

Ce texte a été publié dans une version légèrement différente : Legault, Marie-Josée (2008) "Social relations and knowledge management theory and practice", dans Dariusz Jemielniak et Jerzy Kociatkiewicz (dir.) *Management Practices in High Tech Environments*, Hershey, IGI Global, coll. Information Science Reference, p. 167-190

SOCIAL RELATIONS: THE BLACK SHEEP OF KNOWLEDGE MANAGEMENT THEORY AND PRACTICE

Marie-Josée Legault, full professor, Téléuq

Marie-Josée Legault
5800 St-Denis
Montréal (Qc)
Canada
H2S 3L5

mjlegaul@teluq.uqam.ca

phone : (514) 843-2015 ext 2943

fax : (514) 843-2160

SOCIAL RELATIONS: THE BLACK SHEEP OF KNOWLEDGE MANAGEMENT THEORY AND PRACTICE

ABSTRACT

This chapter proposes a new hypothesis to the refusal to co-operate from qualified professionals and supports it with five arguments drawn from the fields of sociology of work and professions. The management of knowledge (KM) is based, among other things, on a system for pooling knowledge to which employees must contribute. Nevertheless, the experts of KM persistently note the relative failure of knowledge-pooling practices, particularly among the highly qualified professionals. Some experts have little to say about this issue and the scarce explanations they provide are highly unsatisfactory sociologically speaking and inspired by a folk psychology discourse. Sociology of work and professions, particularly, provide the grounds for alternative and more solid analysis of the phenomenon.

KEY WORDS

Knowledge workers; pooling of knowledge; highly qualified professionals; sociology of professions; social relations at work; reputational job market; resistance

Since it is claimed that, in the so-called knowledge economy, knowledge is the most crucial economic resource in the struggle against fierce international competition, it follows that management must pay particular attention to how it manages this resource. But what does "manage" mean in this context? Does it mean promoting its development by investing in training, for example? Promoting its transfer by encouraging creativity, initiative or teamwork, by favoring the setting up of communities of practice (if saying so makes any sense...)? Promoting the disclosure and banking of knowledge or information to make it more easily available to all, to increase access to it for the greatest number while at the same time conserving and accumulating it over time? Does it extend to appropriation by the group? Or appropriation by management? Given that these questions have not been formally answered to date, all these management attitudes are seen to varying degrees.

A so-called new discipline has sprung up since the mid-eighties, known as knowledge management (KM). KM system implementation and management specialists are producing a growing body of work, consisting primarily of handbooks and manuals. Management consultants can't seem to get enough of it and will willingly tell whoever hires them that KM is the key to the constant innovation that will help them maintain their competitive position in today's market:

A horizontal reading of these different business strategies shows, however, that this new competitiveness is based primarily on innovation. [...] The secret to an organization's success lies in its capacity to promote processes that enable interaction between different sources of *individual* or compartmentalized knowledge in order to generate

new *collective* knowledge that provides a basis for diffuse innovation. $1 + 1 = 3!$ [...] To summarize, an organization's capacity to innovate is rooted in its capacity to transform its knowledge assets, which are organized and *individualized* to varying degrees, into "*collective* strategic intelligence." (Jacob and Pariat, 2000, pp. 10–12; my emphasis) [translation]

The following paper presents a sociologist's critical look at this body of work in which very few sociologists has so far shown little interest, whether to contribute to it or to review it. I must underline noticeable exceptions in Great-Britain, that address the questions raised here without reviewing this body of work *per se*: Robertson & O'Malley Hammersley, 2000, p. 242; Swan, Robertson & Bresnen, 2001; Scarbrough, 1999, p. 6; Wilson, 2002). Given the popularity of this phenomenon in the world of work today, particularly since 1997 (Wilson, 2002), this lack of attention should arouse anyone's curiosity.

One of the means that the KM experts propose to manage knowledge is a system for pooling knowledge or information to which employees must contribute. I will be looking here at a phenomenon that concerns both theorists and practitioners of KM, that is, the fact that a significant proportion of workers do not contribute to these knowledge-pooling systems. KM may be implemented in companies from all sorts of industries, employing workers with very different qualifications; I have restricted my study to the case of highly qualified professionals hired by companies supplying very specialized goods and services to enterprises (B2B) using extremely sophisticated production techniques. The professionals I will be discussing are computer specialists and programmers. In Canada, they are not members of reserved-title professions, though they share many characteristics typical of professionals (university degree, shared body of specialized knowledge, high degree of qualification, close contact with customers and dedication to ensuring customer satisfaction, discretionary power¹ in the choice of means to carry out work and in the decision-making process in performing tasks, in the judgments and opinions issued about the work and, in some cases, in the ends being pursued also), but not all of them (they do not have a professional licensing body, a code of ethics, a reserved title, and self-regulation of the rules of membership: curriculum, certification and decertification of members, standards of practice, setting of rates or prices for work, penalties, peer assessment and immunity from outside control).

In this paper, after providing a short definition of knowledge management, I will analyse and critique what KM promoters have to say about demanding that qualified professionals participate in knowledge-pooling systems, the relative lack of success of these practices and the explanations that we can deduce from the solutions they propose. I will then set out why I think these explanations are unsatisfactory in relation to what the sociology of work and the professions has learned about the appropriation of specialized knowledge. Finally, I will propose an alternative hypothesis to explain this lack of success and provide arguments to support it, ones that in my view are sufficient to submit it for examination but not to regard it as having been demonstrated.

WHAT IS KNOWLEDGE MANAGEMENT?

Several definitions of KM, that would be tedious to itemize, mirror the leading position of the Information management (IM) specialists (including decision support systems (DSS), information technology (IT), information systems (IS) over the field (Robertson & O'Malley Hammersley, 2000, p. 241; Swan, Robertson & Bresnen, 2001, p. 10-12 & 17) and as such, those

have in common to point toward:

- A simple objective: promote the use of knowledge held by individuals for the purposes of innovation and/or enhancing the competitive position of companies. In a word, manage knowledge in order to create new value.
- Means to be used: more often than not, a combination of various information and communications technologies (ICTs) and management procedures designed to manage and provide a framework for this knowledge, from the time an idea first emerges until its "value is developed" for economic purposes, that is: formalize, collect, in other words persuade to share, validate, disseminate, transfer, store, accumulate, reuse, update, analyse, apply, etc.

Pooling knowledge — A necessary precondition of KM

To achieve the objective of managing knowledge, management in organizations that subscribe to KM relies to a large extent on the practice of pooling knowledge (held or produced by their professional employees), since this knowledge "can become strategic" and "the loss of it can have serious consequences for the company" (Cotte, 1999, pp. 12–13). As a result, many managers implement procedures and systems for pooling knowledge — such as forums, collaborative systems supported by intranets, or more dedicated, decentralized tools, and urge their employees to contribute to them. These are not the only means to share knowledge or information; many highly qualified professionals working in firms constantly seeking innovation do in fact share knowledge orally rather than under any recorded form (Robertson, Scarbrough & Swan, 2003; Robertson & O'Malley Hammersley, 2000). But the IT driven systems are the ones promoted by IM experts who, as we saw, dominate the consultancy practice in KM; now, these systems suit better the sharing of information than the sharing of knowledge of a higher level of complexity.

The importance of the knowledge of practitioners is nothing new, nor the use of that knowledge by managers in organizations. Sociologists, among others, have long studied the appropriation of workers' knowledge for the purposes of the industrialization of processes. Is the advent of KM changing this practice to the point where it makes our knowledge about the issue obsolete, or is it simply an instance of the extrapolation of known phenomena? Many arguments point in this second direction, but with subtle differences.

Pooling knowledge: An old and new phenomenon

First of all, the systematic nature of efforts to make practitioners reveal their knowledge is not in itself new, as Taylorist time-and-motion studies had this same systematic characteristic (Friedmann, 1964). Nonetheless, the professionals who are the subject of KM make use of what are essentially cognitive resources and so simply observing them is not sufficient to give access to their knowledge; they must be persuaded to co-operate in order to reveal their knowledge. This raises a new problem.

Nevertheless, like the old workers' knowledge appropriation systems, typical KM knowledge-pooling systems are, more often than not, implemented in a top-down fashion and are the result of a deliberate management decision. This distinguishes them markedly from communities of practice,² for instance. The promoters of KM would like to promise the same performance with their systems, but such an enterprise is rather groundless (Brohm, 2005; Wenger, 1999).

