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Consultants and experts in management consulting firms

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Abstract

The aim of the article is to explore different aspects concerning the distinction between the expert and the consultant. We analyse theoretically and empirically these distinctions in the framework of the knowledge-based economy in order to introduce the central concepts of epistemic community and community of practice. The question is to know to which community experts and consultant belongs. We also investigate the role that some actors coming from outside the firm play in reinforcing knowledge creation and codification processes in the firm. © 2001 Published by Elsevier Science B.V.

Keywords: Experts; Consultants; Communities; Knowledge

1. Introduction

Consulting firms are major actors of the knowledge-based economy since they are both influenced in their activity by the new paradigm and among the most active heralds of this new economy. Hence it seemed that if one was to study the management of knowledge and more precisely the use of codification that could be made in this respect, these companies were the best places to begin a study. Moreover, our starting hypothesis was that highly skilled knowledge workers were likely to hold a personal and idiosyncratic knowledge that potentially could resist codification. These particular workers could then well be the embodied limits of codification processes.

In order to analyse this crucial issue, we shall explore different aspects concerning the distinction between the expert and the consultant.

Firstly, we focus on the task that they have to accomplish. Secondly, this first distinction lead to analyse the distinction from a cognitive point of view. We make the assumption that the fulfilment of their respective tasks entails a particular cognitive pattern for each of them. Mainly, the difference lies in the expert's ability to produce new knowledge, in his/her power of creation and imagination. Thirdly, we investigate the question of the social recognition of the expert. But at the same time institutional means are not always at hand to select or label experts. So we will try to identify particular social processes which are at stake in the recognition of a person as an expert.

Lastly, this paper deals with the specificities of experts and consultants, both within the firm they are part of and within the various organisations in which they have to intervene. In the first case, we discuss the various strategies implemented to breed and manage knowledge inside a consulting firm. In this respect, the codification strategy is central in the discussion. In the second case, the client firm is envisioned as a network

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of communities. This network integrates two specific kinds of cognitive communities: the epistemic communities and the communities of practice. The respective role of experts and consultants will be discussed within this conceptual framework.

To carry out our study, we led several interviews with persons acknowledged as experts or consultants. The interviews ranged from individuals to international organisations. They were conducted following a semi-open questionnaire allowing cohesion between the various interviews and yet giving enough room to the interviewed person to freely develop his/her thoughts.

2. Distinguishing experts from consultants

2.1. *Experts and consultants: a first raw distinction*

At first sight, consulting firms seem to carry out one type of activity: solving problems arising in their clients' firms. However, a closer look allows us to lay out a fundamental distinction among these activities. One has to distinguish clearly two broad categories of problem solving contexts in which consulting firms intervene. On the one hand, client firms are used to looking outside their own organisation for specialists (via large consulting companies such as the "Big-5", for example) able to provide them with *a set of solutions* that have to be matched to firms' problems. On the other hand, there are situations in which the very nature of organisational problems is hardly framed and recognised by decision makers who need to implement a more customised and specific device to overcome these specific problems. These situations, as specific contexts of action and reflection, are essentially characterised by the nature of knowledge and individual capacities that consultants have to mobilise to handle them.

In the first case, problems are usually well identified by managers and assignments can be formulated in order to engage specialised people to deal with them. Of course, one should remember that not all problem solving activities are externalised and firms can exploit their own intellectual resources. Nevertheless, the rational guiding managers seem to be based on their willingness to delegate some problem solving activities to qualified external people or firms in order to fasten

the process in an efficient way.³ In fact, consultants are supposed to have more experience and knowledge since they occupy, by the very nature of their activity, a privileged position in several companies (Hargadon and Sutton, 1996; Sarvary, 1999). As noted by Sarvary: "through the consulting assignments, the consultant is connected to many firms in different industries. As a result of this central position, the consultant is aware of a large set of business problems as well as a large set of solutions" (p. 98). In other words, consultants work more efficiently since they benefit from a large empirically validated and highly varied knowledge basis. They act as "knowledge brokers" and are recognised as such by clients.

In certain cases, clients face situations which are unknown to them, i.e. managers are unable to identify the real problem to tackle. Here, consultants are led to check out if these situations can be, by some analogy, related to existing problems and then to propose matching solutions. However, that is not always the case. In fact, firms also encounter problems the pattern of which is not recognised at first glance by specialists. In other words, consultants may fail to identify relevant sets of problems and solutions. Contrary to the first case discussed above, these are temporarily unknown situations which give rise to new problems and need new solutions. In this case, firms look for some kind of expertise enabling them to conceptualise the specific pattern of the problem before trying to solve it. The needed capacity is not the consultants' ability to provide analogy between known problems and solutions, but their creative capacity to propose reliable new patterns of interpretation. This particular capacity is actually what leads some consultants to be considered as experts in their own companies or by clients.

These two different situations call for two different sets of capacities. Indeed, the different contexts encountered do not concern the same type of external interveners. Consultants are the actors intervening in the first type of situation (i.e. in which problems are

³ Decision makers are also aware of the fact that neutrality, as an important element of judgement in this case, can be insured via an external institution responsible for proposed solutions. In fact, when the implementation of managerial solutions imposes important changes, managers can justify their decisions by trusting the specialists' judgement. In this case, consultants often take part in the change process as a relay between top management and employees.

well identified) and experts are the actors addressing the second type of context (i.e. where problems are emerging and blurred).

The main difference between experts and other consultants lies in the distinction between two kinds of cognitive capacities. While, consultants' know-how is their ability to use a particular tool box in well-known contexts, experts propose their capacity to formalise new problems and solutions which are usually context specific and tailor made. An expert is then an intervener who is temporarily involved in a particular process of knowledge creation. The expert, as underlined by Trepos (1996), is able to transform occurred events into knowledgeable situations. As we will see in Section 2.2, this specific expert's cognitive capacity helps us to define what is the essence of the expertise.

2.2. Experts and consultants from a cognitive viewpoint

2.2.1. Cognitive mechanisms common to experts and consultants

Starbuck (1992) and Alvesson (1992, 1993) both consider consultancy work and consultancies to be good examples of knowledge work and knowledge intensive firms (KIF). KIF are firms within which knowledge is the key asset. In such firms, different forms of knowledge are capitalised and exchanged (Spender and Grant, 1996). These pieces of knowledge come both from experiences gained in missions carried out in client firms and from codified sources. The finality of such firms is to use some knowledge in order to meet clients' needs. They are in essence immaterial firms working out problem solving activities and organisational changes. Their fundamental assets thus rely in the cognitive ability of their employees. Typically in the literature, knowledge workers are considered as highly educated individuals who often have been trained in a particular profession (Knights and Willmott, 1987). Reich (1991) referred to knowledge workers as 'symbolic analysts', a new type of workers who combined significant levels of technological skills in problem identification and problem solving. Drucker (1993) also characterised knowledge workers as individuals who had high level of education and specialist skills and combined these assets with the ability to identify and solve problems.

