

Chapter 4

“KNOWING” IN THE CONSULTING PRACTICE: Exploring Knowledge, People, Context and Tasks in Action*

4.1 INTRODUCTION AND OBJECTIVES

In recent years, the practitioner and academic communities have placed considerable attention on the study and management of knowledge in organisations. Although the study of knowledge has been sustained by different theoretical trends, two main discourses are becoming consolidated in the knowledge management (KM) domain. The first discourse, which is based on *knowledge*, reflects what Tsoukas (1996) refers to as a “taxonomic perspective”, emphasising types and characteristics of knowledge. Adopters of this perspective pay particular attention to knowledge conversions (e.g. Boisot, 1995; Crossan, Lane and White, 1999; Davenport and Prusak, 1998; Gupta and Govindarajam, 2000; Nonaka and Takeuchi, 1995; Myers, 1996; Probst, Raub and Romhardt, 2000). They agree that knowledge, like any other company asset or input, should be captured, stored, distributed and applied. Much of this focus is on the challenge of knowledge transformation since, according to this view, knowledge should be “ready to use”. Only when it is “captured” by the organisation and made

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explicit will it be a competitive advantage. This trend has been the prevalent perspective in the KM field.

So-called knowledge-intensive firms (KIF) have not been an exception, and management consultancies have been pioneers in developing and implementing KM systems that were based primarily on capturing information, making it accessible and/or connecting people (e.g. KPMG: Alavi, 1997; Andersen Consulting: Davenport and Hansen, 2002; Ernst & Young: Chard and Sarvary, 1997; PricewaterhouseCoopers: McCauley, Fukagata, Lovelock and Farhoomand, 2000). These approaches are sustained under the belief that relevant knowledge can be captured and that, once knowledge is captured, it will be made accessible and, eventually, people will act according to the application of that knowledge.

During the last decade, scholars shifted toward framing theoretical approaches focused on sustaining practical initiatives, emphasising *knowing* over knowledge per se (e.g. Blackler, 1995; Brown and Duguid, 2000a; Cook and Brown, 1999; Lave and Wenger, 1991; Newell, Robertson, Scarbrough and Swan, 2002; Orlikowski, 2002). This approach leans on the central consideration of action – practice – and focuses on the coexistence of learning and action and the context in which it takes place. More importantly, context is not a landscape or a container, but a “territory” to travel through. It is a constituent element. Besides, as practice becomes the focal point of attention, the boundaries between learning and knowing become less relevant. Consequently, knowledge and its types are given little or no attention as they are not appreciated as action antecedents.

Learning is not just described as the result of a cognitive process but as a phenomenon that derives basic properties from its context. In other words, learning is situated (Lave and Wenger, 1991). Practitioners have echoed these theories and KM approaches were increasingly based on social approaches, fostering communities of practice in the organisation and paying special attention to organisational culture (Alvesson and Karreman, 2001).

Drawing on the study of knowing and practice as a reference, this chapter will explore the following issues and questions:

- The relationship between practice and knowledge goes on being a source of debate – how do we engage in action and its relation with knowledge as we proceed?
- The current “knowing” discourse has dedicated little or no attention to knowledge, which has prevented researchers from studying the interaction between different knowledge types and knowing. What is the role of different types of knowledge in organisations, how are they articulated in practice, and what are the key knowledge dynamics in action?
- To what extent do organisational elements exert an influence on the relationship between knowledge and action? (e.g. organisational structure, see Lam, 2000; characteristics of practice, see Schon, 1983).

The chapter will explore these issues through an in-depth case study of AKUA¹⁷, a global management consulting firm. However, before delving into the empirical study and our description of “real” practitioner work in the KM arena, the discussion clarifies the main theoretical aspects considered, along with the research setting and methodology. The chapter concludes with a preliminary examination of our findings and the implications on how we think about knowledge management.

¹⁷ AKUA is a pseudonym of the actual participating company.

4.2. THE STUDY OF PRACTICE, KNOWING AND BUNDLES OF KNOWLEDGE

A practice-based discourse has increasingly been adopted by many scholars in the KM domain. However, one of the main problems we face is that the terms “knowing” and “practice” are unclear. Indeed, many authors present their work based on the study of “knowing” and “practice” without defining the terms or blurring them in their research (e.g. Atherton, 2003; Lanzara and Patriotta, 2001; Shin, 2001). Table 13, for example, illustrates the different ways in which these concepts have been used.

Based on an analysis of these definitions, a number of observations can be drawn. First, all the authors agree that knowing and action are interwoven, although the nature of that relationship is not always the same. For instance, some authors argue in favour of an intimate relationship between both terms (e.g. Schon, 1983), suggesting that knowing and acting are mutually constituted. This view challenges the foundations of Cartesian dualism as it sharply distinguishes between mind and body and, more importantly, its natural inference according to which knowledge precedes action. In turn, Schon’s work is indebted to the antimentalist claims of Ryle (1949) who questioned efficient performance on the basis of logical and empirical reasoning and Polanyi (1958) who explored the role of knowledge in relation to action.

Second, some authors stress the fact that knowing implies “relations” (Lave and Wenger, 1991) and/or “interactions” (Cook and Brown, 1999; Orlikowski, 2002). Indeed it is important that in addition to acknowledging the centrality of practice we do not lose sight of the thinking subject (Clancey, 1995) and provide room for epistemological agency. In other words, stressing situatedness does not mean dissolving the agent in the practice; on the contrary, it involves understanding a dynamic interaction between the agent, knowledge and practice and this is only feasible through providing evidence of how knowledge and knowing mutually constitute each other.

Authors	Knowing	Practice
Schon (1983)	<p>“Our knowing is ordinarily tacit, implicit in our patterns of action and in our feel for the stuff with which we are dealing. (...) our knowing is our action” (p. 49).</p> <p>“...we are usually unable to describe the knowing which our action reveals” (p. 54).</p>	<p>“... performance in a range of professional situations” (p. 60).</p> <p>“Preparation for performance” (p. 60).</p>
Lave and Wenger (1991)	<p>“Knowing as activity by specific people in specific circumstances” (p. 52).</p> <p>“Knowing is inherent in the growth and transformation of identities and it is located in relations among practitioners, their practice, the artefacts of that practice, and the social organisation and political economy of communities of practice” (p. 122).</p>	
Cook and Brown (1999)	<p>“ ‘Knowing’ refers to the epistemic work that is done as part of action or practice” (p. 387).</p> <p>“... ‘Knowing’ is about relation: it is about interaction between the knower(s) and the world” (p. 388).</p> <p>“Knowing is to interact with and honour the world using knowledge as a tool” (p. 389).</p>	<p>“... we intend the term “practice” to refer to the coordinated activities of individuals and groups in doing their ‘real work’ as it is informed by a particular, organisational or group context” (p. 316).</p>
Gherardi (2000; 2003)	<p>“Knowing is a collective accomplishment which depends on a range of spatially and temporally distributed local practices lying outside the control of any organisation and within a network of relationships” (2003, p. 352).</p>	<p>“.... practice is a system of activities in which knowing is not separate from doing” (2000, p. 215).</p> <p>“Practice connects ‘knowing’ with ‘doing’” (2000, p. 218).</p>
Orlikowski (2002)	<p>“... knowing is not a static embedded capability or stable disposition of actors, but rather an ongoing social accomplishment, constituted and reconstituted as actors engage the world in practice”(p. 249).</p> <p>“Knowing is an enacted capability” (p. 256).</p>	<p>“When practices are defined as the situated recurrent activities of human agents, they cannot simply be spread around as if they were fixed and static objects” (p. 253).</p>

Table 13 - Definitions of “Knowing” and “Practice” in the KM Literature

Third, knowing is implicit in our actions. Our “doing” is the evidence of that “knowing,” and, most of the time, “knowers” or actors remain unaware of the

existence of this knowing phenomena. Finally, some authors stress the fact that knowing has to do with the epistemic work inherent in action, and therefore “knowledge” is also present and considered. All these perspectives will be considered when we refer to *knowing* later on in the chapter.

Taking into account the different definitions of “practice” that are summarised in Table 13, we refer to practice as the typical situations encountered by practitioners when they are doing “real work” in a particular context framed by time and space. This definition captures some crucial characteristics, which underscore that practice is a group of activities situated in a specific context with historical influences.

Although these authors share a lot of common aspects, their focus differs when studying practice and knowing. For instance, Schon (1983) focuses on the practice of different professionals, comparing the “rational technician” who applies rules and procedures to the “reflective practitioner”. He argues that not only does this practitioner reflect on action, but he or she also reflects *in* action in order to face uncertainty and complexity. This reflection-in-action is a “conversation” with the situation and is linked to the ability of being aware of what is happening and being able to find the best solution in order to achieve one’s purpose or goal. Yet, while Schon’s contribution is key to the study of knowing and practice, his examples are mainly problem-solving situations where the practitioners are able to control certain aspects of the situation. In his examples the practitioners stopped to review or comment on a difficult case or a difficult problem to solve. Then, the context is considered, but it is more of a container than an active player. Schon does not consider how contextual variables affect this knowing-in-action. Finally, Schon’s model is centred in the agent or actor and his activities. Most of his work is based on the study of activities in which a single individual plays a predominant role.

Based on her anthropological studies, Lave (1993) defends a perspective based on situated activity, stressing the role of contextual issues and claiming that situated activity is closely linked with changes in knowledge and action (i.e., learning).