More ambitious than the previous knowledge seekers, though, KM systems propose the pooling

of not only formal, explicit knowledge, but also of tacit, meaning implicit, poorly defined as a “yet-to-be-codified knowledge”:

Explicit knowledge refers to all knowledge that has been collected in a form that makes it easily accessible and communicable (a manual, for instance) [...] This is usually the case with methods to be followed, techniques to be used, frames of reference, policies to be implemented, legislation and regulations, etc. [...] Tacit knowledge, on the other hand, encompasses all unrecorded knowledge, usually known only by the holders of that knowledge. While by its nature more difficult to describe and archive in written form, it covers a wide range, from know-how to intuition, and includes tricks of the trade and experience acquired in human relations and other areas. Tacit knowledge is therefore generally informal, contextual, subjective and derived from experience. [...] This knowledge consists of an infinite number of firmly interlinked elements that appear to be simple, yet are incredibly complex (Jacob and Pariat, 2000, p. 38) [translation]

I must here clarify that I do not subscribe to a critique often addressed to the KM promoters for using the notion of tacit knowledge and, above all, their reference to Polanyi’s use of the term (1958). Given the fact that tacit knowledge is “hidden from the consciousness of the knower” (Wilson, 2002, p. 38) or that it refers to preconscious operations, yet prerequisite to cognitive processes, it could not be voiced nor captured by any KM system. It is set out as an “inexpressible process [and] can only be demonstrated through our expressible knowledge and through our acts”; only the “implicit knowledge” is previously unexpressed but expressible” (Wilson, 2002, p. 39). If tacit knowledge could only be demonstrated through our acts and KM promoters’ promises must thus be considered deceptive, professionals should not care about KM practices, isn’t it?

In this perspective, as long as we only consider the kind of knowledge sharing that the IT tools promoted by IM experts allow, we are right to dismiss the potential of knowledge sharing. Critics agree on the fact that such a tacit knowledge, that an individual is unaware he or she has, still remains inaccessible to most KM systems; in fact, few organizations can pride themselves on having found a way to turn this knowledge into explicit knowledge. More frequently, efforts focus on transferring knowledge that people know they have and know how to explain, but have never taken the trouble to pass on, except informally, or has never formulated (though it could be so if ever necessary), that is to say, implicit or non-codified knowledge (Bukowitz and Williams, 1999, p. 4).

Alas, I’d rather stick to Polanyi’s own work and distinguish knowledge of which we are explicitly aware and knowledge that is implied in this awareness:

Polanyi makes a distinction in two levels of awareness: focal awareness and subsidiary awareness: “When focusing on a whole, we are subsidiarily aware of its parts” (Polanyi, 1958, p. 57). The subsidiary awareness provides the clues that are integrated by a person into a coherent whole or entity on which one’s attention can be focused. This attention is focal awareness. Polanyi relates focal awareness to explicit knowledge and subsidiary awareness to tacit knowledge. Tacit knowledge is the content of subsidiary awareness together with performative and integrative skills [...] There are two different levels of tacitness. One is the flow of impressions and traces of previous experiences [...] The other level pertains to performative and integrative skills; this [Polanyi, 1966, p. 4 & 16] also describes as tacit inference (Brohm, 2005, p. 13-14).

Of course, on a plain common sense ground, if we consider oral sharing among project teams, highly specialised knowledge is currently exchanged (Robertson, Scarbrough & Swan, 2003; Robertson & O'Malley Hammersley, 2000) and this is part of KM. But more, in my point of view, seen as an integrative framework as defined here (Brohm, 2005, pp. 13-17), it can not be rigidly separated from explicit knowledge and can be transmitted:

As an alternative image I constructed the stage metaphor to emphasize the dynamics and interdependence of explicit and tacit knowledge. Some of the tacit stage can become an object of focus and thereby be transformed into explicit knowledge. When the focus changes, the explicit becomes tacit once again. Obviously, my reading leads to a completely different methodological approach than the objectivistic standpoint would (which often underlies the rigid distinction between tacit and explicit knowledge (Brohm, 2005, p. 81)³.

In such a perspective, tacit knowledge is likely to be transferable, but maybe not in any conditions. The usefulness of the process of recording and sharing tacit knowledge for management is presented as follows:

This [...] tacit knowledge has become explicit simply by having been documented from field problems and having turned out to be effective in solving them. [...] These quick, meticulous answers save all the players [...] from having to spend their time searching or waiting, which is both tedious and often expensive. Having recourse to both an automated institutional memory (explicit knowledge) and collective work experience (tacit knowledge) enables [workers] to rapidly define the problem and give the customer a comprehensive, practical response in a very short time (Jacob and Pariat, 2000, pp. 39–40) [translation]

There can be huge benefits for management, and often for co-workers, in having this tacit knowledge shared because it can help solve problems that lie at the heart of a company's business operations, especially for knowledge-based companies, and is often rare and highly coveted. Communities of practice have showed it (Orr, 1990). However, it is seldom highly sophisticated and rather has the information status. This information is often the most important and the most useful for experts in addressing mission-critical issues in order to satisfy specific, exacting demands from customers. At the World Bank, for instance, experts are asked to share their knowledge of the customs, constraints and problems they encounter, as well as their solutions, in the diplomatic circles of the various countries they visit in their travels. As would be expected, the resulting database is very much appreciated (Prax, 2003, pp. 10–11). But does this distinguish KM from older practices? So many traditional trades could not have disappeared with the development of mass production during the industrial revolution without the assimilation of the know-how and tricks of the trade, the fruit of experience and the complex reasoning of the craftsmen.

On the other hand, the dissemination of pooled knowledge may take on a new dimension owing to the potential of ICTs for disclosing, accumulating and using this knowledge. In earlier times, knowledge could be passed on to only a limited number of people; experts who were the source of the knowledge knew fairly well to whom and to what extent they were disclosing it. Same can be said of communities of practice, but not in systems that are implemented from the top down. Current top-down KM practices are based on much more powerful technologies, ones that industrialists of the past did not have at their disposal; as a result, the impact of revealing knowledge is much quicker and more direct and more widespread, that entails concern. Conversely, we must recall the noticeable success of intra-organisational knowledge sharing

practices, management-driven, but not supported by any IT recording device that managers would have access to; they are rather oral and take place among peers (Robertson & O'Malley Hammersley, 2000). More generally, those that are not management-controlled (though put forward by managers), wherein the professional groups keep a total control over the content of the exchanges, can also be successful (Robertson, Scarbrough & Swan, 2003; Swan, Scarbrough & Robertson, 2002).

KM AS A SOCIAL PHENOMENON

Hot questions raised by ICT assisted knowledge-pooling

Implementing these practices promoted in work on KM raises a number of questions. First, what sort of knowledge can managers legally compel employees to disclose? All sorts? Are there any limits? Of what kind? Resources (knowledge) that formerly belonged to people and resulted from their training, their experience, their faculties of logical reasoning, and so on, have suddenly become *organizational resources* at the same time that ICTs — in the form of devices owned by the management — have made possible the sharing, quick circulation and storing of knowledge. In other words, from resources *within* the organization, held by the hired expert, they have become resources *belonging to* the organization, held by them. The way in which KM theorists gloss over the issues involved in this shift in ownership is quite striking:

The learning dynamic and the means of capitalizing on experience are what distinguish one firm from another. These types of acquired knowledge reside neither in *blueprints* nor in the memory of a given member of the organization. The *control of knowledge* is an *attribute* of the *organization* and not of the individuals composing it. (Tarondeau, 1998, p. 29; my emphasis; see also Jacob and Pariat, 2000, p. 10–12, cited above) [translation]

Though not pretending that we cannot find specialists' discussions on the individual /collective fundamental *locus* of knowledge from an ontological perspective (see for instance Brohm, 2005, p. 87-88; for the "individual" perspective, Argyris & Schön, 1978; Simon, 1991; for the collective perspective, Boland & Tenkasi, 1995; Cook & Yanow, 1996; Weick & Roberts, 1993; for a mixed perspective, Davenport & Prusak, 1998; Kessels, 1996; Nonaka & Takeuchi, 1995), I must insist on the fact that the legal debate *per se* is still ongoing and the issue unsolved, so the promoters can keep on saying that an organization owns the *control* of knowledge. How far do the KM promoters mean this control go? Insuring the quality of the means implemented to exploit the knowledge? Ownership? Does it simply mean that credit for this control lies with the group, with project teams, rather than with individuals? The transfer of important assets on the labour market that results from this operation raises legal questions that are treated only casually. Does management, which owns the technological system used to support KM, automatically become the owner of what is stored in it? In the works I reviewed, this legal question is not addressed. No one states, for example, that because management pays and oversees the people it hires to work for its business, the knowledge that its employees put to use for the purpose of that business is regarded as one of its resources. These underlying assumptions are never made explicit and are therefore never examined or verified. Aside from the legal aspects proper, are there no questions of legitimacy or ethics involved in the requirement to share knowledge? No one would dispute the fact that there are a number of interests at stake, so there must be such

questions!