These definitions are particularly relevant for both consultants and experts who are both required to apply significant levels of knowledge and attention and problem solving capabilities during specific missions (Lorino, 1997). All these authors emphasise that knowledge workers demand and require a significant degree of autonomy, based on the nature of individuals themselves and the nature of the work they perform.

Moreover, the idea to equate the notions of expert or consultant and of knowledge workers is consistent with the characterisation made by Anderson et al. (1996) who identify four levels of knowledge.

1. Basic knowledge ('cognitive knowledge' or 'know-what') directly drawn from the practice within the discipline that are gained through training and may be rewarded with diploma.
2. A 'know-how' ('advanced skills') that are the translations of 'learning in books' into 'actual practices'. The individual learns the rules of his/her discipline and applies them to the complexity of the world.
3. 'Understanding systems' that supposes the understanding by the individual of the causes and effects of the different phenomena of his/her discipline. Thus she/he is better prepared to solve more complex problems or to call intuition into play. It is then, according to Anderson et al. (1996), the situation in which an 'extraordinary value' is created.
4. A 'self-motivated creativity' (or 'care-why') entailing a couple 'motivation and adaptability' to reach success.

Both consultants and experts deliver an interpretation of reality highly conditioned by the type of demand they face. They both have the capability to rely on previous knowledge (experience) and to re-articulate pieces of knowledge in a new way (what Varela (1989) and Weick (1979) call 'enaction'). Drawing upon this, they generate arguments and series of actions. Despite the similarities we outlined, it seems nonetheless necessary to draw a line between experts and consultants. This difference is visible in the cognitive architecture built by each of these agents.

2.2.2. Cognitive specificities of experts and consultants

The origin of the mission of the consultant and the expert being in most cases largely different, the consultant and the expert rely on different forms of

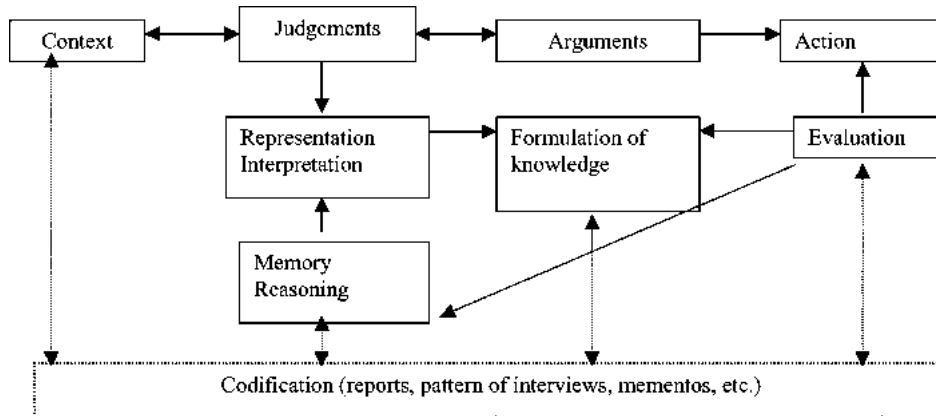


Fig. 1. Cognitive pattern and output of experts and consultants.

knowledge and cognitive processes. Indeed, although their approaches stem from a common ground (Fig. 1), the consultant bases his/her activity much more on standardised and hence widely codified knowledge. The role of imagination remains insignificant and is only used to adapt stabilised methods to particular contexts.

The consultant, no matter the size of his/her company, has access to precise codebooks (methodologies). Moreover, his/her experience allows him/her to gather different 'best practices' from his/her previous references. Within this framework, the consultant mainly learns through 'learning by working' or 'learning by adaptation' (Probst and Büchel, 1995) also named 'single loop learning' (Argyris and Schön, 1978). The consultant evolves within changing contexts by making some corrections in the light of the evaluation of actions undertaken previously. In certain cases, the consultant may have to implement 'learning by construction' also called 'double loop learning' (Argyris and Schön, 1978) when she/he has to conceptualise new products (new methodologies, new procedures, etc.).

The expert does not face the same initial situations since she/he intervenes on problems to which standardised methodology cannot be applied. In this perspective, the expert pays more attention and is more sensitive to changes and to the variety of contexts she/he encounters. The notion of potential surprise resulting from an event described by Shackle (1972) and Dibiaggio (1999) acquires its full meaning. The

expert will call more regularly during his/her missions for 'deutero-learning' through which she/he is able to think differently. In such processes, she/he articulates forms of knowledge different from the consultant's. The first of them is the experience kept in his/her memory, a mix of recollections, tacit knowledge and emotions. This kind of experience is constructed, among other things, through processes of trial-and-error (the expert does not test hypotheses) partly leading to wrong choices. We find here the 'artisan's knowledge' stated by Hatchuel and Weil (1992). Nonetheless, this knowledge is not sufficient. She/he must hold some 'know-what' and 'know-why' about his/her domain of intervention. She/he also sometimes needs 'know-who' when she/he has to seek knowledge complementary to his/her own or precise information. Know-who generates knowledge about who knows what and who knows how to do what (Foray and Lundvall, 1997b). Know-who also includes the knowledge about how to interact with whom. In that sense, know-who underpins the ability to articulate various knowledge located in different places. So, a great deal of the knowledge brought into the firm by the expert is generated by combination (i.e. codified knowledge to codified knowledge) (Nonaka and Takeuchi, 1995).

Lastly, the expert uses personal practices in the resolution of problems by calling into play points of his/her experience upon which she/he will be able to carry out a solution to the problem she/he faces. The expert thus develops a kind of aptitude to create new

knowledge to cope with an unknown situation. She/he operates a form of ‘artist’s knowledge’, a real mix of imagination, creativity and vision in a given context. These processes are at work only in the domain of specialisation of the expert. This is a key difference with the consultant. Indeed, the expert really creates new knowledge that was not existing before his/her intervention. The consultant may actually create knowledge in his/her practice, but this would then be mere spill-over, and knowledge creation occurs at the margin of the processes implemented by the consultant. By contrast, the creation of new knowledge to solve new problems arising in unknown situations lies at the core of the expert’s activity.

The re-actualisation process of the knowledge base of the consultant is different from the one of the expert. In this respect, several remarks must be outlined.

First, the consultant renews his/her competencies partly by mining in the ‘best practices’ she/he observes at his/her client firms, partly by scanning specialised literature and partly by participating in training courses whether internal or external to his/her firm. Depending on the size of the firm, he can access systems of knowledge capitalisation or not (cf. *infra*). It should be noted that his/her bases for renewing his/her knowledge are more easily codifiable than the expert’s. Indeed, newly acquired knowledge partly display an intangible dimension since the consultant must diffuse them both throughout his/her firm, toward his/her colleagues and toward his/her clients. These bases must then be protected as sources of competitive advantage of the company.