According to Lave, learning, therefore, is ubiquitous in practice and there are difficulties in providing a differential status for knowledge. Lave and Wenger (1991) framed their theory of situated learning and legitimate peripheral participation along these same lines. In contrast with Schon’s theory, Lave and Wenger emphasise contextual and collective aspects, but they stress that the processes by which individuals get an identity in a social web undermine the individual’s capacity. Apparently, it is sociology without an actor or, as Clancey (1995) argues in a very sound way, Laves’ characters “do not think”.

Another group of authors, under the umbrella of activity theory (e.g. Blackler, 1995; Engeström, 1987), also draw attention to knowing and make the activity or practice their object of study – situated in the activity’s historical context.

As noted earlier, while Cook and Brown’s model (1999) is valuable to study the interplay between knowledge and knowing, it is not comprehensive enough as it still places too great an emphasis on the taxonomic perspective, has not been empirically grounded and does not acknowledge an evolving dynamic. This point is well taken by Orlikowski (2002) who offers a framework, drawing out the evolution of the study of “knowing” and the idea of knowing as “enacted capability.” However, her study of practice is solely based on in-depth interviews lacking observation of the actual practice. Also, it is difficult to see how what Orlikowski identifies as “practices” in her empirical work in a specific firm may apply to other organisations. From our point of view, once practice is defined by way of its situatedness, it has inherent contextual and idiosyncratic aspects and may not be broadly generalised.

Drawing on these different contributions, this chapter explores the idea of “knowing“-in-practice. Thus, *situated practice* becomes our object of analysis. Taking practice as our starting point, we will explore “knowing”, without omitting the role of knowledge and the learning that is inherent in it. In examining the relationship between knowledge and knowing, we consider that in practice the combination of different types of knowledge constitutes a “bundle of knowledge” (see Figure 15).

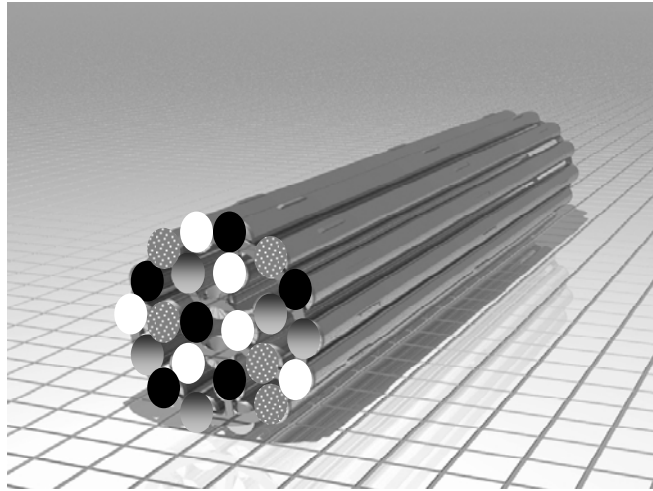


Figure 15 - Bundles of Knowledge in Practice

The chapter explores how this bundle of knowledge is formed, trying to distinguish different variables that may alter this combination. Our hypothesis is that the bundle of knowledge that is used in practice may vary depending on the idiosyncrasy of the practice and the organisational structure where it takes place. As Lam (2000) argues, different organisational structures may foster different types of knowledge: professional bureaucracy sustains the development of individual explicit knowledge, machine bureaucracy fosters collective explicit knowledge, operating adhocracy harbours individual tacit knowledge, and the J-form organisation supports collective tacit knowledge.

Thus, depending on the practice and organisational form, this “bundle of knowledge” can be formed in different ways with potentially different epistemic dynamics. In other words, different organisations may foster or prioritise different types of knowledge. However, not only are types of knowledge affected, but their dynamics in action may also vary. For instance, in some organisations reflection-in-action may be privileged over other forms of epistemic work. Subsequently, organisations are conceptualised as a combination of different types of knowledge with different ways of “knowing”.

4.3. RESEARCH SETTING AND STUDY DESIGN

Our exploration into “knowing” and learning is based on a study of experts and novices involved in the consulting practice of a specific firm, referred to as AKUA. Within this context, the “experts” are the senior managers who have been in their position for at least three years and the “novices” are the individuals who have recently taken on a managerial role. According to the formal organisation, their basic functions are practically identical. While a longitudinal analysis of knowledge development within a group of individuals might be the ideal approach to studying how “knowing” evolves, a comparison between experts and novices enables us to study the interplay between knowledge and knowing that is entailed in a learning situation.

AKUA is a global management consulting firm that delivers industry-focused assurance, legal and advisory services. As an organisation, AKUA is rather hierarchical: there are seven main professional positions and several subdivisions within each group with vertical “ladders”. Once a candidate is hired, his professional career consists of the following steps: junior, consultant, senior consultant, manager, senior manager, director and partner. It is expected that successful consultants will climb as high as possible in the organisation. The research for this chapter focuses on the firm’s advisory and consulting division.

The consulting process starts when a business opportunity has been identified (see Figure 16). A service proposal is written and presented to the client. If the negotiation is successful, the project is internally registered and planning is initiated. At this point, the project is developed. During this phase, agreed deliveries are created and presented to the client. There is also project follow-up and evaluation, with working hours and expenses controlled and registered. Once the work is done, the project is closed and there is a final review and evaluation by the team.

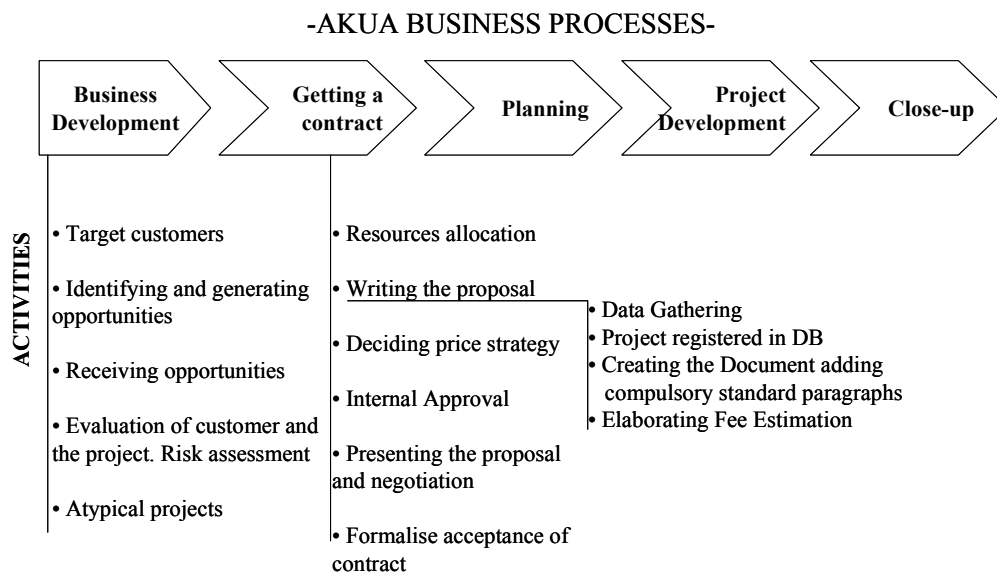


Figure 16 - Standard AKUA Processes

Each project is undertaken by a group of consultants holding different positions, and the members of the team usually vary from one project to another. The different activities of the projects are assigned to the consultants according to their hierarchical position in the company, which reflects AKUA's clear and formalised division of labour.

Our study draws on direct observation and in-depth interviews with the expert and novice consultants. The direct observation is based on data from five consulting projects and their group meetings. After observation, in-depth interviews were conducted to inquire into their practice. Data was collected through tape recordings, the researcher's observation notes, and analysis of company documentation and tools¹⁸ (see Table 14).

¹⁸ In chapter 1 methodological aspects are explained in depth.

Documentation	Archival data
Direct Observation	Five consulting projects: 11 meetings 26 hours of recorded data 22 people Informal conversations Field notes
Structured, in-depth interviews	15 interviews

Table 14 - Data Collection Methods

In this kind of study, having access to direct observation of practice and being able to “follow the actors” (Latour, 1987 cited by Gherardi (2000: 219)) is key. Indeed, practitioners are not always conscious of what they really do and their explanation of their practice may be quite different to the actual practice itself. However, the company gave us limited access meetings and encounters with clients. These are typical situations of practice and quite relevant of the consultant’s practice. We try to solve this situation by asking the practitioners to remember specific meetings with their clients. In order to facilitate the reliving of these moments, we resorted to mediated tools used at that moment (e.g. business proposals presented, a project delivery and so on).

Interviews were conducted according to some guidelines prepared in advance. They were recorded and transcribed verbatim and codified.

Once the data was collected and analysed, two validation workshops with the practitioners were carried out. One was composed of practitioners who participated in the study and the other by non-participants. The objectives of these meetings were to present the preliminary findings and to check those results with the practitioners.

4.4. KNOWING-IN-ACTION AT AKUA

This section provides a vignette that captures the way in which the consultants at AKUA attempt to sell their offerings. Although this material does not comprise the whole practice of the consultants, it is representative of a typical situation at the firm. The vignette is intended to (1) provide the reader with the “flavour” of practice, which will facilitate the subsequent analysis, and (2) illustrate our empirical approach in the field. The analysis “zooms” in and out of the field data, providing an in-depth example of the practice, and an examination and explanation of what is happening.

According to AKUA procedures, the firm’s approach embraces two different business processes: “Business Development” and “Getting a Contract” (see Figure 16). Although each process explicitly outlines its objective, formalised activities and who should perform each activity, the vignette shows that the actual practice of selling consulting products is much more complex than the one reflected in the formal organisational procedures, drawing on tacit understandings between the actors. The data in the vignette is reproduced verbatim, with the exception of the bracketed comments, which are from the researcher’s field notes.