And yet, as critical as one can be towards the new KM fad and its actual innovative nature, rightly so, even if these are renamed and revamped old IM practices, these still aim at changing working practices, the way we manage work, the way people communicate at work and, ultimately, favour information sharing (Wilson, 2002; for case studies: Robertson, Scarbrough & Swan, 2003; Robertson & O'Malley Hammersley, 2000; Swan, Scarbrough & Robertson, 2002). This aim is what is at stake in this paper, notwithstanding the delusive innovative status of the KM.

Relative failure of knowledge-pooling practices

Despite managers' obvious interest in knowledge pooling, their demands for it do not always meet with success, far from it. There are a number of barriers mentioned in the literature. Omitting those that are functional or technical in nature, I will concentrate on just one: the reluctance of highly qualified professionals to participate in knowledge pooling.

Observers invariably focus on the failure of professionals to contribute to knowledge pooling, especially with respect to so-called tacit knowledge, the passing on of which is considered to be one of the chief challenges of knowledge managers:

This is one of the major challenges to be met when implementing a formal knowledge-management system: how to persuade people, the stars, to share what has made them individually successful, in order to enrich the pooled knowledge base. A recent survey by the American Management Association (1998) of 1,051 respondents came to the same conclusion. The answer to the question "What is the biggest knowledge management problem?" that received the greatest number of responses (41%) was persuading people to share their knowledge! (Jacob and Pariat, 2000, p. 41; see also Ballay, 1997, p. 277; Zack, 1999, p. 47; Bukowitz and Williams, 1999, p. 162) [translation]

This does not mean that these demands are never successful nor does that mean that these successes have never been studied (for instance, Robertson, Scarbrough & Swan, 2003; Robertson & O'Malley Hammersley, 2000; Swan, Scarbrough & Robertson, 2002). But these documented successes lay open, obviously, the flaws in the analyses of KM implementation consultants in setting out factors of success that are totally ignored in the KM guides.

Explanations of KM implementation experts

The authors often quoted have little to say about this issue, limiting themselves to addressing the importance, for successful KM, of fostering a "sharing culture," based on conditions expressed in pop psychology terms: the desire to pass on one's knowledge, trust, the right to make mistakes, solicitude and mutual assistance. These are all conditions favourable to passing on tacit knowledge:

Beyond the KM roles proposed earlier, effective knowledge creation, sharing, and leveraging requires an organizational climate and reward system that values and encourages cooperation, trust, learning and innovation and provides incentives for engaging in those knowledge-based roles, activities and processes. (Zack, 1999, p. 55; see also Zara, 2004, p. 9; Jacob and Pariat, 2000, pp. 41 and 43)

So many people share this belief in the virtues of pooling knowledge, with rarely a dissenting

voice, that it would be tedious to quote them all here (see, *inter alia*, Zack, 1999, p. 47, and Scarbrough, 1999, p. 6). Furthermore, writers who discuss the problem of the lack of co-operation among professionals convey the explanations given by consultants in the field. It is not hard to make out that the proposed solutions are inspired by a folk psychology explanation to the effect that professionals may be "inhibited" by a competitive, individualistic organizational culture that fosters selfishness and provokes distrust of peers, because they won't "let you make mistakes" (see also Audebert-Lasrochas, 2000, pp. 234–5). This is in no way surprising, as the KM literature adopts a mostly instrumental approach (for a discussion of the relevant literature, see Brohm, 2005, p. 93-95).

The material interests of professionals are in general ignored in these explanation frameworks, at the most touched upon in some proposals, since to the conditions listed in the quotation above, must be added the courtesy to reward "donors" by crediting them by name for their contributions:

Some surveys make no bones about it: one of the most gratifying measures [is] entering the names of "knowledge donors" into the collective bank. More than special attention showing appreciation, this gesture is highly symbolic and has far-reaching consequences. First, by signing individually, users-providers thereby assert their shared responsibility for the entire process. (Jacob and Pariat, 2000, p. 58; see also Prax, 2003, p. 114) [translation] and Robertson & O'Malley Hammersley, 2000, p. 248-250)

This solution assumes that one of the reasons behind the lack of co-operation of some professionals has to do with concerns about preserving their symbolic capital and intellectual property.

A more recent explanation — related to the "cultural" explanations, but better informed — distinguishes between the various circumstances under which professionals are asked to share and thus transcends the simple explanation of reluctance to share or selfishness by focussing on the choices offered to professionals for sharing their knowledge (Ballay, 2002, p. 165). Ballay emphasizes that experts do not refuse to collaborate, but choose where they do so; he compares experts' interest in sharing knowledge within a community of practice and their interest in sharing with coworkers, at the manager's request and within a structure imposed from the top. This analysis has the advantage of highlighting the difference between the communities of practice set up by and for peers, using their hermetic professional jargon, and the knowledge-sharing structures set up by management, which more or less oblige employees who do not *a priori* feel an affinity for one another to work together for purposes that escape them. The first transcend organizational boundaries, are informal and bring together people based on their common knowledge, without the evaluation issues that are ever-present within organizations. These of course are ideal types, as between these two poles we can find intermediary forms wherein professionals successfully share information and knowledge in project teams and with peers, at the managers' request, but orally and in the course of action, without keeping any written record nor putting anything at managers' disposal (Robertson, Scarbrough & Swan, 2003; Robertson & O'Malley Hammersley, 2000; Swan, Scarbrough & Robertson, 2002).

Here the source of the problem of professionals' unwillingness to co-operate is seen as being more social and less psychological, but the solutions, besides being treated very casually, are strictly folk psychology, which does not reflect the analysis of the source of the problem or contradict it even. What is worse, in the name of the undeniable stimulation that may be gained through intellectual exchanges, the threat of losing one's exclusive specialized knowledge is brushed off:

It is obvious from the incredible complexity of knowledge that any analysis that takes as a principle that an expert who communicates his knowledge will thereby lose influence and power is far too simplistic. For this is to see knowledge as a weapon that can be held and passed from hand to hand. Of course, a manufacturing secret transmitted from one expert to another in the same field can circulate in this way. But once we are talking about different types of knowledge, the exchange does not have such a mechanical effect; sometimes it is by better explaining the conditions and constituent parts of their expertise that players can highlight the complexity and importance of what they do. (Ballay, 1997, p. 277, citing Hatchuel and Weil, 1992, p. 106) [translation]

Alas, demonstrating that the threat is unfounded is one thing, if you manage to do it, but getting the professionals concerned to believe it is another — and it really is a matter of belief, and not of whether the threat is founded or not. Let me emphasize that I am not saying that there is or is not *in fact* a risk of losing major assets, but that the perception of that possibility by the professionals concerned is what motivates their actions. I cannot pronounce on whether the risk exists or not; what is worse, in my opinion, is that no one can, across the board. In the short term, the risk depends a great deal on the field of employment and a number of case studies would be required to estimate it. A medium- or long-term assessment would require a crystal ball, because these are processes that take time and are influenced by a number of forces (see Ballay, 2002, pp. 182–5). But whatever the objective risk, that does not prevent the experts involved from assessing it subjectively when they decide whether to co-operate or not.

Worse, when material interests of solicited professionals are not ignored, they're denied (as are power relations; see Brohm, 2005, p. 93-95; Coutu & Willmot, 2003; LaPalombara, 2001 and Swan, Scarbrough & Robertson, 2002 on that topic) and even those experts who admit the existence of obstacles to knowledge pooling will denounce them as evidence of rigid corporatism in the face of the demands of sustainable development, no less (for instance, Prax, 2003, p. 1). The steps recommended by KM promoters involve very intimate incursions into the minds and consciences of professionals involved in the process and are surprisingly normative in their statements about what management must do to enforce knowledge pooling, making short shrift of the intentions of those concerned, which are mentioned only to say that they must be "changed" if they are not "in line":

The first thing that is required is each person's commitment to co-operative behaviour. This personal commitment could take the form of signing the organization's *collaboration agreement* and thereby subscribing to a *code of collaborative ethics* consistent with the agreement. Changing behaviour means obliging someone to change his or her system of values to get mind (values) in line with action (behaviour). [...] It is important to change behaviour if you want to change values, and the question of behavioural change cannot be negotiable, as it is what enables an organization to evolve. (Zara, 2004, pp. 37 and 39) [translation]