The renewing of expertise is fairly different. It is achieved through particular learning processes but this is not sufficient. The expert must master at a higher level than the consultant the ‘know-why’ of his/her domain. Moreover, she/he must have the ability to formalise his/her knowledge in academic publications. For these reasons, the expert must establish links with the academic realm. This environment offers him/her new theories, new approaches based on acknowledged references and also the possibility to validate the theoretical content of his/her work. Hence, the expert, by participating in research seminars, workshops, collective publications, etc. can confront his/her knowledge and representations with other forms of expertise. In this perspective, she/he benefits from a validation by

his/her peers. This does not exist in the case of the consultant.

Thanks to his/her cognitive capabilities, the expert is a sort of intermediate agent establishing a back and forth circulation between the academic and the firm worlds. Thus, she/he implements particular ‘know-who’ to make relevant translations. Codification plays a fundamental role in this respect, it is an obligatory stage.

Although the consultant and the expert are to be assimilated to knowledge workers, the cognitive processes leading to actions remain different between the two. The renewing of their knowledge is also different. Nevertheless, at different degrees, they are knowledge agents for the firms they are in contact with. They are particular knowledge workers in that they are in contact with numerous different contexts, firms and objectives in their daily activity.

2.3. Recognition of expertise

The activity of experts and consultants entails a necessary recognition by their colleagues, clients and partners. This point impacts on the processes of internal promotion, the capability to cope with increasingly complex missions and, obviously, their activity. Although the consultant and the expert undergo these common determinants of legitimacy, numerous other features distinguish one from the other in this respect.

No matter the size of the company employing him/her, the consultant is acknowledged by a triptych stable over time. Drawing upon the study of the dedicated literature (Jaillet, 1998; Henry, 1992), different conditions of recognition of the consultant have been identified.

- *The belonging*: whether the consultant belongs to an internationally or locally known company (majors of the sector or independent consulting firms) the ‘client’ selects him/her above all for his/her belonging to this entity. Then, following the nature of the mission, of the activity sector, of his/her experience, a consultant or a team of consultants will be commissioned. A selecting process is then run internally in the consulting firm. The acknowledgement is carried out at a first level by the hierarchy of the organisation.
- *The education*: the consultant, to be acknowledged by his/her hierarchical superiors and his/her peers,

must obtain the adequate diploma. We thus admit that she/he has completed a curriculum that was validated at a point in time.

- *The experience*: to be qualified, the consultant must gain a minimum of successful experiences. The results obtained give him/her legitimacy inside his/her organisation but also outside for his/her clients. An experienced consultant does not hesitate to cite his/her references (his/her previous clients). Hence, by contrast with the academic world, the audience of the consultant does not need material references (Jaillet, 1998). She/he just has to utilise experiences undergone with his/her previous clients (Henry, 1992).

All junior consultants cannot pretend to established references. In order for them to swiftly gain some experiences, the junior consultants are coached during missions by more experimented consultants. They thus benefit from ‘learning by imitation’ and ‘learning by interacting’ in the case of a collective work. These different elements constitute the mode of social recognition of the consultant. Through these means, they are selected at the expense of others.

In other words, no professional organisation devoted to consultants recognises them directly. In France, although some attempts have been made, none has yielded real institutionalisation of recognition. Besides, although certain consulting firms possess international standard of organisation (ISO) agreements, this can a priori only guarantee an internal coherence, but not their ability to conduct a mission successfully. The acknowledgement of the consultant is thus due to the triptych presented above.

As a consequence, the ruling of this sector of activity is achieved through market mechanisms and hence, ultimately, the clients. These latter thus acknowledge ex ante the competence of one or the other consultant. This recognition must be confirmed by action. The consultant is also acknowledged by evidence she/he mobilises and by the arguments she/he produces.

In this perspective, codification is omnipresent; it is the consultant’s action. It is operated through several means: by causal schemes, demonstrations, various graphic processes, quantitative studies, etc. The codified elements produced are the property of the client and become his/her own tools. The quality of works achieved in turn confers recognition whenever the ac-

tual results match the expected ones. This recognition takes the shape of wages or of additional missions. One must not overlook that the codified elements produced remain immaterial assets that will constitute evidence either of successes or of failures of the consultant.

The expert’s recognition can be partly built out of the described triptych, but also out of specific parameters.

- *Word of mouth*: having by definition few experts by domain, their recognition and promotion is achieved through largely implicit processes. As is the case in medical or legal domains, a list of accreditation of experts does not exist.
- *Personality*: by contrast with the consultant, the ‘order-giver’ in the case of expertise selects above all a human being. We do not dismiss the fact that some choices are made according to a famous trademark, but the charisma of the individual is equally important. This personality is determined by the features of the expert’s discourse. Three main features appear according to Jaillet (1998). First seriousness, stability and synthetic competencies of the expert. This corresponds to his/her professional identity. Second, the expert must have a particular sensitivity and feelings. Third, is the expert’s capability to create logical and relevant arguments about complex and unusual problems.

These three characteristics are also taken into account for the consultant but at a lower degree. The expert being commissioned for complex tasks, the perception of his/her professional identity is paramount. It allows him/her to be someone that can be trusted. It will be his/her responsibility to turn this presumption into a certainty.

- *Academic recognition*: by contrast with the consultant, this kind of legitimacy is necessary to the expert (cf. supra).

In the domain of management consulting, consultants and experts are acknowledged and selected by uncoded processes (informal procedure). Their legitimacy is mainly built through market mechanisms. There are no state or professional organisations to give them a label and thus a kind of recognition. The studies and interviews allowed us to clarify several key features. We however assume that some others may exist. These elements highlight the subjectivity of the identification of experts. Although processes of iden-

tification of experts might exist within large organisations, this is not the case for small businesses.

3. Empirical material

3.1. General presentation

This paper stems from TIPIK, a European funded research project on codification of knowledge. In such a framework, our questioning was the following: “given the growing importance of codification of knowledge and use of ICT as means to make this knowledge virtually available to anyone, is there any room left for individuals endowed with specific skills and knowledge?” Consulting firms then seemed to be relevant places where to find such individuals. The authors thus decided to undertake several interviews in this realm of activities in order to better understand the role they play in the current economy and how this role was carried out. From these interviews, it appeared that two main dimensions were to be considered: the internal management of knowledge as it is carried out in such organisations and the relationships with the environment considered from a knowledge-oriented standpoint.

We carried out seven interviews of individual working in management consulting firms. Although this is clearly not enough to statistically back strong theoretical assertions, it nonetheless allowed us to propose some insights that could be further investigated. More precisely, there are two usual ways to link empirical and theoretical dimensions of an academic work (Thietart, 1999). Either one tries to ground a previously built theoretical framework empirically, or one tries to infer a conceptual formalisation from a data collection. Our process has been somehow looser than either of these two possibilities. Given the nature of the material collected (semi-opened interviews) and its relative small amount, the empirical work played for us a particular role. On the one hand, it served as a filter through which the literature was assessed according to its relevance to the observations. Moreover, it served as an articulation of the different bodies of literature. On the other hand, the relevance of the thoughts expressed by the different persons interviewed provided new insights that allowed us to develop new ideas or to link ideas in an original (at least for us) way.