4.4.1. Vignette: Selling Consulting Services in AKUA

- 1 *Researcher:* “Who prepared the proposal?”
- 2 *Senior Manager 1:* “The seniors, Consultant A, and me.” [Consultant A is the director of
- 3 this project.]
- 4 *Researcher:* “How did you make the proposal?”
- 5 *Senior Manager 1:* “Ah, well. Yes, I am allowed to show you that...we use some
- 6 databases.” [The Senior Manager moves towards his laptop and
- 7 shows a screen with access to corporate databases, where previous
- 8 business proposals are attached. These proposals have been
- 9 evaluated and chosen as ‘best practice.’]

10 “However, we usually use the word-of-mouth system. You get to
11 know who has done a similar project before. In this case, Consultant
12 A had done the other project. We made it based on that proposal.”

13 [He takes out a document, which is the proposal for the project.]

14 “Good, well as I was telling you, here’s the background that we
15 wanted to show them we knew. Then the senior consultant compiled
16 the information and, with the data he had compiled, I prepared info
17 on the denomination of origin. We talked about the region, also about
18 the characteristics of the olive groves, which type of olives they had.
19 And we even made a first diagnosis, on the basis of the information
20 we’d gathered, where we told them what problems we thought they
21 might be facing. In fact we were right, and that quite surprised
22 them.”

23 *Researcher:* “Of course, because I imagine that they were also testing you.”

24 *Senior Manager 1:* “Yes, but you have to show them that you're not a greenhorn, that
25 you most certainly know what you're talking about, to give them
26 confidence, because if not, they'll say ‘Hold on! What's this idiot on
27 about! I'm the expert, and this guy is telling me fairy stories - no
28 way...’ Then we had already spotted that there’d been a problem of
29 demand, that there’s an excess of supply and that the positioning of
30 their image was bad. They had a very good reputation, in fact it was
31 the second best-known, but as the positioning was on low segments
32 of products, you know, it was bad.

33 We talked first for a bit about them, then we told them what was
34 going on in the olive sector worldwide, that we were well informed,
35 that Consultant A already had this in his data and knowledge bases.
36 Above all, we talked about Australia – the case of Australia is a
37 curious one – and, well, not only Australia ..., we’d got it already for
38 another proposal, but we showed it to them. We told them that we
39 have the capacity to analyse what’s happening around the world,
40 and that we know what we’re talking about.

41 (...) We focused on it from three viewpoints: supply, demand and
 42 organisation. And we did it like this because these are the three
 43 points we consider we have to cover in the strategic plan.

44 (...) And then we threw in some questions... And then we gave the
 45 answers. We said that these things are what must be taken into
 46 account when preparing a strategic plan, and then we said, 'on a
 47 world scale, these questions were dealt with in different countries (...)
 48 And what about Spain? In Spain there's this, ... this..., this..., that...,
 49 and this one.' And then we told them, 'we did all these – this, this
 50 and this.' So they could see we had experience and we knew what we
 51 were talking about. And, in fact, it was one of the things that made
 52 them decide, led them to go for us, because they could see that this
 53 reference helped us more than anything else."

54 *Researcher:* "And who were the other consultants competing for the job?"

55 *Senior Manager 1:* "BP. It has a lot of experience in strategic sector plans, but in this
 56 industrial sector they don't have as much as we do.
 57 (...) BP also has a name and its reputation to rely on. They could do
 58 this service. I think they're as capable as we are. The problem is that
 59 our strongpoint was our experience in the sector, and we had to
 60 emphasise it to have a competitive advantage against BP, because if
 61 not, they could take it off us just the same. Then, the annoying thing
 62 was that even if it went to price, then that's when ... and in fact, we
 63 were quite nervous when setting the price strategy. At the first
 64 meeting we never talk about price. This is the rule we have, because
 65 you want to leave them feeling good about the whole thing, and if
 66 you mention price, they ... (...) On the subject of price, I can tell you
 67 my experience, that it's better to negotiate in *petit comité* ..., you can't
 68 go into a meeting and say 'well, that's so much'."

69 *Researcher:* "And what you told me before, the questions you replied to. Is this
 70 what you normally use?"

71 *Senior Manager 1:* “Yes, increasingly so. The questions to make them think, yes. Not
72 only on issues of strategy, but even proposals we’re offering, and
73 above all when you put them to the people there, you ask them
74 questions that will make them reflect, that will make them say, ‘Well,
75 I hadn't thought about that, he's right, this fellow’.”

76 *Researcher:* “And how did that turn out?”

77 *Senior Manager 1:* “It turned out well. Consultant A and I said, ‘We are going to look at
78 what issues could catch them.’ And based on that, we both began to
79 ask questions and the ones we liked [laughs] we asked them.”

80 *Researcher:* “But the idea of asking questions in this type of presentation, it’s just
81 that in other projects, you were already doing that.”

82 *Senior Manager 1:* “Yes, we'd already done it before. And it gave good results. Who
83 thought it up? I don't know. Since proposals are transmitted from
84 one person to another here, and you see one, and you say, ‘hey, this
85 is great, I like it, and so on’, and you apply it in something else.
86 Someone must have thought it up, but I don't know who.
87 I tell you this because to prepare this document – which has fifty-two
88 pages – we only had four days. So you either use this, you know, or
89 you have something similar you’ve already done. It’ll never be the
90 proposal you would have wanted, but either you take stuff from
91 various sources or, if not, you just don't have time.

92 Then we explained all the phases that we were going to do, from the
93 point of view of internal and external analysis and all the things that
94 we were going to analyse, the summary of the SWOT, putting
95 forward the alternatives. But practically, we did this because it got
96 through to them better. And really..., these are the methodological
97 things and the activities that we were going to do.

98 The three of us [Partner A, Consultant A and Senior Manager 1] went
99 to the presentation. And this was good, because with BP, the partner
100 didn’t go.”

101 *Researcher:* “Was that decisive?”

102 *Senior Manager 1:* “We haven't asked them, but really, it shows your involvement and
103 your willingness to do the project. But it's not the same having the
104 partner responsible for the sector, who is a heavy weight in the
105 organisation, as having a senior manager or a director.”

106 *Researcher:* “And in this presentation, did you all present a part, or was there
107 anyone earmarked to make the presentation?”

108 *Senior Manager 1:* “Consultant A took on making the first phase of the presentation,
109 because the truth is, he's the expert with experience in oils... By the
110 end of this project, I'll have become an expert in the olive sector, but
111 not yet. Although, and this is also true, we sell ourselves as if I was a
112 specialist in the olive-growing sector. At times you have to lie, you
113 take the risk, but ... at times. Until you learn [the particular area of
114 expertise], they are just white lies, but you learn to tell them so
115 convincing that the client believes it. Consultant A presented the first
116 part, I presented the part on methodology and the partner was...,
117 well, the first part was him, because we told him, to convince the
118 client why it had to be AKUA. But we had prepared this. Consultant
119 A came in with the part on the sector, and I came in with the part on
120 methodology.

121 (...) The important thing is that you transmit self-confidence and that
122 you know what you're doing and know the sector. (...) when we
123 talked to them about the sector and the knowledge we had of their
124 situation, and of what was happening in Spain and of what had
125 happened in the world. They had no idea about the rest of the world,
126 I'm convinced of that. It rang a bell, but what's happening in Spain,
127 what's happening in their region, that's their territory, that's what
128 they know about. And we set it out and no-one complained and said
129 no, on the contrary: then they saw that we had understood the
130 problem.

131 Then, at the time of the sale, the partner tells them that we can offer
132 them the best service; that we are involved, that we are going to be

133 here, that we wanted to do it. This had considerable importance. And
134 then, above all that, they saw that we knew about the sector, and that
135 we understood their problem. The methodology, that’s the part I
136 presented, and I sincerely think we have no differences on anything
137 in terms of BP because, in fact, I would bet anything that if I saw their
138 methodology and ours, there wouldn’t be that much difference. (...)
139 The partner has to see the proposal to put in the dots and commas. If
140 you give a proposal to the partner and the partner says ‘I don’t like
141 this,’ you’re lost. Before it reaches the partner – hey, I tell you because
142 the partner, apart from this, has to be concerned with thousands of
143 projects and thousands of commercial actions in other places – we
144 have to get organised. Normally the manager or a senior manager
145 (...) the difference between manager and senior manager is length of
146 service. A senior manager is normally in charge of bigger projects
147 and a manager is given smaller projects. First year managers
148 sometimes act as Project Manager on one of the large projects, but the
149 commercial team has a partner; if it’s a large project, it will always
150 have a partner; if it’s a smaller project, perhaps a partner isn’t needed.
151 In that case, there’ll be a director. This was a large project, and we
152 had a partner, a director and me – a senior manager. I took charge of
153 making the proposal, with the help of a senior consultant and an
154 assistant for researching information on the background – but then
155 he didn’t take part in the project because he was involved in
156 something else. The rest [of the material] I already had. I have
157 databases and other proposals, depending on the problem they want
158 to deal with, and I sit down beforehand with Consultant A, the
159 director, to focus the subject. He tells me ‘this is what we want, this is
160 what has to be done and this is the problem to go through, and so
161 on.’ When we have it clear, I set to work on the proposal. The team
162 helps me find the information, I process that information, and when
163 I’ve got a first draft I argue it through with the director. Then it’s the

164 director who makes changes, and says, 'This we will have to focus
165 on, perhaps from that angle, or this yes, the other no.' This is what we
166 discuss among ourselves and produce the document. And when the
167 final document is ready, this is when you pass it on to the partner.
168 But the partner, as I told you, has to see it once it's perfect, because if
169 it's not perfect he tells you, 'This is useless. This is [expletive
170 deleted]!'"