Three main insatisfaction sources grounded in sociology

The explanations of KM promoters must generally be assumed from their proposed solutions, for they are either underdeveloped or left entirely unsaid. All of them are also highly unsatisfactory sociologically speaking, for three reasons. First, materialists will find nothing convincing, because these individual behaviours, since they are fairly consistent within the environment of

the knowledge economy, are beginning to look like social facts. Indeed, basic sociological principles require us to see collective effects that must be examined as such and must be linked to objective interests and strategies for action (Drazin, 1990; Swan, Scarbrough & Robertson, 2002). Second, the explanations are often too superficial and themselves require explanation. It goes without saying, for example, that a "climate of trust" will not hurt collaboration; but what are the conditions, the issues, the guarantees in local social relations, of such a climate? If the phenomenon is a social fact, the explanation must also be social; a strictly psychological explanation is not good enough. Even Prax's slightly more developed framework (2003, pp. 110–8 and 394–9) gives only a few keys to the smooth operation of a knowledge-sharing team, but fails to attack the systematic refusal to co-operate at its source. Hardly a few of them question the basis of these refusals, but all of them recommend action, rather coercive in the case of Zara, for instance, to deal with this resistance. Last, the KM program widely promoted in consultancies so far is essentially normative, not based on a theoretical apparatus that would take into account the social relations of work (contrary to those above mentioned: Robertson, Scarbrough & Swan, 2003; Robertson & O'Malley Hammersley, 2000; Swan, Scarbrough & Robertson, 2002; Scarbrough, 1999, pp. 6–9). For instance:

The current difficulties of many companies in implementing a sustainable KM process can be explained in part by the following reasons [...] 25% of negative leaders, opponents to any change, who struggle fiercely to maintain the status quo. Their undermining efforts will be all the more effective if they keep quiet about them. They will feign goodwill from beginning to end [...] These opponents, although in the minority, are still today the big winners and explain the very limited diffusion of collaborative intranets, for example. [...] The chances of success are therefore low today, except in some more *culturally advanced* companies. (Zara, 2004, p. 55; my emphasis)

The explanations provided by these promoters — among other things, associated *a priori* with implicit theories — rely on the symbol of co-operation as a universal virtue, independent of social relations, and lead inevitably to a moral or "culturalist" explanation of the failure of knowledge-pooling systems.

Yet to stand up to examination, the rather unsatisfactory assumption of selfishness or mistrust should be set against the assessment of the work motivation of these professionals and take into account, where applicable, the gap separating their failure to contribute to knowledge-sharing systems and their high motivation. In a recent study of new-economy IT professionals (Anon, 2005), I found that they were very motivated: they put in greater effort than required, demonstrating availability, flexibility and initiative, paying special attention to costs and customers, working unlimited hours, putting their personal lives second, demonstrating productivity, co-operation, mutual assistance, etc. The assumption of the "inertia" of "unmotivated" employees would not stand up in that study population.

Loyalty has not disappeared from these technological services to business organizations, for example, but experts now have more than one loyalty: to their organizations, of course, but also to their customers, to their colleagues and to their responsibility to their boundaryless career development (see Alvesson, 2000, pp. 1109–11). In other words, professionals have not stopped being loyal, but their sole loyalty is not to management; they have a number of competing or successive loyalties.

A sociological analysis of history sheds a different light on the relative failure of knowledge-

pooling practices in KM. If we assume that the result of the process of having professionals pool their knowledge and make it explicit is that their managers can have access to it, even unlimited use of it, certain past experiences take on a new relevance to understanding what then becomes resistance to the appropriation by others of a hitherto hermetic knowledge that was coveted and thus negotiable. The marginalization, in many areas, of cottage-industry work methods at the time of the industrial revolution constitutes one of these useful historical reference points.

In many sectors, the cottage-industry work model was replaced by industrial work organization at the time of the industrial revolution, although the earlier form never totally disappeared. In the sociohistorical process that led to the shift from cottage-industry to mass industrial production, appropriation of the knowledge of craftspeople played a crucial role in setting up the division between the design and execution of work and the social and technical division of labour that was a precondition of industrialization.⁴

The coming together of independent craftspeople (entrepreneurs, in fact), in a collective workplace, under the legal and economic subjugation of an owner of the means of production was already a step towards the accumulation of capital, but the power derived by workers from possessing hermetic know-how essential to production acted as a brake on productivity (Clegg, 1981, p. 547). That gave rise to a major transformation of work organization, which in turn led to a major transformation of social relations: deskilling of craftspeople, incorporation of knowledge into a sociotechnical system that allows processes to be rationalized and standardized, a wage relationship instead of a trading relationship between craftspeople-entrepreneurs and their customers.

Let us be clear, however; while seeking the optimal appropriation of workers' knowledge is a condition of the capitalist mode of production, no one is claiming that knowledge has been entirely eliminated from industrial work, and the evolution of work organization cannot be summed up as the deskilling of workers. There are still traces of the crafts' or trades' organization of work in modern industry, where there is still skilled labour, in the craft guilds typical of the construction industry especially, in the professions — among independent entrepreneurs as well as in groups of professionals within large bureaucratic organizations.

A large part of the work of contemporary sociology of the professions concerns the transformations in the status of professionals that occurred as a result of the increased employment of salaried professionals in organisations, who are greater in number than self-employed professionals or those practising in partnerships, at least in Great Britain and the United States (Evetts, 2001, p. 5), who may or may not have a professional licensing body or reserved title, working for public or private organizations (Derber, 1982, 1983; Freidson, 1994; Hirst, 1982; Hoyle and John, 1995).

Regardless of how we interpret the transformation in the status of professionals, bureaucracies that employ them seek to gain some sort of control over them. Yet the range of instruments of control of work has been refined and now includes means that vary from direct control, through bureaucratic control, to assigning "responsible autonomy" (Lincoln and Kalleberg, 1990, p. 9, citing Friedman, 1977). Professionals, as a social group, respond to this attempt to control them by reacting and resisting. They enjoy a certain power to resist efforts to control their work, however, and an entire branch of sociology of the professions has been examining this question of a new method of labour management for qualified, salaried professionals from an antideterminist perspective with regard to class theory.⁵ The idea of a regulating mechanism in constant flux is more useful than that of a rigid rule structure that standardizes the social relations

of work. Management controls qualified professionals less directly because it has thus far been unable to take control of their exclusive and (relatively) hermetic knowledge and eliminate it from their work process, although it can reduce it.

The issue of control is crucial to salaried professionals, who are more susceptible to pressure from outside the profession (public policies, in-house policies, public opinion) if the profession does not have its own regulating body (Hirst, 1982, p. 173). More, the professionals I have studied are hired by organizations that have a stake in a post-Fordist, liberalized economy, in post-bureaucratic organizations that are characterized by greater competition for smaller markets, by a system of capital accumulation that demands great flexibility on their part and on the part of their employees, by the tenuousness of the employment relationship, and thus, by the very great external mobility of professionals (Hargreaves and Goodson, 1996; Helsby and McCulloch, 1996; Robertson, 1996, pp. 37–8). Such an economic context favours intentions of rationalization on the management side, and the resistance of professionals is merely the corollary.

One of the main instruments that enable skilled workers to resist control is the fact that they keep their knowledge quite hermetic, which guarantees them some discretion in performing their duties, since they clearly cannot avoid economic and legal subordination when they work for a salary. Developing and maintaining a hermetic language for their knowledge is the obvious way they have to protect the exclusivity of their symbolic capital and resist attempts to control their work. This means of resistance addresses a perceived threat of control from the management and has nothing to do with a refusal to share among peers, should they be outsiders; case studies in fact show an actual collaborative tendency among scientific from different fields (Robertson, Scarbrough & Swan, 2003; Robertson & O'Malley Hammersley, 2000; Swan, Scarbrough & Robertson, 2002).

This is a very inspiring notion in the process of accounting for professionals who do not contribute to KM knowledge-pooling systems, since the demand to contribute to these systems goes to the heart of their exclusive knowledge, and the hermetic language that goes with it. Interestingly, they often mention this language as an obstacle to passing on their knowledge. Indeed, one of the local issues of debate between managers implementing these systems and the experts is precisely the impossibility of translating knowledge expressed in their own jargon into the standardized format of the system, which the experts claim is too confining. For the purposes of this paper, it is not necessary to determine whether this objection is well founded; perhaps it is only a pretext, after all, but what is interesting is that they are citing their hermetic language as a reason to refuse to share their knowledge, when this very language is a well-known means of protecting the status of professionals in hierarchies.