We thus fully acknowledge that in its present state our work lacks more thorough empirical grounding and that, in turn, this empirical study should lead to deeper theoretical developments. However, we believe that our study provides a first set of proposals regarding knowledge workers, their behaviour and their role in the current economic environment.

Consulting activity is essentially based on the capacity of specialised companies with highly qualified staff to solve their clients’ business problems. They are occasionally asked to carry out specific missions inside the firm in order to advise decision makers involved in a complex business environment. Decision makers, as clients, expect them to bring *new knowledge* as inputs for the firm decision-making process. In this sense, as far as consulting activity is concerned by business problem solving, we are basically facing people whose profession is to create new knowledge for organisations. In addition, by the very nature of their activity consultants hold key positions in several sectors. This is much more true for large consulting companies which regularly conduct important missions within several industries and large firms.

As a particular field of consulting activity, management consulting obeys the same principle. These firms directly receive assignments from their clients and deal with a large set of management problems (benchmarking, re-engineering, organisational problems, market studies, human resource troubles, etc.). The expected output of their work is usually intellectual services of high quality, i.e. practical methodology for work process, strategic diagnosis of the organisation, specific training programmes for employees, new ways of thinking the business and so on. The range of their missions thus includes a large set of managerial situations which evolves over time following firms’ needs. This also implies a large set of services proposed to their clients. For instance, in France, consulting companies specialised in human resources management propose over 20 types of services ranging from “individual coaching” to “organisational design” and “organisational change management” (Cabin, 1999).

A careful examination of consultants’ missions leads us to distinguish the following categories of professional function:

- employee training;
- reduction of uncertainty/supporting decision makers;

- diagnosis and judgement;
- organiser (implementation of workshops with employees);
- theoretician (understanding complex phenomena);
- relay agent (linking top management to the whole organisation).

The different interviews can be divided into two categories: (1) consulting firms that favour standardised solutions that can be re-employed a great amount of times thus seeking economies of scale and (2) firms that prefer implementing customised solutions invented for each specific mission.

The empirical studies⁴ can be organised along two dimensions. First, consulting firms can be characterised by the way they manage their internal knowledge (Hansen et al., 1999). Second, two categories can be identified, following the relationships and the services consulting firms provide to their clients, according to the framework displayed above.

3.2. *Internal knowledge management strategy*

The conduct of the interviews led us to differentiate two main forms of knowledge management and capitalisation in consulting firms. A first group of firms, gathering firms F and G, achieve a capitalisation of knowledge through codification processes and extensive use of internal means of diffusion, namely, intranets and databases.

Firm F has implemented a method of collecting and spreading knowledge. A wide-range knowledge management programme has been set up in firm F started in the last few months. Instead of archiving all documents in a librarian style, the knowledge management task force chose a hierarchical classification of documents according to their features, in order to facilitate their collecting and diffusion.

Firm F taskforce has conducted a marking of each working paper, on the basis of the degree of their potential use. To do so, the team must identify the persons potentially concerned with the document and also appreciate the value of the document, in terms of target audience and informational value.

One must not be misled by the method of marking documents. It is not designed to restrain the diffusion of the documents. On the contrary, it aims at multiplying the chances that the right person gets the right document, thanks to an intelligent archiving of documents. A second step is to appreciate the degree of information entailed by the document. The task force counts the number of times a document has been read by members of the population evaluating this way the value of this piece of knowledge.

Firm G has almost the same internal strategy of knowledge management. For such a firm's strategy of capitalisation, the use of an intranet is paramount. A network of agents throughout the world work on the formalisation of knowledge about a given domain and the processes of the firms in that domain. A virtual group models the processes of the client firms. Processes are divided into actions gathered under the label global best practices (GBP). The aim of these GBP is two-fold. On the one hand, they are set to train the junior consultants. On the other, they are used for benchmarking.

The sum of all knowledge accumulated by consultants is stored in a 'knowledge space' (the intranet). This knowledge space is used for feeding consultants' work with previous experiences and, at a higher level, to create the GBP (there is thus a work of formalisation and compilation made by the virtual group mentioned above based on the knowledge space).

The second group of firms gathers firms A–E. Those firms have in common the same mode of knowledge capitalisation. They mainly use informal methods to collect their experiences. Indeed, the collecting of knowledge and know-how is carried out from electronic or paper documents, without gathering these documents in a structured information system. They thus favour informal and direct exchanges from consultant to consultant to diffuse knowledge. Codified pieces of knowledge serve as a basis for these exchanges, nonetheless tacit knowledge plays the central role in interactions. These practices are a priori pertinent and efficient since these different firms are

⁴ Studied firms are named with the following seven conventions: (1) firm A, a small consulting firm (10 employees) specialised in management and quality; (2) firm B, a medium-sized firm specialised in management and marketing strategy; (3) firm C, an individual consulting firm specialised in operation and process management; (4) firm D, a medium-sized consulting firms specialised in management and quality; (5) firm E, an individual consulting firms specialised in knowledge management; (6) firm F, one of the Big-5 international consulting firms specialised in accounting and management; (7) firm G, one of the Big-5 international consulting firms specialised in accounting and management.

all small or medium-sized. Only reports from missions have a common shape, the other relationships are not based on formalised patterns. This is consistent with what Hansen et al. (1999) call personalisation.

Two internal strategies of knowledge management have been outlined. The first one focuses essentially on the codification of experiences gained through missions worked out for clients and on their structuration in information systems. The second one is essentially based on the personal capitalisation made by each agent. A second distinction can be made among these firms, based on their ability to deliver a knowledge product to their clients.

3.3. Relationships with client firms

The selection of a consulting firm by an organisation is made in several ways. The first selection criterion is the size and the reputation of the consulting firm. Firms F and G fall within this category. Those consulting firms are chosen by clients thanks to their image as international firms. By contrast, firms A–E are chosen by clients that heard about them by words of mouth and through their belonging to a given context (a geographic area, a sector of activity, etc.). Thus, relationships between clients and consulting firms are different in nature. The first category (i.e. F and G) have an industrial approach of their activity, whereas the second type see their activity much as a work of proximity.

Two kinds of answers to problems arising in client firms are made evident in the interviews. The seven

firms studied share the fact that their employees carry out consultant jobs. In most cases, firms bring standardised and experienced solutions to the problems faced by their clients. Only some of them display the expert's ability to handle complex problem solving activities. In this latter case, solutions cannot be standardised. In this perspective, the relationship with the client tends to be more personal.

Considering the mode of social recognition of a consulting firm activity, two different processes apply, depending on the nature of the firm. In the case of the big consulting firms, their competencies and skills are acknowledged through the medium of their brand name, and through the academic credentials of their members. For the more 'artisanal' consulting firms, their social value is acknowledged through two ways: (1) through the academic and professional publications of their members and (2) through the reputation gained from recommendations from previous clients.