171 *Researcher: (...)* "And how can he tell if it's perfect or not so quickly?"

172 *Senior Manager 1:* "Because he reads it, he begins to read, if, suddenly ..., he has
173 already shaped it in his head, based on his experience, he knows the
174 problem. We've spoken before and he knows the problem, and also
175 knows how it has to be focused. If he begins to read and suddenly
176 doesn't like what he's reading, he says, 'Hey, this isn't good enough,
177 turn it over twice mate, because I'm certainly not going to read it as it
178 is,' and he gives it back so you just have to sort it out. He tells you the
179 points and, well, he doesn't tell you explicitly, but you simply have to
180 look a bit at where he's going.

181 (... The director has previously sat down with the partner and he
182 already knows where he has to go. It's all very hierarchical and very
183 structured. The partner can sit down and talk to me, but normally he
184 won't, at least to avoid going over the director's head.

185 (... There have been partners who have even said to me, 'My part is
186 to dot the i's and cross the t's, or correct the odd mistake that has got
187 past you.' Otherwise, they don't have time to start drawing up the
188 proposal. They only touch it up a bit, you know, what you have to
189 think about is this, that and the other. They say, 'Think about it and
190 when you've got it right, come back to me.'

191 I don't like it at all if the partner tells me this, so I make sure he
192 doesn't come back. Now, have I been told this? Yes, I have. Especially
193 when I was a manager with less experience. Yes, they have said this
194 to me.

195 (...) I've been a manager for three years. This is my fourth year as
196 senior manager. Of course, the first year, when you make your first
197 proposals, you don't do it very well. Well, it's not that you don't do it
198 well, maybe you do it well but it's not the standard that AKUA
199 wants, or the standard the partner is looking for. But that can be
200 learned. When I have to present a proposal now, I know the points I
201 have to cover and already have my idea of how I should present it to
202 comply with the standard. I know what I have to do to understand
203 and make the client understand that I understand their problem.
204 That's tricky to get over.”

205 *Researcher:* “And what happens sometimes is that, perhaps, depending on the
206 partner you're working with, depending on each project, you know
207 that Partner A has such and such a mania, well, not mania, but ...”

208 *Senior Manager 1:* “Too true! There are certain partners, well for example ... directors
209 too, it doesn't have to be a partner – and I also have my own manias,
210 I have to say. If they give me a bullet point, without respecting the
211 margin, as soon as I see it, it's out - these are manias... There are
212 other partners who don't like bold [print], they just don't like it.
213 There are others who when you use blue, they want it in ochre. In
214 other words, yes, everyone has their own [preferences]. What
215 happens is that you work more or less with the same people because
216 we are organised by sectors. Then you already know what they want,
217 their weak points. The same as the seniors, they know what my weak
218 point is, and the consultant knows the weak point of the senior. And
219 if he doesn't know, he'll learn.

220 (...) In fact, we have part of our remuneration fixed and the other part
221 variable, depending on compliance with objectives. And what has the
222 highest weighting among these is sales.

223 (...) I think that Partner A, the partner on this project, might have an
224 objective, I don't know, of 1.5 billion pesetas. But of course, he has to
225 make it alone..., or go to the people he has below him, lean on them

226 and give them objectives at their level, otherwise, how is it going to
 227 work?"

228 *Researcher:* "I see. In other words, this was how you managed to get the project,
 229 and then you prepared the contract letter... "

4.4.2. Vignette Commentary: Analysing the data

This next section looks at the vignette, drawing out lessons and observations about the overall process and practice in the consulting firm, taking into account the data obtained by different practitioners in the interview phase.

4.4.2.1. Putting Things Together

Once one of the AKUA partners and his commercial team (usually a director and/or a senior manager) get in touch with a potential client, the next step is writing the business proposal and presenting it to the client. According to the firm's formalised procedures, the manager or senior manager is supposed to gather all the relevant data, register the project in the database, and create the document (the "Proposal") by adding compulsory standard paragraphs (see Figure 16). Although these actions are generally followed, the process is more complex in practice.

"Writing the business proposal" is not an individual activity. There are a number of different people and positions involved in its creation. In this case, a partner, a director, a senior manager and two senior consultants were all involved in the process. The division of labour, which is an aspect of the organisational structure of AKUA, is a relevant dimension because it affects the actual practice. For instance, one crucial requirement is that the proposal should reflect the client's problems and needs. However, the division of labour prevents all the actors from having direct contact with the client. As a consequence, the senior manager has to transfer the client's needs to the manager. This activity is apparently effortless for the senior manager, but it is really crucial for the novice manager, who is usually absent from the meeting with the client. As a manager explains:

“Kicking-off a project is very difficult for a manager if he has been absent in the commercial phase... Senior Managers are always there from beginning... You could ascertain information from the person who has been present, but there is always a limit. I have realised that when I participate in the initial data gathering, prepare the proposal and defend it, my success rate is really very high. If I am in the middle of the process, it decreases... Therefore, it is very important to realise that you’re winning their confidence and to be involved during the whole process. This is important in capturing what the client wants. Once you know what he wants, you give it to him, and a bit more... but that feeling only comes from being present...

Consultants need to detect if they’re being hired because somebody told them to ‘hire you,’ because he [the client] really has a need or because he wants to defend something internally but he cannot do it by himself and he needs your help. They need to realise if the client is committed or not, if he is in favour or against [the project], if he has been obliged or not. I think all this is important so you can reflect it in the proposal. Having someone who really needs you is not the same as having someone who has been obliged to work with you. In the case of the latter you have to give him other things. In the proposal, you have to try to make him see the benefits for him... And a good salesman doesn’t sell from a distance: he doesn’t sell on behalf of others. He needs to be with his client. So, here, I don’t see very clearly how we are organised.”

For the senior manager, capturing the client’s needs is relatively straightforward, largely because he was present at the meeting. However, for the manager, it is a more complex task

as he was not involved in the client meeting and he has to rely on the senior manager's interpretation and feedback. Although transferring the information itself is not particularly problematic, according to the practitioners, capturing the needs of the client also involves detecting the unsaid. It involves "feeling" and intuition, which are forms of individual and tacit knowledge. For these practitioners, having physical access to the client, participating in the entire process is important for a double reason. While the client contact allows them to perform the task better, it also legitimates their role within the company. Based on the vignette, the manager and senior manager are apparently supposed to do the same tasks (see lines: 144-147). The official difference between them is that the senior manager is an "expert" who has been in the position longer than the (novice) manager. The senior manager has access to the whole process, while the newer manager is left on the periphery. As Lave and Wenger (1991) suggest, legitimate participation is a crucial aspect of becoming a member of a community, and the lack of involvement of the newer managers/ consultants limits their learning process.

According to AKUA's standardised procedures, "writing a proposal" entails gathering all the relevant data. This task, however, is not performed by the senior manager, as he guides the other members of the team to where relevant information can be found (e.g. lines: 152-156; 161-163). In pursuit of this objective, organisational databases and knowledge repositories of previous business proposals and best practices play an important role (e.g. lines: 156-157).

As the vignette illustrates, previous business proposals are key tools for the practitioners. They are a good reference and learning tool. In this framework, learning is produced by analogy. The previous document guides the practitioners (e.g. structure, format, type of letter, methodology) and guides the development of the new proposal (e.g. lines: 11-13; 33-46). Resorting to previous work done in the past – by either the individual involved with the proposal or others in the firm – not only saves time (e.g. lines: 87-91) but also helps to spread innovations in an informal way (lines: 80-86). Time is crucial for practitioners and exerts constant pressure on them, a reality that is underscored by the fact that most consultants

participate in more than one project at the same time. This is another distinctive feature of their work; that they have to cope with overlapping projects (lines: 141-143).

Despite the value of having documents from previous projects, the vignette captures some of their limitations in practice. Sometimes, having access to the explicit document as such is not enough. In these instances, the practitioners attempt to identify who was involved in the previous project and/or locate the appropriate experts (lines: 10-11). This data seems to confirm previous works in which authors have stated that explicit documentation is of limited use when it comes to specific, real situations (e.g. Bou and Sauquet, 2004; Tsoukas, 2003; Clancey, 1992). The information needs to be interpreted, largely through the guidance, understanding and assistance of the consultants who were actually involved in the earlier project.

On other occasions, the consultants also turn to other colleagues, from inside and outside the firm, to obtain useful information and practical guidelines – as one of the managers illustrated:

Manager: “We have a department with very good sources; you can search through them or use the Internet. Then, people tell you, ‘Well, I read this and that...’ You can draw on a worldwide knowledge management database, ... You can even ask a question and someone from another country will answer, ‘Well, I have done something similar.’ There is a lot of information in many places.”

Researcher: “However, when you had this problem, you didn’t resort to the database. You asked the people you knew had worked on a similar project. And so?”

Manager: “Well, the truth is that I was assigned to the project on Thursday. On Friday, I was introduced to the client as an expert. I thought [the KM department] could give me the theory of this subject, but I thought it was going to be more valuable to get others’ experience. They could show me similar models in other companies and it was going to be more useful than the theory I could find about the [project]. Why? Perhaps because of the time factor. The first

thing that comes into your head is to say, 'What do I do?' Instead of losing ten hours searching and reading things, I'm going to see who has done it."

As the above excerpt illustrates, time pressures are a key reason why the practitioners turn to their colleagues rather than explicit resources in the firm's database. The respondents also felt that the others' experiences had significant value, especially since it embraced the type of applied, practical knowledge that will facilitate their efforts.