QUALIFIED PROFESSIONALS AND KM

Alternative hypothesis concerning their lack of co-operation

The objectives of expert systems and other knowledge-based systems challenge the notion of the exclusivity of some types of knowledge. Without claiming that they will in the short term enable professional work to be split between design and execution, they may be an important outside means of controlling work as well as significantly reducing discretionary power. For professionals who are not organized into an association, the implementation of joint resistance

strategies is more difficult than for those who are, and the threat is therefore much greater.

As a result, I hypothesize that in refusing to co-operate, salaried professionals, especially those who are not represented by a professional body, are resisting what they perceive to be a threat to take over their hitherto exclusive knowledge. This they do more unofficially than officially, more surreptitiously than openly, even more unconsciously than consciously, using the means available to them individually, which are necessarily different from and more limited than those of group action, because they have no organized structure to defend their professional interests. Their resistance is based on the fear of deskilling and loss of control over how they practise their profession, related to the top-down imposition of these systems that do not ensure reciprocity. If they were organized, they could express their resistance through other (group) strategies, but the ways they choose to act are symptomatic of their isolation in a competitive market.

The fear of deskilling and loss of control is a resistance factor sorely neglected in work on KM and yet it seems to me that its potential to explain the behaviour of qualified professionals does not deserve such neglect. Let us look at why.

Importance of assets on job market

The most hermetic and least codified knowledge in these highly skilled sectors is what makes these professionals valuable on the job market, whether in-house or external. Not only among the very mobile new-economy professionals, but also in large bureaucracies, the value of experts rests largely on the appreciation of the know-how that makes them necessary, that distinguishes them from their colleagues and confers upon them a certain amount of individual bargaining power, a position within the organization, and a significant asset if they should leave later (Scarborough, 1999, pp. 11–12).

Now according to KM theory, as we have seen, that knowledge which used to belong to *people* and resulted from their training, experience, powers of logical reasoning, etc., must become *organizational resources*. In terms of perceptions,⁶ if the experts believe that not only their own personal assets but the very principle of the hermetic language of their profession and the existence of a territory protected by the impossibility of codifying some types of knowledge are under attack, why would they not see their professional interests threatened?

In a short online article, a specialist (Goman, 2002) gives five reasons why, in her view, experts keep their knowledge to themselves: the belief that knowledge is power, insecurity about the value of their knowledge, lack of mutual trust, fear of ridicule and lack of reciprocity. All these reasons are psychological, some overlap, and she leaves some out. In the electronic discussion that followed the article, one of the experts responded:

People don't trust management. I am astounded that the article, "Why People Don't Tell What They Know", as well as the responses I read, leave out one of the most obvious reasons — people don't trust management with the results of the sharing! One of the goals of a knowledge sharing and gathering effort is frequently to reduce human capital (lay off people, more bluntly) and people, having seen many years of this, ask themselves, "Why should I share?". Knowledge is power and if you don't know everything I know, maybe my job is secure. The fact that the author and the respondees did not even mention this tells me that folks who are preaching about this topic are way out of touch with reality. (Jack Hipple, Innovation-TRIZ, Inc., 8/16/2002)

From the management's point of view, why would experts rely solely on the knowledge they

have already stored up individually rather than relying on that which can be found in the organization where they work, the knowledge of all their colleagues, and thus reduce the uncertainty in the task? Yet the management's plans to reduce *its* uncertainty are in competition with those of the professionals to whom knowledge pooling is nothing more than a factor increasing their own uncertainty on the job market, one that runs counter to their ongoing efforts to preserve their own value. Wilson, 2002, tackle these issues and challenges the democratic utopia based on autonomy and sharing by opposing the numerous mass lay-offs in the consultancy sector to this promise. Indeed, focussing on innovation, KM is often part of a project-management approach and serves its aims; KM theorists are quickly satisfied that employee participation in decisions about what processes to adopt within the organization, work in teams with varying degrees of independence and, short, flat hierarchies are characteristics of work organization that contrast sufficiently with the Taylorist model to justify their proclaiming the progressive nature of knowledge sharing, without referring to the other conditions of this pooling of knowledge (Cotte, 1999, p. 12).

Because ICTs allow much faster circulation, storage and sharing of information, their potential for the *organization* is easy to see. Sidestepping the question of the impact on the professional categories affected, their proponents associate them with *transparency* (for the benefit of management, in fact, but at what price?) and declare them to be factors in progress. The normative content of KM handbooks promotes transparency, participation and accountability, in keeping with the new high-performance "liberal organization" model:

The ultimate aim of collective management [a precondition of KM] is to develop trust among members of the group and to foster commitment through action. This trust and commitment will emerge (1) if people are involved in making decisions that concern them, by giving their opinions and taking part in debates; (2) if, once the decision has been made, the why, the reasons for the decision, are explained, so that everyone can be sure that the decisions have been made in the interests of the organization (commitment will exist even among those whose opinion has not been followed); (3) if, once the decision has been made, the new rules are clearly set out and understood by everyone. (Zara, 2004, p. 12) [translation]

KM manuals adopt the normative version of this organizational model and associate it with great autonomy in doing the job, enhancement of skills through the dissemination of knowledge, and participation in discussions, but not decision making. Experts are asked to share their knowledge, reveal their knowledge to managers who will then decide and "explain things" to the team. Now, the normative version gives short shrift to the diagnoses of salaried professionals regarding their role in such participatory structures, their opinions of the relationship between the contribution requested and the reward offered, and their consequent interest in participating in this organizational model (see Courpasson, 2000, pp. 187–211).

But therefore, it is hard to imagine, as KM experts suggest, a way of reducing management's uncertainty that would also be universally effective as a motivator, because decisions to do with work organization are made within a social relations framework and become issues at stake in the players' strategies.

The organization is only one setting where professionals feel they belong; they have other loyalties, too, including to their customers. They may well regard the know-how they use with certain customers — or in some cases have developed for a certain customer — as a secret between them and that customer, to whom they are also loyal (Robertson and Swan, 2003,

p. 852). Telling the story of a given project for a given customer, for example ("feedback on the experience," one of the activities required by KM) may breach an unspoken agreement. In a context of high mobility and boundaryless careers, customers will survive the current employment relationship, and what is more, will often play a very important role in finding replacement jobs (Alvesson, 2000, pp. 1109–11). And yet, replacement is an important issue as very few organisations in the sector of specialized consultancy for businesses, for instance, can pride themselves with a low turnover and a high retention rate (like the one studied by Robertson & O'Malley Hammersley, 2000). Tension is inevitable between cross-organizational job markets and knowledge-sharing systems implemented separately within each organization.

Importance of professional discretion

The concept of professional discretion refers to the assumption that professionals have the capability, and can be given responsibility, to assess problems and their circumstances and to state their views by advising, deciding and recommending. The hermetic part of their knowledge is the best protection they have against control, guaranteeing them professional discretion founded on competency that managers and customers cannot assess unless they have the same training (Alvesson, 2001). For managers and customers, only results testify to their skills.

After pooling knowledge, professionals may fear (in the more or less long term) an increase in the number of predefined procedures for operations that until then had depended on their individual discretion (Alvesson, 2001), for is not the purpose of the operation to disclose "best practices," the new keystone of management sciences? Indeed, KM may be seen primarily as a means of shifting the weight from the first antidote to the uncertainty involved in a task (the knowledge *that a worker has already stored up*) to the second (the knowledge that *can be found* within the organization). In this regard, contemporary sociology of the professions underscores the power that specialized software gives to managers concerned with reducing the margin of discretion of salaried professionals by standardizing practices and routinizing processes (Evetts, 2001, p. 8; Freidson, 1994, p. 167). As salaried workers, they have little control over the end results of their work (*ideological autonomy*, to use Derber's term, 1982), because the manager defines them. Wrongly or rightly, these professionals may feel that they are also being asked to give up control over the organization of their work and their professional discretion over how to do their job (*technical autonomy*, Derber, 1982) as a result of knowledge pooling (Drazin, 1990; Swan, Scarbrough & Robertson, 2002). Conversely, that very importance of professional discretion can explain the success of knowledge pooling practices that are oral and limited to peers in a team project, as observed by Robertson & O'Malley Hammersley (2000) or, more generally, the success of those that are not imposed on professionals nor controlled by managers and wherein professional groups keep the control over the content of their exchanges (Robertson, Scarbrough & Swan, 2003; Swan, Scarbrough & Robertson, 2002).

Legal protection won't do them much good

If its demands to pool knowledge are successful, management will make professionals reveal knowledge that it considers implicitly to be its property, but which, up until the advent of ICTs, was largely inaccessible for purely practical reasons, because there was no technical way to store it and use it, that requires very rapid interconnexions through huge amount of words (Cotte, 1999, p. 15). Questions of intellectual property have not been raised to support what has so far remained a shift in the meaning of property rights, from rights over technical equipment to rights

over what is stored using it.