In the course of his/her activity, a member of a consulting firm of the second type does not resort to specific abilities that the customer does not hold. His/her activity can better be described as the linking of internal and external expertise. She/he does not apply a pre-defined aptitude to the situation, except for very standardised cases, where a package has already been designed inside the consulting firm (for instance, technology-related problems: year 2000 bug, switch to Euro accounting, etc.). The consultancy process then requires a capacity of thinking by analogy with reference to past experiences. It also requires a comprehensive attitude consisting of adapting to the precise problem under review. The whole process can

Table 1
Main results drawn from the empirical study

	Firms providing standardised solutions typology A (firms F and G)	Firms providing customised solutions typology B (firms A–E)
Internal knowledge management	Codification	Personalisation
Dominant type of knowledge	Codified knowledge	Mix of tacit and codified knowledge
External relationships		
Selection	Brand mark, international reputation	Proximity reputation, trust
Output	Standardised and rationalised processes Address well-identified issues	Standardised processes Ad hoc solutions
Situations in which they are called		
Usual situations	Consultants	Consultants
Unusual situations		Experts

only be handled by experienced consultants, who master enough frameworks and several intellectual markers to be able to understand new situations. The agent then conducts a process of cognitive regeneration of past experiences, faced with a new situation. Hence, expertise can be characterised more as the (re)creation process than the application of a specific knowledge. The main results presented are summarised in the Table 1 inspired from Hansen et al. (1999).

Drawing upon the theoretical framework displayed in Section 2 and the empirical report of Section 3, it is now possible to draw a synthesis of the two and to carry the analysis further by introducing two new concepts: (1) epistemic communities and (2) communities of practice. The aim is to sharpen the distinction between experts and consultants by grounding these concepts in a larger framework.

4. Cognitive typology

4.1. Capitalisation (*internal knowledge management*)

To the extent that consultants and experts are dealing with numerous experiences, it is necessary for their firms to be able to capitalise them and to get rid of their idiosyncratic dimensions (that is to objectify them). As Robertson and Swan (2000) and Starbuck (1992) put it, the management of these highly autonomous knowledge workers requires a delicate balance between a level of formalisation necessary for co-ordinated actions and low levels of formalisation required to facilitate knowledge work processes. It should be noted that consultants and experts remain particular workers, more autonomous and having a larger latitude in their functioning.

According to Kelley (1990), this point suggests that knowledge workers are in fact ‘gold collar’ workers enjoying superior employment conditions compared to more traditional blue and white collar workers. In addition, typically management within KIF is also faced with an innately uncertain and equivocal environment in which establishing and monitoring efficiency criteria is problematic. The time and resources required to produce successful outcomes from knowledge work processes can never be accurately estimated as the process itself (knowledge creation) is inherently unpredictable (Robertson and Swan, 2000). The major

tensions that exist within many knowledge-based firms therefore are between: autonomy versus control and efficiency versus uncertainty. These tensions need to be addressed and mediated by management if the firm is to sustain its competitive position over time.

These elements entail that consulting firms hold critical immaterial assets (intellectual capital) and therefore the recruitment and management of the workforce can be considered as critical strategic issues (Alvesson, 1995). Lowendhal (1997) suggests that the top management must centralise decision-making processes to some extent. Moreover, their autonomy implies that experts and consultants must be co-ordinated and always integrated through the means of knowledge basis maintenance.

We have found out in our interviews that in order to stabilise knowledge of both consultants and experts, the top management had to implement processes known throughout the firm and to make sure that they were actually used. According to our findings and consistent with Hansen et al. (1999), these processes are of three kinds.

The first strategy as exemplified by firms F and G in our classification is codification of knowledge. In that case, the consulting firm implements and feeds a knowledge base on an intranet in which each of its members can search and stock knowledge. In this way, the consulting firm possesses a universal and globalised system, taking into account the local specificity, cultures, sectors of activity, etc. ‘Cyberbas’ (Nonaka and Konno, 1998; Creplet, 2000) can then exist and are places of knowledge exchanges. Knowledge is here mainly explicit and tangible. In other words, knowledge is de-contextualised and can be exploited by any firm around the world. For such systems to function, particular knowledge workers must exist: knowledge carriers between consultants and the organisational memory (intranet). Their function consists of gathering and processing available knowledge to diffuse it throughout the firm. They are not mere archivists, but rather real converters of tacit and explicit knowledge into codified knowledge exploitable by the whole firm. They can operate conversion modes such as externalisation and combination (Nonaka and Takeuchi, 1995; Nonaka et al., 2000). According to Nonaka et al. (2000), “externalisation is the process of articulating tacit knowledge into explicit knowledge. When tacit knowledge is made explicit, knowledge is crystallised,

thus allowing it to be shared by others, and it becomes the basis of new knowledge. . . . The successful conversion of tacit knowledge into explicit knowledge depends on the sequential use of metaphor, analogy and model". In view of Nonaka et al. (2000), the step following externalisation is combination. "Combination is the process of converting explicit knowledge into more complex and systematic sets of explicit knowledge. Explicit knowledge is collected from inside or outside the organisation and then combined, edited or processed to form new knowledge. The new knowledge is then disseminated among the members of the organisation".

Within this first mode of knowledge capitalisation, a codification process is obviously operated. It is based on a language common to all members of an organisation, on translation and recombination of different best practices identified by the clients. It appears that the consultant integrates local jargon, local practices drawn from many different firms. By dragging them into a universal database, she/he sparks a conversion process. The codification process that occurs incorporates articulated explicit knowledge as well as inarticulated tacit knowledge (Ancori et al., 2000). Nonetheless, the consultant can hardly access too inarticulated, tacit knowledge embedded in individuals or groups. Thus, whatever the kind of codification operated, it entails a deterioration of knowledge. Codification however allows the spanning across cultural and managerial boundaries through the setting of a sort of meta-language or meta-code.

Codification in this first case, although not overcoming these different constraints, gives a global language to the consulting firm. Consultants have access to a continually enriched knowledge worth trans-nationally and trans-culturally. This codification is a lever for efficiency and action; it is a sort of economic intelligence in the sense that the consulting firm holds an immaterial asset that allows it to activate knowledge and solutions swiftly.

Once activated, this knowledge will be carried by other consultants; new interpretations of these codified products emerge; they merge with the culture of the individual or the organisations using them. A kind of internalisation takes place; the consultant uses these codified elements as tools for his/her missions.

Gains are thus multiple: better financial profitability (at a given cost, the consultant spends less time or

mobilises a smaller number of colleagues), enhanced competitiveness, a better and quicker access to adapted knowledge.

Although these processes function with regard to consultants, they appear more difficult to apply in the case of experts. The consulting firm must manage to capitalise some of their knowledge and, at the same time, more traditional publications.

The risk inherent to this codification process takes several shapes (Foray and Lundvall, 1997a). First, there is the risk of a loss of capitalised knowledge; second, the non-diffusion of certain practices; lastly, a low return of investment on codification costs.