Another crucial aspect of "writing a proposal," which is not reflected in the formalised procedures, is that the proposal needs to be adapted to the partner who is in charge of the project (lines: 205-214). This is only possible if one "knows the partner", which implies more than having a superficial idea of the person's expertise and preferences. It also means that the manager must have sufficient knowledge of the partner to be able to appropriately consider the partner's habits, likes and dislikes, and to truly understand his messages.

Understanding messages, and therefore, language and meanings are especially relevant in AKUA. According to some authors (e.g. Werr and Stjernberg, 2003) methods and tools used by consultants provide them with a common language and a common knowledge structure (e.g. concepts, theoretical models). For instance, the senior manager assumes that the researcher knows what SWOT is (line: 94), the concept of stakeholders, and so forth. Methods or methodologies are standard and common for the whole company (lines: 41-43), and even for other consulting firms (lines: 135-138), which fosters understanding among practitioners.

As suggested in this practice, however, it is still necessary to know the specific company jargon to understand what is going on. AKUA's jargon embraces a group of words which have meaning only if you belong to this organisation. For instance, the practitioners refer to the "meadow", a metaphor that refers to the lay-out of the corporate offices. The meadow is the open space where scholars, junior and senior consultants, and managers interact. AKUA has a "big meadow" and a "small meadow" (where only managers are located). Within this context, lay-out and privacy are symbols of hierarchy. The higher you are in the

organisational structure, the more privacy and space you will have (e.g. directors have an office of their own, while senior managers share offices). Indeed, hierarchical aspects are very present in the actual practice of these respondents, and they have to resort to implicit norms to cope with them (e.g. circumventing hierarchical position – lines: 183-184).

In order to fully capture messages, you also have to be able to “read between the lines”. The meaning in a message is often not explicit, and being able to capture this subtle aspect of the message is crucial. This ability becomes especially important for those consultants climbing the corporate ladder, as this type of knowledge is especially relevant when interacting with the partners. As our Senior Manager 1 remarked (line: 140): “If the partner says, ‘I don’t like it,’ you are lost”. This collective tacit knowledge has a lot to do with the “genre” in question (Cook and Brown, 1999) as the same statement in another company might have a different meaning or connotation. In the same way, if a partner says to you, “turn it over twice, mate” (line: 177), the message implies that you have made some error and you should not be wasting the partner’s time. In this instance, the consultant can be in an awkward and risky situation, especially if the subtle warning behind the statement is overlooked.

Complexity increases when the actual practice requires anticipating future events. This is the case when the practitioner has to prioritise relevant information. In order to write the proposal, data and information must be gathered, but questions linger as to how to select the key aspects. According to Senior Manager 1, a key aspect is anticipating client priorities (see lines 77-79), where Consultant A and Senior Manager 1 have to think about which questions will be relevant for the particular client.

Anticipating client reactions is also crucial when deciding on the pricing strategy. This activity implies an estimation that considers the budget, workload and previous experience and expenses with similar projects. However, as the discussion with Senior Manager 1 indicates, there are other less objective aspects that are also considered. In this instance, the partner in charge of the project wants to bring in as much profit as possible in order to meet his annual sales objective (lines: 223-227). Moreover, higher incomes in the organisation imply more money for the partner at the end of the year – clearly, a strong motivator. At the

same time, it is important to take into account how much the client is willing to pay for the project, something that is not typically made explicit by the client. As a senior manager explained:

“Price estimation is important, because if you propose a price that meets [the client’s] expectations, you don’t have any problem. We always say that if we are around ten or twenty percent up on client’s expectations, then it is not a problem. If the price is much higher, the door is closed and you will get a ‘No’. If the price is 10 percent higher, we can negotiate and in the end we can arrange a deal... But if the price is 20 or 30 percent higher, even if the client is interested, you run the risk of him going to another firm for their services. Then you are really lost... Hence, price is an important variable, one that should be calculated very carefully. You have to make the client see the importance of what you are doing and the fact that what you are proposing to him cannot be done just like that. It implies that a lot of work is involved and the fees are justified.

For instance, we don’t fix the fees, but we make the so-called ‘fee estimate’ based on our experience in similar projects. We know – taking into account the size of the client and his characteristics – the hours we will need. We budget for hours and each hour has a price, depending on the positions of the members of the team. Over that price, you calculate the final fees... The more experience you have, and the more repetitive the project is, the more you guess correctly. When they ask you something that you are not sure of, then you are a bit ‘blind’.”

As the senior manager continued,

“Well, for instance, here’s an anecdote with a client. I was talking with the partner, and he told me that he couldn’t come to the meeting with the client. He told me to go to the meeting by myself. He then asked me if I had done the budget. I said ‘Yes’, and he asked me how much it was. I told him sixty-six thousand euros. He told me to ‘ask him for eighty.’ ‘For heaven’s sake!’ I thought, ‘Eighty! That’s too much’. And he told me to ask him [the client] for eighty. He told me he knew the client and that he would try to bargain over it, but wouldn’t think it was too much. To sum it up, I thought, ‘Well, I will tell him eighty, but we’ll see what happens in the end’. I went to the meeting and made my speech... The client took some minutes to gather his thoughts and said, ‘You have convinced me, I think that’s reasonable. I am going to support it in the Executive Committee.’ (...) Of course, the fellow left me puzzled, because as I said, ‘... I was scared to ask for sixty-six, he’s [the partner] asked for eighty and they’ll [the client] give us eighty without batting an eyelid.’ And why? Well, I don’t know why. I don’t know if it was because he [the partner] knew the client, or because he had had similar experiences and he knew it was something the client needed urgently and he could take advantage of it...”

Thus, estimating the price for a consulting service is a complex process, based on experience, knowing the client, getting a “feel” for the client’s needs and anticipating the client’s reactions. This reality clearly exceeded the objectivity suggested in the firm’s formalised procedures. It is a process that involves dimensions that are both individual (e.g. line 67 refers to “my experience”) and collective (e.g. lines 64-66 refer to “collective rules”).

4.4.2.2. *The Moment of Truth*

Once the consultants prepare the written documentation for the proposal, decide on the price and receive internal approval to move forward, the moment of truth arrives. At this stage, the consultants are “on stage”, in front of the client. There is limited time, and they cannot stop to reflect on or think about the underlying process. At the same time, however, this activity involves a complex amalgam of challenges.

According to the practitioners in our study, there is much more to presenting the proposal than simply explaining the written document. They also have to defend the proposal and convince the client, being aware of client reaction and instilling a sense of confidence. For this last purpose, they resort to AKUA’s brand image, helping the client to value their proposal against competitors (lines: 57-61), using the client’s terminology and jargon, speaking with self-confidence, showing they understand the client’s problem, helping clients to reflect (lines: 71-75), illustrating their expertise by presenting team members as experts and by pointing out specific aspects of their industrial sector, and emphasising the commitment of AKUA for that specific project (lines: 98-136).

The discourse employed with the client is, therefore, highly complex with plenty of rhetorical forms. Among these, it is especially relevant how consultants resort to forms of *ethos*. These are discourse constructions which are used by the consultants to demonstrate their credentials and legitimate their role in front of the client audience (e.g.: lines 33-40; 102-105). For instance, in lines 33-40 the consultants design a discourse in which they initially present worldwide data about the industrial sector. This is not by chance. If they can prove that they can manage and handle worldwide problems, they will lead the client to think that they will also be able to manage their problem.

While this exchange is part of the process of convincing the client, practitioners note that this is not enough. Specific knowledge plays a key role, as clients do not seem attracted by general knowledge such as theories or methodologies. Clients value the specific knowledge

that the consultants are able to show in the presentation, and it is a differential competitive factor (lines: 55-56). Moreover, this specific industrial knowledge points to a difference among AKUA’s team members since this type of knowledge is obtained through participation in different projects. As the senior manager noted, “By the end of this project I will have become an expert in the olive sector, but not yet” (line 109-110).

Although there is a fair amount of latitude involved in this process, the consultants are expected to stay well within organisational norms and AKUA’s standards. Everything is expected to be completed within an hour and a half. In these situations, applying steps or adhering to rules can be rather difficult. Our respondents manage this situation by taking for granted certain aspects that they have developed through practice, improvising as events unfold during their presentation. As illustrated by the following comments, the key is “doing” the practice:

Senior Manager 1: “And in the end it is like everything else. I remember that at the beginning when I had to present something in public, speak in front of people, it was really daunting. You don’t feel sure of yourself. But right now, I surprise myself with my ability to improvise and make a presentation. Sometimes, you don’t even have time to prepare them. Well, in the end you get so much experience that you know. Of course, at first it’s madness. You have to prepare everything. The day before, you’re there, suffering. You don’t sleep for nerves. But then, it’s like every else, you get the hang of it and it works out fine. It’s not that I’ve gone for it and got right in there, it’s more bit by bit ... that comes with practice.”

4.4.2.3. Selling Internally: The underlying internal practice

During the course of their practice, we observed the respondents behaving in ways that were not directly related to the formal assigned tasks. For instance, they devoted considerable time to gathering information about new consultants or promotions within the existing group, paying especial attention to rumours and provoking informal conversations. Inquiring about this form of behaviour, we realised that these were not minor actions. In the same way there is a formal process involved in (external) selling to their clients, there is also a complex informal process of internal selling to colleagues.

“Selling oneself within the company” means to look for an appropriate project and then offering to work on it with someone. A basic question, of course, is why the consultants undertake this course of action since there is already a formal procedure that assigns people to projects. However, this procedure assigns consultants to projects according to organisational needs, without considering the practitioners’ preferences. Through this “internal selling”, consultants try to meet their individual motivation to work on specific projects. Moreover, in order to have a successful project senior managers typically look for members they already know. When selecting team members, they first choose among the people they trust. In the same way, the senior manager has been chosen for that project because the director or the partner relies on him. As this dynamic suggests, in addition to winning the client’s trust it is also important to win one’s superiors’ and colleagues’ trust.

