is codified, stored and distributed at low cost making feasible—but not compulsory—the deskilling process. However, depending on the type of task performed (routine versus non-routine) there are limits to the codification strategy. In fact, as above argued, it is not possible to codify tacit knowledge. This means that examining skill-deskill processes considering the degree of tacitness embedded in knowledge might throw new light into this debate and simultaneously illuminate the boundaries of outsourcing practices in both service and knowledge-intensive industries.

The social construction of technology (Bijker, Hughes and Pinch, 1990; Noble, 1986) approach can also be used as a basis for examining knowledge and learning concepts. This approach seems to be specially important to facilitate the examination of the dynamic relation between artefacts, users-assumptions, organisational goals, stakeholders goals and knowledge and learning issues. That is, the understanding of negotiation, choice, influence and control processes associated with knowledge and learning might not only help to clarify knowledge and power issues but also to improve existing theoretical models.

Power related issues embedded in knowledge and learning processes can also be viewed as forms of organisational misbehaviour (Ackroyd and Thompson, 1999). For example it would be useful to observe how the ‘appropriation of (company) knowledge’ can be used either for engagement, commitment, cooperation and compliance or for withdrawal and hostility. That is, establishing relations between well known knowledge dimensions such as type of knowledge, sender and receiver context, task uncertainty with different types of misbehaviour will contribute to better understand the issue of (mis)appropriation of company knowledge. In a different but complementary approach, the classic work of Marglin (1973) might help to examine the ‘knowledge appropriation’ issue from critical perspective.

Finally, the use of post-modern theories such as Foucault’s, might significantly aid to evolve current knowledge and learning concepts by pointing out gaps as well as alternative views to address control related problems embedded in the application of conventional knowledge and learning concepts. For example, using Foucault’s (1977) categories of regimens of discipline and truth it will help to uncover how power-related issues shape Nonaka and Takeichi’s (1995) socialization, externalization and internalization components of their model. While some of these perspectives have already started to be considered by a handful of researchers (c.f. Pritchard et. al., 2000; Sewell, 2005), there is a constellation of power and nature of knowledge gaps waiting for its exploration.

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