These practices can be implemented within large firms but are difficult to set within small structures, either regional or national. A critical size is necessary for efficient codification. Therefore, for medium-sized structures, a risk of de-invention or loss of parts of their competence might exist if senior consultants leave the firm.

The second strategy is personalisation. For example, by contrast with firms F and G, the objective of firms A and C is totally different: the aim is not to capitalise knowledge under digital forms, but to implement a 'know-who' system about who holds knowledge and competence about a given domain. By using his/her 'know-who' the expert is able to build a network at a given moment in time to answer a particular problem necessitating a critical size of competencies. Knowledge exchanges between consultants will be more based on face-to-face meetings in groupware systems (Ciborra, 1996) or video-conferences. In this case, the firm mainly relies on the consultants' capability to transmit their knowledge without personal strategies. Codification however still exists in that case but it is not institutionalised. Consultants must be able to share their reports on codified supports with their colleagues but not as intelligent knowledge-basis as presented above. This mode of capitalisation and exchange relies more upon the expert; she/he can more easily transmit certain of his/her 'best practices' and successful experiences to the other members of the firm. Nonetheless, she/he will still hold unarticulable and uncodifiable knowledge.

In that case, codification is also very much used (as in the first case), but the leadership of the consulting firms using the second mode acknowledges the idiosyncratic knowledge of experts and the

non-codifiable nature of some individual knowledge on which they rely.

Finally, the last strategy available is a mix of the firsts two ones. The interviewed expert from the firm B pointed out this possibility. They privilege rather simple codification and capitalisation systems and the organisation of meetings on a regular basis during which knowledge is exchanged. These systems appear nonetheless really efficient. However, these firms being medium-sized (under 100 employees), it is problematic to envision to implement these practices universally.

Because of the specificity of their knowledge workers and of their ways of dealing with knowledge, consulting firms display a particular organisational structure. Many researchers suggested that specific structural conditions, in particular organisational configuration, are a critical factor in firms where innovation and problem solving are a conscious strategy (Mintzberg, 1983; Starbuck, 1992; Alvesson, 1995; Grant, 1996). These commentators suggest that the operating ad hococracy (Mintzberg, 1983) is the most appropriate configurational archetype. The ad hococracy de-emphasises the hierarchical structure and, instead, call for a dynamic organisational structure based on self-forming project-teams, decentralised decision making and little formalisation.

Crucially, Mintzberg suggests that in the absence of a formal hierarchy, control needs to be based on professionalism and on the development of strong consensual cultural values. Hence, there is a suggestion here that the tensions between organisational efficiency and individual autonomy can be mediated by the development of a strong organisational culture that promotes the development of normative (cultural) control which serves to both self-discipline and integrate individuals within these typically highly informal organisational environments (Cremer, 1993).

The various modes of capitalisation and diffusion of knowledge inside KIF are meant to make clients benefit from knowledge proved valuable and, in the case of experts, to make new knowledge emerge. The consultant thus appears in this new economy as a highly autonomous intermediate agent looking for the best combination of knowledge to sort a particular situation. With his/her clients, she/he creates a form of bilateral relationship (of which the 'client' is not necessarily conscious) each of them benefits from them,

learn, learn how to learn, etc. In that context, network externalities appear and grow, stemming from codification.

Economics of knowledge through consultants can be identified with the concept of 'glocalisation' (Guilhon et al., 1997). Indeed, by capturing knowledge in a given place (local) and diffusing it inside his/her firm that can be international for the biggest consulting firms (global) and adapting it to specific needs (local), the consulting firms blur the notions of space and time.

Such KIF are thus knowledge catalysts, one of the cornerstones of the economics of knowledge. Moreover, these firms possess a certain number of experts. These experts by dealing with codified knowledge (free of context) act heavily on this economy. Thus, in such an economy, evolving towards virtuality, KIF are central.

4.2. Outcomes (relationships between consulting firms and their clients)

Experts and consultants are knowledge workers and their function is to provide or modify behaviours of firms. In the new context constituted by the paradigm of the economics of knowledge, the most important behaviours that are to be considered are the cognitive ones. Indeed, in that case, the most important asset of the firm is the knowledge it holds and the way it uses it. Hence, the outputs of consultants' and experts' activities will be cognitive in nature and will interact with the knowledge structure of the organisation they intervene in. Thus, to evaluate the impact of the intervention of consultants or experts in a firm, one must first analyse the firm from a cognitive viewpoint. To do so, we use the concepts of 'epistemic community' and of 'community of practice'.

These two concepts help to view the firm as a set of learning loci with and among which consultants and experts play their role in the cognitive evolution of the firm. Indeed, the actual process of production and circulation of knowledge within the firm is the cornerstone of the formation of organisational learning. We assert in this perspective that the tendency towards a knowledge-based economy and the related intensive use of new ways to communicate and exchange knowledge will contribute to enhancing the role of the two specific communities: (1) epistemic communities and

(2) communities of practices, in the formation of organisational learning and knowledge creation within the firm. In this respect, we agree with Gibbons et al.'s (1994) statements that a new mode of knowledge creation emerges which, in our view, stems from the interactions between these two kinds of communities (Cohendet et al., 2000).

The concept of “epistemic communities” has been developed noticeably in the realm of international relations (Haas, 1992; Adler and Haas, 1992).⁵ Using this concept to address the issue of codification of knowledge, Cowan et al. (1998) suggest that any codification activity implies the existence of codes that are understandable by the communicating actors. Following this approach, an epistemic community may then be concretely defined as a framework within which codification can occur. The concept of “communities of practice” was introduced by Wenger and Lave (1990) who, by focusing on individuals' practices, identified groups of persons engaged in the same practice, communicating regularly with one another about their activities.

The key point lies in the way knowledge is created in these two kinds of communities. In epistemic communities, knowledge creation lies at the core of their activities. By contrast, communities of practice focus on their practices (as the name indicates). Knowledge creation is thus an unintended spill-over and is by no means the main focus of this latter type of community.

4.2.1. *Communities of practice*

The members of communities essentially seek to develop their competencies in the practice considered. Communities of practice can then be seen as a means to enhance individual competencies, they are oriented toward their members (Lave and Wenger, 1990; Brown and Duguid, 1991). This goal is reached through the construction, the exchange and the sharing of a common repertoire of resources (Wenger, 1999).

Wenger (1999) and Brown and Duguid (1991, 1998) state that self-organisation is an essential characteristic of communities of practice. According to Lesourne (1991), self-organisation is the ability of a system to acquire new properties by organising itself or by modifying by itself its own organisation. Self-organisation confers to the system an adaptive ability to evolve without any constraint of authority or any determinism. The system is then autonomous and sets a boundary with respect to the other functions of the firm. It creates a sort of ‘organisational closure’ in the terminology of the theory of self-organisation. This idea is important since it underlines the cross-functional nature of communities of practice within the firm.