There are additional organisational factors that exert an influence. AKUA has a matrix structure. Practitioners belong to both a technical division (where they are specialised in different solutions) and an industry or sector group. However, not all the different solutions or industry groups have the same power and possibilities of growth, and, as a result, promotion. Therefore, the practitioners try to approach certain groups or individuals who, according to them, can facilitate their professional careers.

These are some of the reasons why practitioners devote so much time to making themselves visible *within* their firm. While the “internal selling” game is one way of winning such visibility, the consultants also show their willingness by participating in company events – workshop, meetings and so on – as a way of getting noticed and known by their superiors.

Gaining visibility legitimates one’s position within the organisation, even to a point where it places (legitimates) consultants in a higher status position to the one they officially hold. In the vignette, for example, Consultant A had been introduced to the Researcher (lines: 2-3) as a director. However, at the moment of the research he was, in actual fact, not yet a director. After some months, promotions were announced and he was promoted to the director level, but when the events narrated in the vignette occurred he was still a senior manager. Rather than attempting to mislead the researcher, the individual was unofficially considered as a director. He was already carrying out the functions of a director, and other organisational members assumed he was in that role – before it was officially announced. In essence, the practitioners “read” a subtle, unofficial company message.

Based on this assessment, it should be clear that actual practice is much more complex than the one reflected in formal procedures and documentation. Table 15 reflects this complexity and how the idea of practice can vary depending on one’s position within the company.

Process of Getting a Contract		
Formalised Activities	Experts Managers (Senior Managers)	Novice Managers (Managers)
Resources Assignment	<ul style="list-style-type: none"> • Estimating resources • Assigning people to projects / Choosing the right team • Having trust in someone 	<ul style="list-style-type: none"> • Assigning people to projects • Having trust in someone • Internal selling
Preparing Business Proposal <ul style="list-style-type: none"> • Data gathering • Project registered in database • Documentation / adding compulsory paragraphs 	<ul style="list-style-type: none"> • Communicating what client needs • Locating useful information • Supervising • Anticipating client reactions: knowing <i>who</i> the client is • Adapting the information for the partner 	<ul style="list-style-type: none"> • Understanding what superiors are saying about client needs • Having a “feeling” / intuition for seeing what client wants • Detecting what client really wants / “seeing” the unsaid → reading between the lines • Creating the document: translating from official documentation
Deciding Price Strategy	Estimating the price: <ul style="list-style-type: none"> • Anticipating client reactions • Knowing the partner 	
Presenting Business Proposal and Negotiation	<ul style="list-style-type: none"> • Defending the proposal • Convincing the client • Giving confidence to the client: <ul style="list-style-type: none"> ▫ Brand Image ▫ Differentiated solutions from competitors ▫ Using client’s jargon ▫ Lying in a convincing way ▫ Speaking with self-confidence ▫ Showing you understand the problem → prioritising ▫ Showing possible threats and offering a solution ▫ Helping clients to reflect ▫ Selling the team members as experts ▫ Showing they know about the specific industrial sector ▫ Showing implications for the Firm • Being aware of client reactions 	<ul style="list-style-type: none"> • Giving confidence to the client / winning client’s trust ▫ Using client’s jargon ▫ Showing you understand the problem ▫ Knowing how to connect with someone
Obtaining Formal Agreement	<ul style="list-style-type: none"> • Negotiating the price: <ul style="list-style-type: none"> ▫ Making client value the offer 	

Table 15 - Practice 1 at AKUA: Commercial Activity / Selling Services

4.5. EXPLORING “KNOWING” IN PRACTICE

The preceding discussion points to a number of different factors which influence consulting in practice. Our analysis of the case vignette draws out (a) the different types of knowledge employed by the practitioners, (b) special characteristics of the nature of their work, and (c) individual and (d) organisational aspects of their practice. Moreover, data also suggests differences in the practice of expert managers and novices. This section explores those aspects in more detail.

4.5.1. Identifying the Bundle of Knowledge

As illustrated in the vignette, the consultants resorted to myriad forms of knowledge to perform their practice. Using Collins’ (1993) classification based on ontological and epistemological criteria, we can distinguish four types of knowledge: individual-explicit, individual-tacit, collective-explicit and collective-tacit knowledge. In our assessment of practice within AKUA, we identified examples of each type (see Figure 17).

Individual-explicit knowledge is particularly relevant in consulting companies. Indeed, individuals who have more of this type of knowledge are considered the formal ‘experts’ within the organisation. This would reinforce Lam’s idea (2000) that professional bureaucracy sustains the development of individual-explicit knowledge. Within this form of knowledge, it is worthy to stress the existence of both general (e.g. technical knowledge) and specific (e.g. industrial knowledge) knowledge. Even though both aspects are part of the individual’s explicit knowledge base, the latter is gaining more importance in practice.

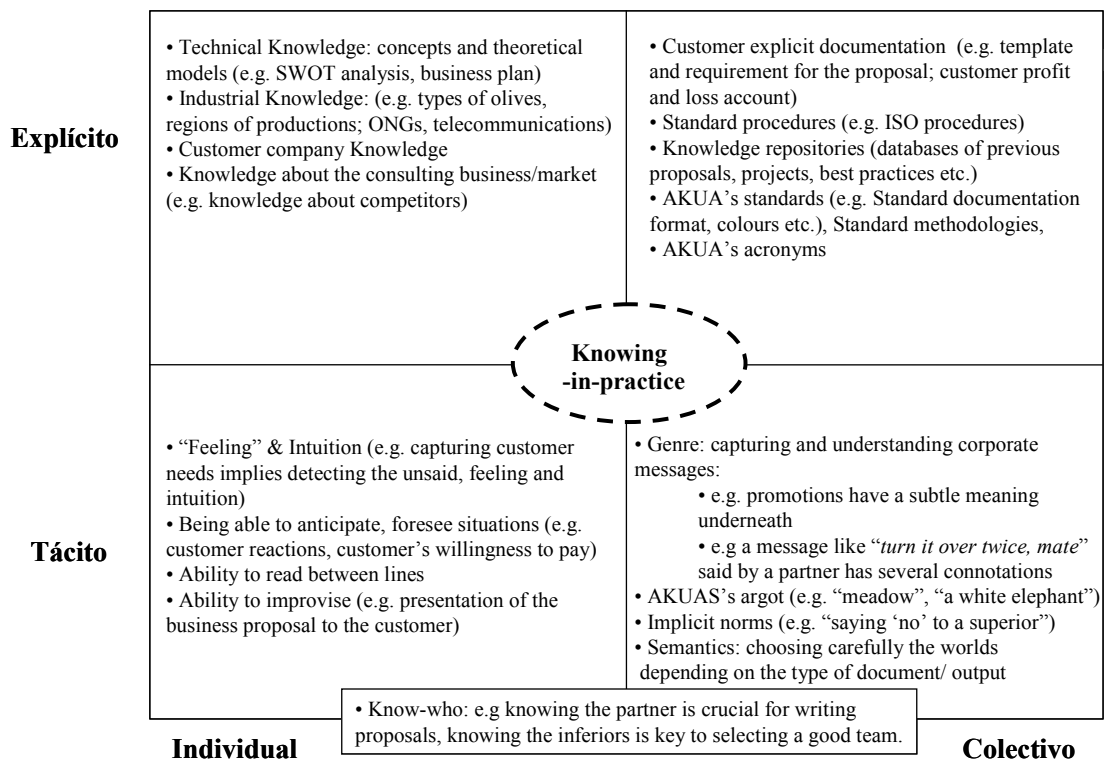


Figure 17 - Bundles of Knowledge in Practice

Since AKUA is a global company, formalisation and standardisation play a role in ensuring order and homogeneity – which suggests the additional existence of collective-explicit knowledge. Our empirical data strengthens this premise, and illustrates how this type of knowledge is especially useful in providing the consultants with a common language and the ability to reuse knowledge. Gaining this knowledge is especially relevant for newcomers.

As previously mentioned, however, such organisational artefacts have some limitations. While they typically focus on "what to do" or "what *not* to do", they do not really facilitate practice. For instance, in AKUA written procedures were not very important – even for newcomers. They know about their existence, but time pressures often limit their ability to draw on them. Moreover, the consultants seemed to feel that overlooking these procedures did not compromise the integrity of their practice. As one of the consultants in the study noted:

“The methodology tells you what steps to follow, but not how to go about it. For instance, it tells you that you have to design a questionnaire, but how should the questionnaire be designed?”

Moreover, explicit documentation cannot be applied without interpretation. Capturing, storing and distributing this type of knowledge in and of itself may not be difficult, but it is at the moment of practice when difficulties emerge (Bou and Sauquet, 2004; Tsoukas, 2003; Clancey, 1992). As a consequence of these limitations, practitioners usually resort to other colleagues or experts (within or outside the company) who can help them to interpret the procedures or guide their practice.

Despite the amount of written norms and documentation, the most important rules are not written down. They are implicit, shared through informal conversations, and are more crucial than the written guidelines. For instance, although not written in any official AKUA policy, it is “understood” that subordinates cannot say “no” to a partner. Moreover, it is also understood by members of the firm that they “cannot fail to meet a deadline. If you don’t sleep, you don’t sleep” and that each person has to make him or herself “visible”. These statements are examples of unwritten, unofficial norms that are crucial for the survival of the consultant within the company since they are related to the internal organisational system and are expected to be taken into consideration in daily practice.