In terms of labour law, in the case of salaried professionals, the concept of legal subordination of the employee to the management gives the manager the right to take all the steps that, added up, make it possible to appropriate the knowledge of employees: the right to oversee work, to give instructions concerning procedures, to set up work committees that communicate electronically, to find out what means have been implemented to reach an objective or do a job, etc. The manager has the right to watch over people at work, to question them, to look for better ways to organize the work, to change the organization of the work.

In terms of protective strategy, in the case of professionals asked to pool knowledge, intellectual property rights may serve to protect an invention, by means of patents, for example, but they will not be of much use in protecting knowledge not yet codified or materialized in the form of a product or process, or methods of doing things. Will experts be able to invoke some notion of trade secret or personal information to ward off their management's demands to share their knowledge? Self-employed professionals or consultants commissioned for their expertise on an *ad hoc* basis (expert opinion, report, study) can legitimately keep to themselves the secret of the intellectual process that leads to the final product, for their customer is only buying the final product. But the question of trade secrets is purely hypothetical in the case we are examining, having never yet been brought before the courts (at least in North America).

A fortiori, in the case of salaried professionals not organized into an association, the most clandestine strategies offer the best prospects of effectiveness without having to be justified for what they are, which is better suited to individual resistance not backed up by a collective movement.

These professionals are not organized

The question of the legitimacy (and not the legality) of the demand to pool knowledge is poorly dealt with in KM theory texts, either (for a discussion of that point, Brohm, 2005, p. 93-95). If it is mentioned, it is only casually, with the assumption that it goes without saying that this kind of sharing enhances the status of workers who are asked to share their knowledge, because it is supposed to be a step towards industrial democracy. The KM universe fully endorses "responsible autonomy" with regard to worker control:

Employees are our most important assets. We can't afford to lose our most important assets. We have to utilize the knowledge of every single employee. Everybody has to understand the importance of their work for us, and they have to be personally responsible to a great extent. (Andreas Rihs, one of the co-founders of *Phonak*, a leading light in KM, quoted in Von Krogh, Ichijo and Nonaka, 2000, p. 36)

Earlier we presented the type of control of work proper to highly skilled professionals, "responsible autonomy," and the manufacturing of consent. Picking up our reasoning where we left off, let us keep in mind that, based on empirical work, "responsible autonomy," as a form of control, cannot function without clear, rational rules — consistent procedures that provide guarantees of reciprocity within which rights and obligations are shared rather than unilateral (Halaby, 1986, p. 634).

In this context, is it legitimate for management of a company involved in KM to subject its professionals to the consequences of KM in terms of the stripping of knowledge that will eventually result? In other words, if the professional perceives that he or she is losing the term

"autonomy" from the method of control he or she believed in up until then, why should that person continue to be "responsible"? Here again, conversely, that very importance of professional discretion can explain the success of knowledge pooling practices that are oral and limited to peers in a team project, as observed by Robertson & O'Malley Hammersley (2000) or, more generally, the success of those that are not imposed on professionals nor controlled by managers and wherein professional groups keep the control over the content of their exchanges (Robertson, Scarbrough & Swan, 2003; Swan, Scarbrough & Robertson, 2002).

Officially posing the question about legitimacy would require professionals to formally designate stripping and appropriation as the object of the process. But to pose the question about the ultimate aim of the management's actions, professionals asked to share their knowledge for KM purposes would have to be organized, which is not always the case (teaching professionals are one group that could ask this type of question; see Locke, 2001, pp. 47–8). The question of what is at stake for professionals contributing to knowledge pooling, their individual interests in pooling knowledge in a system designed by and for the management of their companies, cannot be raised without some sort of organization. Salaried professionals who are *rather lukewarm* towards the effects of KM have no other option than underground resistance strategy.

Conclusions of study of communities of practice

Experience has shown that informal communities of practice create a tremendous dynamic of innovation and integration. However, they often remain unofficial and are not always accepted by the hierarchies (Prax, 2003, p. 39). And for good reason, because they often extend beyond the boundaries of organizations and enable the dissemination of knowledge *among peers* at competing companies! Studies generally conclude that when an attempt is made to implement this type of practice from the top down, when professionals are competing with one another, whether on an in-house or external job market, sharing does not take place (Brown & Duguid, 1991). KM systems imposed from above do not have the features of the ones that experts would themselves choose spontaneously, and they are not compatible with their interests (Lesser & Storck, 2001; Merali, 2000; Wilson, 2002).

The initiative must come from below, be implemented spontaneously and remain under the control of its participants if it is to be a success. "In a very hierarchical management universe, people keep their knowledge to defend themselves" (Prax, 2003, p. 38). This KM promoter unfortunately does not explain what experts are defending themselves against — though a good analysis would take that as its starting point. For the experts are obviously not totally reluctant to share, but their attitude depends on whom they are sharing with.

There are three avenues to explore here: (1) Do those who share their knowledge in communities of practice have boundaryless careers or are they more likely to be hired in large bureaucracies where their jobs are fairly stable? (2) Does the community of practice guarantee reciprocity so that those who share their knowledge and experience are assured of benefitting equally in return in a way that will help advance their careers? (3) Are they asked to share the same type of knowledge in KM systems as they share in communities of practice? Future researches must deepen our knowledge on these issues.

CONCLUSION

At first glance, what KM promoters have to say about strategies to motivate and mobilize participants and the rewards of knowledge sharing seems naïve, in light of what is at stake for those being asked to contribute their knowledge. The promoters' literature on KM deals so unsatisfactorily with lack of co-operation that it highlights the theoretical and analytical weakness of the field as it now stands.

The inadequacy of the proposed explanations may be attributed to the fact that knowledge pooling is a practice that has given impressive results in the field of communities of practice, spontaneously implemented from the bottom up and later observed by experts or consultants, most often IM experts, who have deduced from them the ingredients for a new magic formula, without doing an in-depth analysis of the conditions of emergence (and success) of the process (on the matter of methods of dissemination of new fashions in management thinking, see Swan, Robertson & Bresnen, 2001).

Yet, KM promoters and “how-to” books' authors blatantly fail to address the real issues at stake regarding the pooling of knowledge, that is, intellectual property issues, in more than one point of views. Between “managing knowledge” and “appropriating knowledge”, there's a shift that hasn't been lost on experts, but nevertheless, this issue stands in a relative gap in the law as well as it's lost on any ruling body, be it professional, managerial, or else.

A study of the work of KM system promoters shows that *organizational knowledge* is defined as an *aggregate of individual knowledge*, a view that has serious practical and legal consequences. A new ethics is rapidly spreading through the literature:

Information should not be a source of power for its holder, but for the *one who knows how to create collective intelligence by sharing it*. (Rochet, 2003) [translation]

Who, then, knows how to create collective intelligence? In any case, management will have extensive means at its disposal if it succeeds in obtaining access to the pooled knowledge of all its experts! However, the highly qualified professionals who are being asked to share their knowledge may perceive the initiative as threatening to their interests because of what is at stake for them. The scope of the dissemination of this shared knowledge via an automated system open to managers is an unheard-of change in practices, and no one can yet know what its effects will be.

Facing this vacuum, there are no clear guidelines that can be enforced and there is still a “free zone” regarding knowledge: managers ask for it all, while some experts share it, others keep it to themselves, though not overtly. As long as either law nor case law do not provide clear answers, and as long as professional bodies do not either provide clear guidelines (including rights and obligations), experts' propensity to share knowledge will mainly depend on their labor market situation (assuming that the more mobile they are, the less they wish to share in order to save their assets on the market), the importance they attach to professional discretion (assuming there is a threat of managers implementing standardised “good practices” based on a new *organisational knowledge*) and, finally, their control on whom are they sharing with, and the purposes of the pooling. Without any response on these, good will and fickle circumstances will bring some to share, with fickle results for the managers...

Now, what is left to be said to unfortunate knowledge managers failing in making professionals share knowledge? Sadly, I must admit that I do not believe KM promoters could do far better in giving tips to these unsuccessful managers, simply because the aim of managing knowledge is, in

my point of view, another example of the overwhelming faith in management and its range, particularly in control over human beings and in the organizational capacities and reach of management. The loss of knowledge for management in a world of boundaryless careers is a simple by-product of many practices of the so-called new economy, and cannot be magically checked by the virtues of management. Far from a matter of chance, there is an important ground for knowledge-pooling to thrive in communities of practice (and far less elsewhere); cooperation and collaboration in a democratical environment is still a way of organizing, that may well have no substitute in the hierarchical environment of the firm, where workers are asked to behave like citizens while not experiencing citizenship (for an interesting discussion of this mythical faith in managerialism, see Parker, 2002, p. 1-16). In other words, sometimes, some places, management techniques are powerless. When the putting-out system was implemented in England, craftsmen did not use to refuse to share their trade secrets with peers; many of them refused to do so with factories' owners, on the grounds of their material interest, while others probably agreed to. Would *management techniques* have done better than coercion with the former? We can doubt it.