More precisely, autonomy and identity of communities, the key characteristics of self-organisation allow for collective acquisition and processing of stimuli from the environment (Wenger, 1999; Dibiaggio, 1998). Identity and autonomy are essential for the agent to define himself/herself with respect to his/her environment and for the members of the community to behave collectively.

Self-consciousness is also visible in the mutual commitment of the community. It is built around activities commonly understood and continually renegotiated by its members. A community's member feeds it with his/her experience and, in turn, relies on the knowledge capitalised by the community to carry out his/her activity. These processes take the shape of ‘war stories’ (Brown and Duguid, 1998) that members tell when they gather. They develop a jargon understandable by the members only. It is thus a mutual commitment that binds agents in a social entity, ensure cohesion of the community and recruitment of new members.

Wenger and Lave (1990) interpret the practice of these communities as the vector of learning, that is in turn the building of an individual entity. Hence, the evaluation of an individual is made by the community of practice as a system and is focused both on the values adopted by the individual and on the progress made in his/her practice, the two being co-constitutive.

Within communities of practice, the privileged knowledge is thus essentially the know-how (Brown and Duguid, 1991), which is tacit and socially localised. The nature of knowledge is due to the objective and the structure of the communities of practice. As a result, the community tends to send

⁵ Related concepts are also to be found in sociology of science. In this domain, one may mention Barber (1952) who asserts that scientists tend to create self-regulated communities and Knorr-Cetina (1981) who developed the concept of scientific communities. One may also quote Beyssade (1998) who studies linguistic and, in this field, uses the notion of epistemic community and stresses the importance of a common language as a cement for such communities.

no messages toward the outer world. Messages are almost exclusively exchanged among the members of such a community.

4.2.2. *Epistemic communities*

Epistemic communities can be defined as small groups of ‘agents working on a commonly acknowledged subset of knowledge issues and who at the very least accept a commonly understood procedural authority as essential to the success of their knowledge activities’ (Cowan et al., 1998). Epistemic communities can thus be defined as a group of agents sharing a common goal of knowledge creation and a common framework allowing them to understand this trend. Hence, the goal of epistemic communities is simultaneously outside and above the community’s members.

What defines a community is the existence of a procedural authority that can be explicit or not. However, it must be different from the kind of authority held by a guru to ensure a certain autonomy of the members. Moreover, the procedural authority conveys the idea of progress toward the cognitive goal set by the community. The belonging of members will thus be evaluated with respect to this procedural authority. It should be noted that this procedural authority can a priori emerge from the interactions among members. In that case, the organisational closure is either realised, or imposed from the outside and then not realised. In the former case, the epistemic community will be self-organised and then close in this respect to a community of practice. This remark is important since it shows evidence of the possibility for one form of community to evolve into the other.

Within an epistemic community, agents are bound together by their commitment to enhance a particular set of knowledge. The recruitment rule is thus defined with regard to the contribution an agent makes to fulfil this goal (this goal is likely to be partly given and partly emergent: Blackler and McDonald, 2000).⁶

Epistemic communities are structured around a goal to be reached and a procedural authority endowed

by themselves (or with which they were endowed) to fulfil that goal. Notions of autonomy and identity are weaker than in the case of communities of practice, thus favouring the group’s creativity (Kao, 1998; Leonard-Barton, 1995). In this way, the community increases its ability to seize future opportunities. This form of organisation furthers knowledge creation by favouring the synergy of individual varieties. We find here the principle of ‘required variety’ stated by Ashby (1956). Individuals accumulate knowledge according to their own experiences. The quality of this knowledge depends on two factors. The first is the variety of individual experiences in interaction. The second factor is the ‘knowledge of the experience’. This is consistent with the idea of a rational ability of experience feedback within which validation is made according to the procedural authority: what is evaluated is the contribution of the agent to the cognitive goal with regard to the criteria set by the procedural authority.

Because of the heterogeneity of the agents, of the objective of knowledge creation for the sake of knowledge creation, of the lack of deeply shared values, it appears that the knowledge creation mode is much like a form of externalisation (conversion of tacit knowledge into explicit knowledge) in the sense of Nonaka and Takeuchi (1995). The first task of epistemic communities is thus to create a ‘codebook’. Hence, knowledge circulating within epistemic communities is explicit (but not codified since it remains mainly internal to the community: Baumard, 1999).

According to the authors, the consultant mainly has to do with communities of practice. Indeed, according to the empirical data collected, the consultant intervenes in the firm at the level of the operating structure and not at the level of the strategic and decisional one as the expert does.

During his/her professional life she/he gathers experiences, she/he observes various practices and learns to speak different languages spoken in various communities of practice. These different skills allow him/her to act as a translator between communities of practice. A translator is a person who gained experiences in a given field, but also has the capability to adapt his/her knowledge to the different milieus she/he has to interact with (Brown and Duguid, 1998). The experience of the consultant is the synthesis of the ‘best practices’ she/he encountered during his/her missions. She/he is then able to transfer them from one locus to the other.

⁶ Epistemic communities emerge in uncertain context calling for the creation of a new paradigm (which is not the case for communities of practice) (Haas, 1992). We are then close to the community of young researchers overcoming the old paradigm in the theory of Kuhn (1962).

Because of the self-organised nature of communities of practice, the consultant can neither create them nor act upon them. However, she/he still can bring them new know-how or at least the means to gain this know-how. These means are actually the knowledge she/he gathered from his/her interactions with various social contexts (communities) and that she/he codified. This codification process gives him/her a product that can then be carried from one place to the other. This codified product is a means for a community of practice to evolve in its activity (Cook and Brown, 1999). She/he is in this respect an actor of codification. Moreover, given the output she/he provides, the evaluation of his/her activity is easily made by the client and by his/her hierarchy.

However, virtuality and new communication and information technologies may jeopardise the consultant's role. Indeed, with these new tools, communities of practice now can by themselves go outside to interact with either communities of practice belonging to the same international firms or communities from another firm or even domain. They are thus able to share knowledge and best practices without resorting to consultants. The role of diffuser held so far by the consultant can now be handled by the community itself and his/her role does not appear as essential anymore as it used to be.

With respect to the interactions with a firm, the expert is radically different from the consultant. Because, his/her particular cognitive skills are to spark new knowledge, to provide solutions to unknown situations, she/he has to deal with epistemic communities. His/her activity with epistemic communities is two-fold. Either she/he turns a community of practice into an epistemic community (or at least makes a community of practice tend towards an epistemic community) or she/he relies on an epistemic community to work out a solution.

One can define several levels at which the expert plays a role. These are the inter-disciplinary and the trans-disciplinary levels. Inter-disciplinarity is the expression of a need to establish a co-operation between autonomous disciplines to widen the understanding of a particular domain or to reach a common objective. Inter-disciplinarity thus jumps over boundaries of domains and questions the methods and materials of the various intellectual practices. In this way, problems hidden by the point of view adopted by es-

tablished disciplines can be revealed. However, although inter-disciplinarity spans the boundary of each domain, its finality remains embedded in disciplinary research. By contrast, trans-disciplinarity deals with what is between disciplines, across different disciplines and beyond all the disciplines. In that sense, trans-disciplinarity and disciplinary research are complementary.