However, writing down and acknowledging these norms are not enough. In order to fully understand them, collective-tacit knowledge is also required. For instance, according to the junior consultants, “it’s vital to know how to say ‘no’ without putting yourself in jeopardy”. This implies that the practitioners should be able to identify when it is possible to refuse an order and how it might be done without running undue risk. In this instance, the ultimate purpose is to break the unwritten rule of “never say ‘no’ to orders from a superior” in such a way that the superior is unaware the individual is breaking the unofficial norm.

As consultants begin to move up the corporate ladder, this type of knowledge becomes increasingly important as they interact with partners. This collective-tacit knowledge has a lot to do with “genre”. It is very contextual knowledge and it only has meaning in a particular scenario. The same statement or sentiment in another company might have a different meaning or connotation. Therefore, this type of knowledge is similar to a code of interpretation, the one which allows the practitioners to “read” the rules and corporate messages.

Individual-tacit knowledge also plays a role, although its nature varies depending on the consultant’s experience. Junior consultants need to learn how to work in groups and especially how to work under pressure. Once a consultant has achieved higher status, tacit knowledge shifts to the client and the need to sell engagements. As illustrated earlier, at AKUA it is understood that it is very important to be able to project confidence and gain a client’s trust. Senior managers also need to be able to win their superiors’ trust, and one of their tasks is to “free” the director or partner of some of their duties. Other relevant knowledge is being able to anticipate events, for which one’s previous experience with clients, colleagues and projects and also one’s own intuition are crucial. Moreover, improvisation is apparently very useful, especially when handling unexpected situations.

Both, newcomers and experts agree that consultants should get to know the different individuals. As one of the consultants pointed out, it is important to be observant and to distinguish “who knows and who doesn’t, who will support you and who won’t, who values your efforts and who doesn’t”. We have referred to this knowledge as “know-who” (as opposed to know-how) and it implies both an individual skill and explicit and tacit collective knowledge.

4.5.2. The Interplay between “Knowing” and Knowledge: Comparing Experts and Novices

As the preceding discussion has indicated, different types of knowledge exist in AKUA. These different types of knowledge coexist and there is no conversion. As illustrated earlier, for example, in the practice of “selling consulting products” the practitioners employed different forms of knowledge at the same time (see Figure 17). Thus, “knowing-in-practice” appears both in the centre of the diagram as well as in a discontinuous line. This means that in the performance of their actual work, practitioners resort to different forms of knowledge simultaneously and there is interplay between the enabler (knowledge) and “knowing”.

Experts (Senior Managers)	Novices (Managers)
<ul style="list-style-type: none"> • Practice is more complex. Take many variables into account • Anticipate, foresee some situations • Improvisation (although they feel awkward to admit it) • Prioritise between aspects and as a consequence they speed up practice • Technical knowledge is subsidiary, it is instilled in them. This makes them self-confident and they pay attention to other aspects • Usually resort to tacit-individual knowledge (to interact with clients) and to tacit-collective knowledge (to interact with partners) • Know-who more complex and subtle, tacit components prevail. • Give “orders” in a subtle way • Storytelling to subordinates is frequent 	<ul style="list-style-type: none"> • Not as many variables are considered • None, or scarce anticipation • If possible, everything prepared in advance (avoid improvisation) • Technical knowledge is critically important in their daily practice • Feeling insecure when handling client’s demands • Usually resort to formal training • Know-who • Sometimes storytelling to subordinates • Making themselves visible is more crucial for them
<ul style="list-style-type: none"> • Winning superiors’ trust in order to “free” them • Assess/evaluate subordinates • Reading “between the lines”: organisational events and messages 	

Table 16 - Differences and Commonalties between Experts and Novices

According to AKUA's official documentation, there are few differences between the practice of senior managers (experts) and managers (novices). Our data, however, suggests that their practice is, in fact, quite different. As we have seen in Table 15, their activities do vary and even in the case of common activities, the expert takes into account many more factors. For the expert, practice implies more complexity. As summarised in Table 16 this is not the only difference.

These findings seem to point to the existence of different bundles of knowledge linked to the consultant's professional career. Data shows that we can identify at least three different bundles of knowledge which are linked to different positions in the firm.

Figure 18 shows the composition of the bundle that would be employed by a newcomer and junior consultant who is immersed in his own socialisation process within the organisation. This practitioner often resorts to his explicit individual knowledge (e.g. academic background and technical knowledge). He allocates time to learning the official rules and routines though he is also interested in getting to know the implicit contextual norms. These unofficial implicit norms are considered key to developing practice.

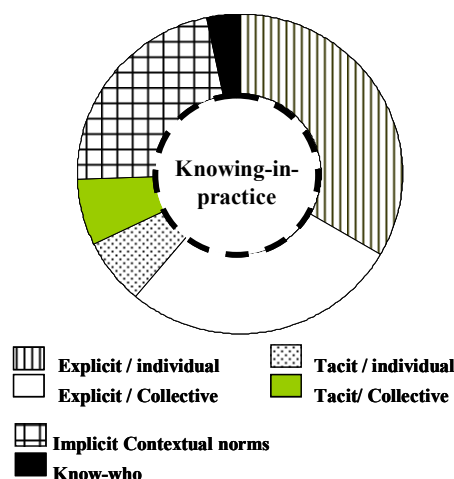


Figure 18 - AKUA Consultants: Bundles Typology 1

When consultants start climbing the "ladder" and reach mid-level positions the characteristics of the bundle are different. The consultant is becoming familiar with technical knowledge. As we have seen previously in Table 16, the novice manager relies on the use of

technical knowledge and employs a type of knowledge constituted by implicit unofficial norms. These unwritten rules focus mainly on the interaction between colleagues, superiors and subordinates and on how to break the official standard rules which constrain practice. These are complex rules which imply explicit and tacit collective knowledge. Moreover, during this phase, AKUA consultants increasingly resort to tacit knowledge and know-who gains in importance (see Figure 19).

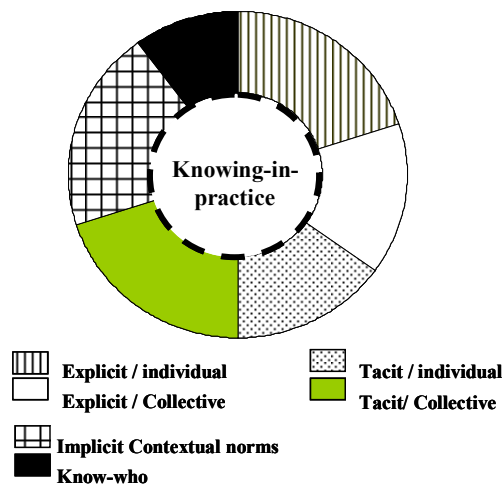


Figure 19 - AKUA Consultants: Bundles Typology 2

Finally, there is a third typology of bundle which belongs to consultants who are in higher positions in AKUA. These are supposed to be our experts. Taking into account that AKUA is a highly structured and professional bureaucracy, we could assume that the role of explicit knowledge – individual (Lam, 2000) and collective – should be more relevant than other types. However, our data does not seem to point in that direction.

For these experts, explicit-individual knowledge (e.g. technical knowledge) is not as crucial and remains subsidiary. On the contrary, according to our data, individual and collective tacit knowledge are especially relevant for the experts’ practice. Indeed, individual tacit knowledge is especially relevant to deal with clients. On the other hand, collective tacit and Know-who knowledge are relevant in order to interact with superiors and to understand corporate underlying messages. This Know-who type of knowledge is not superficial knowledge. It implies detailed and subtle components. Figure 20 shows these findings.

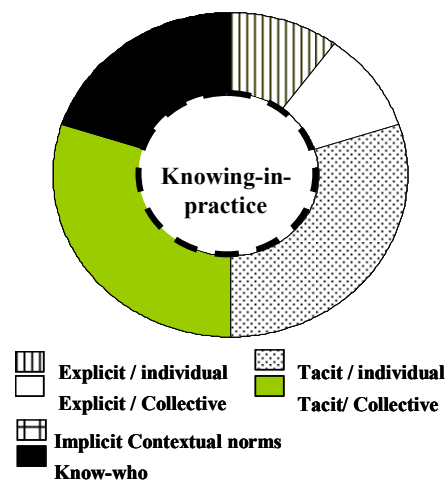


Figure 20 - AKUA Consultants: Bundles Typology 3

Taking into account these preliminary findings, we can now highlight some aspects. First, it is interesting to see that a large proportion of relevant knowledge is related to the interrelationship between practitioners. For instance, many unwritten rules tackle this issue. One reason may be that practice is collective. It is carried out by a team, and at the same time there is a strict division of labour: everyone has their assigned tasks. So from the very outset, practitioners have to interact with other consultants in different hierarchical positions. Another reason is rooted in the concept of “knowing”. As we have seen in previous sections, “knowing” implies relationships or interactions. The existence of this relevant knowledge reflects this fact.

Second, we can also explore the different typologies of bundles. This highlights the fact that the bundle of knowledge evolves through practice. Different bundles of knowledge are employed at the same time that the professional climbs the hierarchical ladder. This evolution does not imply a replacement but the different bundles constitute different sedimentary layers in the consultant’s stock of knowledge (see Figure 21).

While the analysis thus far provides insights into some of the differences between knowledge and knowing, questions linger with respect to the ways in which the senior managers’ bundle of knowledge evolves in the consulting practice. For example, to what

extent do some forms of knowledge prevail over others? Why does collective tacit knowledge appear to play such a crucial role? Why is it so important to be able to “read between the lines”? Based on our analysis, it appears that to a large extent the answers to these questions rest on certain characteristics of the specific consulting practice and its organisational features. Studying these variables will be the purpose of the next section.