Of course, the hypothesis set out here must be subjected to empirical examination, and all I wished to do was demonstrate that it would be wise to do so; proving its validity is a task that goes well beyond the scope of this paper. For the reasons given above, I do, however, feel that it is valid, as long as it is agreed that it does not bear on the real consequences to be expected of KM with regard to professional qualifications, but rather on these professionals' perceptions of themselves as actors who trigger action. Indeed, professionals are resting for the time being primarily on their perceptions of the risks of the operation, which are a driving force of action to no lesser extent.

REFERENCES

- Allen, R. (1990) *Thinkers of our time. Polanyi*, London, Claridge Press.
- Alvesson, M. (2001) Knowledge work: Ambiguity, image and identity, *Human relations*, 54(7), 863-886.
- Alvesson, M. (2000) Social identity and the problem of loyalty in knowledge-intensive companies, *Journal of Management Studies*, 37(8), 1101-1123.
- Apple, M. W. (1995) *Education and Power*, 2nd ed., New York, Routledge.
- Argyris, C. & Schön, D. (1978) *Organizational learning: A theory of action perspective*, Reading, MA, Addison-Wesley.
- Audebert-Lasrochas, P. (2000) *Les équipes intelligentes*, Paris, Éd. d'organisation.
- Ballay, J.-F. (2002) *Tous managers du savoir! La seule ressource qui prend de la valeur en la partageant*, Paris, Éd. d'organisation.
- Ballay, J.-F. (1997) *Capitaliser et transmettre les savoir-faire de l'entreprise*, Paris, Eyrolles.
- Bélanger, J. (1991) La production sociale des normes de production : monographies d'entreprises en Grande-Bretagne et au Québec, *Sociologie et sociétés*, 23(2), 183-197.
- Boland, R. J. & Tenkasi, R. V. (1995) Perspective making and perspective taking in communities of knowing, *Organization science*, 6(4), 350-372.
- Brohm, R. (2005) *Polycentric order in organizations. A dialogue between Michael Polanyi and IT-consultants on knowledge, morality and organization*, Erasmus Research Institute of Management

(ERIM).

- Brown, J. S. & Duguid, P. (1991) Organizational Learning and Communities of Practice: Towards an Unified View of Working, Learning and Innovation, *Organization Science*, 2(1), 40-57.
- Bukowitz, W. R. & Williams, R. L. (1999) *The knowledge-management fieldbook*, London, Prentice Hall.
- Clawson, D. (1980) *Bureaucracy and the Labor Process: The Transformation of US Industry, 1850-1920*, New York, Monthly Review Press.
- Clegg, S. (1981) Organization and control, *Administrative Science Quarterly*, 26, 545-562.
- Cook, S. D. N. & Yanow, D. (1996) Culture and organizational learning, in Cohen, M. D. & Sproull, L.S. (eds) *Organizational learning* (pp. 430-59), Thousand Oaks, CA, Sage.
- Coutu, A. et Willmott, H. (2003) "Re-embedding situatedness: The importance of power relation in learning theory", *Organization Science*, 14(3), 283-296.
- Cotte, D. (ed.) (1999) *Les enjeux du management de l'information dans les organisations : usages, outils, techniques*, Lille, ADBS.
- Courpasson, D. (2000) *L'action contrainte. Organisations libérales et domination*, Paris, PUF.
- Davenport, T. H. & Prusak, L. (1998) *Working knowledge: How organizations manage what they know*, Boston, Harvard Business School Press.
- Derber, C. & Schwartz, W. A. (1988) Les hiérarchies à l'intérieur des hiérarchies. Le pouvoir professionnel à l'œuvre, *Sociologie et Sociétés*, 20(2), p. 55-76.
- Derber, C. (1983) Managing professionals: Ideological proletarianisation and post-industrial labor, *Theory and Society*, 12(5), p. 561-603.
- Derber, C. (1982) *Professionals as Workers: Mental Labor in Advanced Capitalism*. Boston, GK Hall & Co.
- Drazin, R. (1990) Professionals and Innovation: Structural-Functional versus Radical-Structural Perspectives, *Journal of Management Studies*, 27(3), 245-263.
- Eccles, R. G. (1981) Bureaucratic vs craft administration: The relationship of market structure to the construction firm, *Administrative Science Quarterly*, 26(3), 449-469.
- Eraly, A. (1988) *La structuration de l'entreprise. La rationalité en action*, Bruxelles, Éditions de l'Université de Bruxelles.
- Evetts, J. (2001) New directions in State and International Professional Occupations: Discretionary decision-making and acquired regulation, Proceedings of the SASE 13th Annual Meeting on Socio-Economics Knowledge: *The New Wealth of Nations*, University of Amsterdam, Pays-Bas, 28 juin - 1^{er} juillet, available at : <http://www.sase.org/conf2001/papers/papers.html>
- Friedman, A. (1977) *Industry and Labor*, London, Macmillan.
- Friedmann, G. (1964) *Le travail en miettes*, Paris, Gallimard.
- Freidson, E. (1994) *Professionalism Reborn: Theory, Prophecy, and Policy*, Chicago, University of Chicago Press.
- Galbraith, J. R. (1973) *Designing Complex Organizations*, Mass., Addison-Wesley.
- Gelwich, R. (1977) *The way of discovery: An introduction to the thought of Michael Polanyi*, New York, Oxford University Press.
- Gill, J. H. (2000) *The tacit mode: Michael Polanyi's postmodern philosophy*, Albany, State university of

New York Press.

- Goman, C. K. (2002) "Five reasons people don't tell what they know", *DestinationKM-Viewpoint*, June 22, on-line: DestinationKM.com
- Halaby, C. N. (1986) Worker attachment and workplace authority, *American Sociological Review*, 51, 634-649.
- Hargreaves, A. & Goodson, I. (1996) Chapter 1: Teachers' Professional Lives: Aspirations and Actualities, in I. F. Goodson & A. Hargreaves (eds), *Teachers' Professional Lives* (p. 1-27). London, Falmer Press.
- Hatchuel, A. & Weil, B. (1992) *L'expert et le système. Gestion des savoirs et métamorphose des acteurs dans l'entreprise industrielle*, Paris, Economica.
- Helsby, G. & McCulloch, G. (1996) Chapter 3: Teacher Professionalism and Curriculum Control, in I. F. Goodson & Hargreaves, A. (eds), *Teachers' Professional Lives*, (p. 56-71). London, Falmer Press.
- Herman, E. S. & N. Chomsky (eds) (2002) *Manufacturing Consent. The political economy of the Mass Media*, Dan Frank Ed.
- Hirst, P. H. (1982) Professional Authority: Its Foundation and Limits, *British Journal of Educational Studies*, 30(2), 172-182.
- Hoyle, E. & John, P.D. (1995) *Professional Knowledge and Professional Practice*, London, Cassell.
- Jacob, R.I & L. Pariat (2000) *Gérer les connaissances : un défi de la nouvelle compétitivité du 21e siècle. Information, interaction, innovation*, CEFRIO.
- Kessels, J. (1996) Knowledge productivity and the corporate curriculum, in J. F. Schreinemakers (ed), *Knowledge management: Organization, competence and methodology*, vol. 1 (pp. 168-174). Würzburg, Ergon Verlag.
- Laflamme, R. (1998) « Mobilisation ou manipulation? », in R. Laflamme (ed.), *Mobilisation et efficacité au travail*, Actes du 9^e congrès de l'Association internationale de psychologie du travail de langue française (AIPTLF), Tome 6 (p. 87-96). proceedings of *Gestion des paradoxes dans les organisation*, Cap Rouge, Presses Interuniversitaires.
- LaPalombara, J. (2001) The underestimated contributions of political science to organizational learning, in M. Dierkes, A. B. Antal, J. Child & I. Nonaka (eds), *Handbook of organizational learning and knowledge*, (pp. 56-71). Oxford, Oxford University Press.
- Legault, M. (1988) Le métier de chercheur scientifique en sciences sociales et la sociologie des professions, *Sociologie et sociétés*, 20(2), 163-176.
- Legault, Marie-Josée (2005) « Differential Gender effects of project management and management by project on skilled professionals », dans Kay S. Devine et Jean-Noël Grenier (dir.), *Reformulating Industrial Relations in Liberal Market Economies - Reformuler les relations industrielles dans une économie de marché libérale*, Concord, Ontario, ACRI-CIRA et Captus Press, p. 105-124
- Lesser, E. L. & Storck, J. (2001) "Communities of practice and organizational performance", *IBM Systems Journal*, 40(4), 831-841.
- Lincoln, J. R. & Kalleberg, A. L. (1990) *Culture, control and commitment. Study of work organization and work attitudes in the United States and Japan*, Cambridge, Cambridge University Press.
- Locke, T. (2001) Questions of professionalism: Erosion and reclamation, *CHANGE. Transformations in*