Mutatis mutandis these considerations fit with what occurs within a firm if it is envisioned as a set of communities. Hence, consultants intervene at the 'disciplinary level' in communities of practice (nonetheless keeping in mind that these communities are practice-oriented), whereas the expert interacts with 'inter-disciplinary' teams (epistemic communities) since the outcomes of these communities will be scattered in the different communities of practice and hence modify the disciplinary patterns. But the expert also acts at a trans-disciplinary level in that the epistemic community aims at producing knowledge that is above the members of the communities and thus above the disciplines members come from.

Besides, and for the trans-disciplinary outcomes to be effective, the expert has to be a link between the top management of the firm and the epistemic community that has carried out the problem solving process (Haas, 1992). His/her task is in that case to convince the top management of the value of the results of the epistemic community. To do so, she/he must possess the 'strategist's knowledge' (Hatchuel and Weil, 1992). This particular knowledge reflect the ability of an individual to evolve in an ambiguous environment and to manage to co-ordinate the various forces at stake in this environment. This is also the kind of knowledge labelled '*metis*' by Baumard (1999). It is this concrete, oblique knowledge used in action to cope with a complex and uncertain environment. The evaluation of expertise, by contrast with the one of the work of the consultant, is thus highly subjective and depends fully on the CEO's reaction.

Lastly, at this stage, codification plays an important role. Indeed, once the top management is convinced of the value of the outcomes provided by the maieutic process, the next move is to diffuse this new orientation to the enterprise as a whole. In that case, codification is the best means to reach this goal by operating what Wiley (1988) calls 'generic sense making'. Generic sense making links individuals to

institutional issues. The next step would be an internalisation by all members of the new vision, but this first codification process remains however necessary in order to reach a certain level of homogeneity quickly.

To sum up, both the consultant and the expert play an important role in the cognitive development of the firm. The consultant acts at an operational level and works at enhancing the day-to-day practices of the firm. But beyond that, what she/he actually does, is to maintain and make the core competencies of the firm evolve. His/her part thus should not be underestimated. The expert's role is to participate, through a maieutic process, in the evolution of the more global strategic vision of the firm by working out together with epistemic communities new knowledge and thus new representations and beliefs of the firm at a global level.

5. Conclusion

The theoretical and empirical studies carried out to understand the feature of the expert in the domain of management consulting led us to identify another form of actor: the consultant. These two actors intervene in firms, organisations of all sizes in order to help these organisations to improve their behaviour, to implement better tools, to solve critical issues, etc.

According to the definitions we set, the expert intervenes mainly in unusual situations and operates a relatively new panel of knowledge; the consultant, by contrast, acts more within missions where standards solutions fit the forecasted project.

From there, we described, within a cognitive perspective, the specificities of each of them. To do so, we introduced the notions of 'knowledge worker' and KIF. These two actors are indeed knowledge producers, knowledge carriers, and the structures employed by them are of their own, loci of knowledge and information exchanges, creation, capitalisation and modification.

It thus appears that the consultant and the expert develop various learning processes in their respective practices and that they use, produce, etc. specific forms of knowledge. In addition, the expert, unlike the consultant, must call into play such notions as creativity, imagination, and articulation of knowledge through arguments. The consultant and the expert, in the realm

we analysed, are thus different in nature. Although we acknowledge that some consultants could be specialist consultants, a boundary however separates these two kinds of actors.

We also addressed the question of determinants of the recognition of these two actors. It appears that the recognition, or legitimatisation, of the expert is far different from the one of the consultant in some respects. Whereas the former must display ingenuity, must be acknowledged through academic modes and through successful complex experiences, the mode of recognition of the consultant is different since his/her recognition relies on the reputation of the firm employing him/her and on a number of standard parameters (e.g. diplomas). Lastly, we underlined the importance of the personality of the expert as key element in his/her legitimatisation.

The consultant and the expert produce knowledge in their firms and in the clients' ones. Several modes of capitalisation of this knowledge, of organisational memories, have been described. The production of these actors takes the form of codified outputs, but the capitalisation processes are not so uniform. We identified three types of possible capitalisation: one form was based on codification, relatively hierarchical and universal, another form based on personalisation entailing a kind of interactive organisation, and lastly a mix of the two.

In each of these cases however a preliminary stage of codification remains necessary to allow the firm to keep immaterial assets gained from experiences. From this stage, the strategy varies with firms and exchange methods, enrichment, diffusion, etc. rank from fully codifying knowledge to keeping large amounts of tacitness.

Lastly, we dealt with the outputs provided by consultants and experts respectively to their companies and to their clients. To do so, we displayed two concepts: (1) epistemic community and (2) community of practice. The expert interacts more with the former and sparks creative processes. She/he must then convince the top management of the value of these outcomes thus entailing a change in the overall strategic vision of the firm. The consultant acts within the firm and contributes to the diffusion of 'best practices' and hence to the enhancement of the day-to-day operations.

The existence of consultants and experts in the knowledge-based economy remains relevant

and allows, at various degrees, the constitution of inter-industries, cross-cultural, international, inter-disciplinary and trans-disciplinary links. These particular knowledge workers are actually real knowledge carriers across disparate organisations.

Moreover, the focus on experts, agents holding really specific knowledge, the artist's knowledge and the ability to carry out new knowledge and solutions to unknown situations may well be the limit of codification. In this respect, it is unlikely that devices such as the Internet or expert systems will replace these knowledge creators.

The stakes in terms of structural economic policies cannot be overlooked. In particular, the use we made in this paper of the concept of KIF is consistent with the concept of knowledge intensive business services (KIBS) developed by Muller and Zenker (2001). KIBS can be described as firms performing, mainly for other firms, services encompassing a high value-added. They are important articulations of networks of firms leveraging innovation potential of such networks. KIBS are thus specific KIF acting in the realm of services, and consulting firms are good examples of KIBS. Our results are thus convergent with the ones displayed by Muller and Zenker in acknowledging the importance of consulting firms in the circulation and development of knowledge within networks articulated around such firms. However, whereas Muller and Zenker mainly focus on the regional level, our analysis is complementary to theirs in that we focus on the individuals' scale.

Whereas, during the 30 years following World War II, knowledge was mainly the attribution of certain layers of society and of firms, nowadays, increasingly, thanks to agents such as consultants and experts, knowledge becomes the concern of actors disseminated throughout organisations.

On the one hand, management consulting firms are involved mainly in knowledge codification processes which can be internalised then disseminated between firms. In a certain way they represent knowledge intensive business interactivity which involves communities of practice existing within and among organisations. On the other hand, experts are involved in knowledge creation process which nurture the strategic and organisational thought of epistemic communities very close to the top management. They contribute to the emergence or the concretisation and

transformation of the entrepreneurial vision based on cognitive communities in the firm.

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