- Education*, 4(2), 30-50.
- Marglin, S. (1973) What do bosses do? The origins and functions of hierarchy in capitalist production, *Review of Radical Political Economics*, 6(2), 60-112.
- Merali, Y. (2000) Individual and collective congruence in the knowledge management process, *Journal of Strategic Information Systems*, 9(2-3), 213-234.
- Montgomery, D. (1979) *Worker's Control in America*, Cambridge, Cambridge University Press.
- Murphy, R. (1990) Proletarianization or bureaucratization: The fall of the professional?, in Torstendahl, R. & Burrage, M. (eds), *The Formation of Professions: Knowledge, State and Strategy* (p. 71-96). London, Sage.
- Nonaka, I. & Takeuchi, H. (1995) *The knowledge-creating company*, New York, Oxford University Press.
- Orr, J. (1990) *Talking about machines: An ethnography of a Modern Job*, Cornell University.
- Parker, Martin (2002) *Against management*, Cambridge, Polity Press
- Polanyi, M. (1966) *The Tacit Dimension*, London, Routledge & Kegan Paul.
- Polanyi, M. (1958) *Personal knowledge: Towards a post-critical philosophy*, Chicago, ÉU, University of Chicago Press.
- Prax, J.-Y. (2003) *Le manuel du knowledge-management*, Paris, Dunod.
- Reynaud, J.-D. (1991) La régulation sociale, *Revue internationale d'action communautaire*, 25(65), 121-126.
- Robertson, S. L. (1996) Teachers Work, Restructuring and Postfordism: Constructing the New Professionalism, in Goodson, I. F. & Hargreaves, A. (eds), *Teachers' Professional Lives* (p. 28-55). London, Falmer Press.
- Robertson, M. & Swan, J. (2003) Control - What Control? Culture and Ambiguity within a Knowledge Intensive Firm, *Journal of Management Studies*, 40(4), 831-858.
- Robertson, M., Scarbrough, H. & Swan, J. (2003) Knowledge Creation in Professional Service Firms: Institutional Effects, *Organization Studies*, 24(6), 831-857.
- Robertson, M. & O'Malley Hammersley, G. (2000) Knowledge management practices within a knowledge-intensive firm: The significance of the people management dimension, *Journal of European Industrial Training*, 24(2-4), 241-253.
- Rochet, C. (2003) *Conduire l'action publique des objectifs aux résultats*, Paris, Éd. Village mondial.
- Sanders, A. F. (1988) *Michael Polanyi's post critical epistemology. A reconstruction of some aspects of "tacit knowing"*, Amsterdam, Rodopi.
- Scarbrough, H. (1999) Knowledge as work: Conflicts in the Management of Knowledge Workers, *Technology Analysis and Strategic Management*, 11(1), 5-16.
- Simon, H. A. (1991) Bounded rationality and organizational learning, *Organization science*, 2, 125-134.
- Stinchcombe, A. L. (1959) Bureaucratic and craft administration of production: A comparative study, *Administrative Science Quarterly*, (4), 168-187.
- Stone, K. (1974) The origins of job structures in the steel industry, *The Review of Radical Political Economy*, (6)2, 113-173.
- Swan, J., Scarbrough, H. & Robertson, M. (2002) The Construction of "communities of practice" in the

- Management of Innovation, *Management Learning*, 33(4), 477-496.
- Swan, J., Robertson, M. & Bresnen, M. (2001) Knowledge Management and the Colonization of Knowledge, *Special Issue of the Best papers from the Critical Management Studies Conference, The Electronic Journal of Radical Organization Theory*, 7(2), [on-line].
- Tarondeau, J.-C. (1998) *Le management des savoirs*, Paris, PUF, coll. Que sais-je?
- Torstendahl, R. & Burrage, M. (eds) (1990) *The Formation of Professions: Knowledge, State and Strategy*, London, Sage.
- Thrupp, S. (1963) The guilds, *Cambridge Economical History*, (3), 230-280.
- Von Krogh, G., Ichijo, K. & Nonaka, I. (2000) *Enabling knowledge creation. How to unlock the mystery of tacit knowledge and release the power of innovation*, Oxford, Oxford University Press.
- Weick, K. E. & Roberts, K. H. (1993) Collective mind in organizations: Heedful interrelating on flight desks, *Administrative Science Quarterly*, 38(3), 357-381.
- Wenger, E. (1999) *Communities of practice: Learning, meaning and identity*, Cambridge University.
- Wilson, T. D. (2002) The nonsense of *knowledge-management*, *Information research*, 8(1), paper no 144.
- Zack, M. H. (1999) "Managing codified knowledge", *Sloan Management Review*, 45-58.
- Zara, O. (2004) *Le management de l'intelligence collective*, retrieved from [http :www.axiopole.com/intelligence_collective.php](http://www.axiopole.com/intelligence_collective.php).

ABSTRACT	2
KEY WORDS	2
WHAT IS KNOWLEDGE MANAGEMENT?	3
POOLING KNOWLEDGE — A NECESSARY PRECONDITION OF KM	4
POOLING KNOWLEDGE: AN OLD AND NEW PHENOMENON	4
KM AS A SOCIAL PHENOMENON	7
HOT QUESTIONS RAISED BY ICT ASSISTED KNOWLEDGE-POOLING.....	7
RELATIVE FAILURE OF KNOWLEDGE-POOLING PRACTICES	8
EXPLANATIONS OF KM IMPLEMENTATION EXPERTS	8
THREE MAIN INSATISFACTION SOURCES GROUNDED IN SOCIOLOGY	10
QUALIFIED PROFESSIONALS AND KM	13
ALTERNATIVE HYPOTHESIS CONCERNING THEIR LACK OF CO-OPERATION	13
IMPORTANCE OF ASSETS ON JOB MARKET.....	14
IMPORTANCE OF PROFESSIONAL DISCRETION	16
LEGAL PROTECTION WON'T DO THEM MUCH GOOD.....	16
THESE PROFESSIONALS ARE NOT ORGANIZED.....	17
CONCLUSIONS OF STUDY OF COMMUNITIES OF PRACTICE.....	18
CONCLUSION	19
REFERENCES	20

¹ The concept of professional autonomy, which was used for many years in sociological studies of the professions, is increasingly being criticized, quite rightly, on the grounds that instances of true professional autonomy, in the

strict sense of the term, and as it is defined in the weberian ideal type or model often used in work on the proletarianization of professionals, are very rare cases. According to Freidson (1994, p. 162), these instances were limited to the medical and legal professions, in the United Kingdom and the United States, during a very short historical period and in consultancy mostly. Questions are therefore increasingly being raised about the usefulness of this concept, and that is why we will refer more to discretionary power than to autonomy (Evetts, 2001, pp. 3–7).

² For the purposes of this paper, we will distinguish communities of practice from KM systems and will define them as follows: informal, spontaneous groups, often cross-organizational, with membership being voluntary, and with members being asked to participate on the basis of their competency; the chief objective of such groups is the sharing of knowledge related to a specific practice, usually professional, through social interaction. The main conditions for participation are: similarity, complementarity, proximity (not necessarily physical) and reciprocity (Prax, 2003, pp. 96–102).

³ In taking such a standpoint, the author shares the perspective of many Polanyi's exegetes: Allen, 1990; Gelwick, 1977; Gill, 2000; Sanders, 1988. See Brohm, 2005, p. 80-81.

⁴ Clawson (1980); Derber and Schwartz (1988); Eccles (1981); Marglin (1973); Montgomery (1979); Stinchcombe (1959); Stone (1974); Thrupp (1963).

⁵ See, for instance, Reynaud (1991) and Bélanger (1991). For more information on the origins and development of several sociological trends on the proletarianization of salaried professionals, see Legault (1988).

⁶ I would like to reiterate that my hypothesis does not concern the actual results to be expected from KM respecting professionals' qualifications, but the perceptions that make professionals act as they do. In other words, I am not arguing that the risk of deskilling exists objectively.