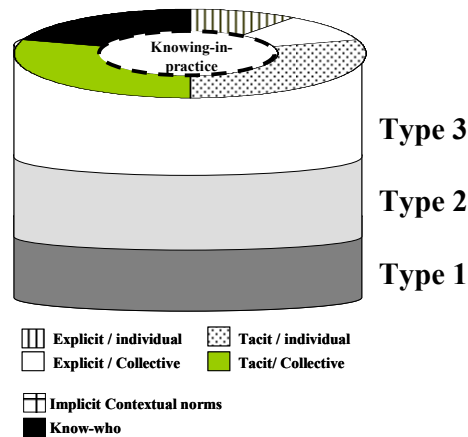


Figure 21 - Bundles Evolution

4.5.3. The Organisation

“When it comes down to it, I always say that we’re a factory, that our machines are people...”

-AKUA’s junior consultant-

“No, no, I believe that it’s like... they aren’t written down anywhere, but I don’t know how to put in into words for you. It’s like in a hospital where you’ve got an auxiliary worker, a patient and a doctor. They don’t say to the auxiliary worker “listen, you’ve got to show some respect to the doctor”. The doctor has to respect the auxiliary worker as well, it’s a question of mutual respect, but let’s say that there’s a kind of hierarchy as far as orders go, especially related to orders.”

-AKUA’S senior manager-

“... In addition it gave us this vision of back-office, of background, of what you don't normally get to see: this underground world at AKUA, and let's just say that there's a lot to see, and there's no work culture of this, of how things are done, of how people relate to one another, you won't find this written down anywhere. But, well, it's real. I suppose it's like the fizz and bubbles in Champaign, and when you see the people who are rising to the top, well, I...”

-AKUA'S manager-

AKUA provides different kinds of professional services: auditing, consulting, tax and legal advisory services. These are the three main divisions of the company. Within each division, practitioners are grouped taking into account two criteria: by solution (product) and by industry. This means that formally, technical and industry knowledge has prevailed over other types. Indeed, the predominant position of individual-explicit has had far-reaching implications: the specialisation of its members, the definition of experts within the company, hiring policies focused on employing knowledgeable individuals, professional development based on formal training which fosters this type of knowledge, and so on. However, this specialisation is defined along the professional career. For low positions in the hierarchical ladder, consultants are not assigned according to certain level of specialisation. They are part of a “pool” of consultants who are a resource assigned to different projects according to company needs.

AKUA lacks a formal explicit organisational graph. Practitioners know who holds the main positions but they should devote time to enquiring as to where each of the practitioners is located within the matrix. In any case, hierarchy is ubiquitous in this organisation. As consultants say, *“This organisation is very hierarchical... it is a pyramid”*. Hierarchy entails the different positions of the organisation and the relationships between practitioners of different levels. It is a ladder and you either climb up or you are out. Therefore, there is the implicit assumption that everyone who starts working in AKUA should focus on achieving the highest position – being a partner – otherwise, he will be out. Climbing the ladder is a survival feature, not an option.

As a consequence, how to climb the ladder turns into a key issue for practitioners. Nevertheless this aim is not easy. It is not based on good performance or on how much technical knowledge you possess. Many other aspects seem to exert a major influence on it. For instance, working in an office branch or in the central office is relevant for promotions. The types of projects you participate in and the industrial sector you belong to are also influential aspects. In general, hierarchy and power are not directly linked. The hierarchical position may be the same but power varies according to the industrial sector, division, branch or group you belong to. Then, how to climb the ladder? There is no straightforward answer to this question and it includes considering not only the formal system of evaluation and promotion but other aspects which gain more importance. For example, your ability to sell, the support of a benefactor, to be excessively tolerant of the organisation and knowing the individuals, their personal likes and dislikes are crucial aspects to be taken into account.

Moreover, formal position needs informal corporate legitimisation. In other words, a senior consultant can be promoted to manager but he may well carry on performing the same tasks as other senior consultants, because the organisation and practitioners do not recognise him in his new position as such. Or, as we have previously stated, if the organisation unofficially assumed a forthcoming promotion, this will guide the practitioner's role.

Due to the importance of hierarchy, practitioners should be able to handle and work with it and this will have consequences on the type of knowledge required throughout the different phases in the professional career of the consultant. For example, practitioners devote a lot of time to capturing the implicit norms which will allow them to cope with the hierarchy. They also develop the ability to “break” formal structures and rules in a way that doesn't seem obvious. Indeed, like similar analyses performed in the past, practitioners shift from canonical to non-canonical practice (Brown and Duguid, 1991).

4.5.2. The Individual Practitioner

Although the organisation exerts considerable influence over the practitioners, individual aspects also affect consultants' actual practice. In this section we will analyse how the

personality, identity, personal motivation and previous experience of the individual practitioner affect or are affected by the actual practice.

Personality and hierarchy are also interwoven but in different ways. On the one hand, not all managers or senior consultants behave in the same way. They act according to their own personality and the level of discretionality is high, especially in the relationship with their team members and inferiors. On the other hand, the higher you climb on the hierarchical ladder, the more similar you are to your colleagues in the same position. In other words, hierarchy affects personality, there is an individual transformation. As a consultant remarks: *“All the partners seem the same. They change the way they think... They share the same speech patterns... There is a real transformation.”*

“Well... it’s perhaps who you have to talk to. But, well, I believe that it’s also got a bit to do with what each person has to offer: if you’re good at what you do or not.”

-AKUA’S manager-

According to practitioners, personality also influences the possibilities of climbing the ladder as many requirements for being promoted are based on innate capabilities. If you are lucky and you are good at negotiating or at selling yourself internally, you will climb the ladder. If not, you will be out. This means that personal skills and abilities, which are a form of knowledge, play a key role in promotion within AKUA.

“Well, yes. As far as I’m concerned, really, the fact that they’ve [‘They’ refer to ‘the clients’] paid is not what’s important. I mean, I put myself in their shoes... I don’t feel comfortable if I think I’m not giving them what they’ve paid good money for. So...that unsettles me, it makes me feel uneasy. I mean there are times when I have real conflicts, I get upset and I have a strong character, and they know it. When I see that there’s a conflict between what they are being given and what I believe they really want, or they have shown that they are hoping for... it seems to me that they’re being short changed somehow, and that makes me feel uncomfortable.”

-AKUA’S senior consultant-

Practitioners also exert their discretionality based on their moral judgement. They should decide for themselves what to learn or not to learn, what behaviour is appropriate or inappropriate even when this may be accepted by the organisation. This situation may cause personal conflict if the practitioner cannot decide for himself because of his hierarchical position.

Nevertheless, in addition to their own personality, knowing others' personality is crucial. Personal features are key aspects to be considered if you want to get to know someone, especially if this person is one of your superiors:

“Here, you don't know what Manager 2 is in charge of, maybe you know he's in the 'Public' division, but then again maybe not. So you might know he's in Public department, or you might know that he's a great guy, or you know that he's quite good with the subject of... For example, let me give you an example... you know that he is quite good with the subject of (...) that it is not a question of spending a lot of hours on it either; you already know that they might appreciate a job well done; you know that they'll probably come back to you if the job gets done well, the type of projects, etc. You know that... Of course it's a question of having bit of information up your sleeve, for instance, what projects they work on. I know that Manager 2 works on projects related to organisational themes.”

-AKUA'S junior consultant -

Knowing practitioners' personality is a piece of the key information consultants seek out in order to approach certain superiors or not and/or manage daily workloads with them.

Identity is also an influential aspect. Consultants' identity comprises many aspects. For instance, their hierarchical position, their academic background and the organisation means that a consultant is at the same time a manager and an engineer as well as being an AKUA consultant. These different identities emerge at different moments.

“Before, you would exert responsibility up to here, but now you see it just a little bit more than that... You see it something like “listen, you’ve got it right, eh? I am good at what I do. You’ve made the right choice in appointing me manager”. Now, I am something else, I’m different.”

-AKUA’S manager-

This statement captures the feelings of a newly-promoted manager. He states that now that he has climbed another rung on the ladder, he *is* different. Indeed, as previously said, there is an individual transformation the higher up you are in the AKUA hierarchy and practitioners turn out to be more homogenous. At the same time, hierarchy defines the line between “we and they”, between “we, the consultants” and “they, the bosses, the ones who hold a managerial position”.

“And on the other hand, in terms of the wine cellars, this really is very interesting as I’m an industrial engineer. I mean, the whole production and elaboration side of things in the cellars for instance, is what I think perhaps I would have liked to have gotten more involved in, and seen how they worked through each process.”

-AKUA’S senior consultant-

The academic background also comprises the identity of our practitioners. It affects their motivations, their stock of technical and general knowledge and their relation with team members. Indeed consultants from different academic backgrounds resort to their specific fields to frame problems or tackle situations. This may give rise to certain conflicts between consultants working together on the same project.

Finally, the “AKUA profile” is a distinctive feature to take into account. Indeed, they are AKUA consultants and they are different to others who belong to a different global advisory firm.

“Perhaps if you want to be in a company of this type and with this type of work, a certain profile is required: one of very hardworking people who are extremely dedicated to doing their job well. People who are very generous with the company, not so focussed on themselves in particular, but

on the company, making sure that the job gets done well, in making sure that others are satisfied with the results. And, then, whenever somebody (...), commitment is very important, getting involved in what you're doing...”

-AKUA'S senior manager-

“... One of the AKUA priorities is motivation. Well, motivation, yes, teamwork. And it is assumed that it has Well, you know, in principle you've got to be your own motivation.”

-AKUA'S manager-

“And then you say to him: ‘listen, to make sure this turns out well, we have to do it together. You are part of this team and we need your help as much as anyone else's, because without you, you are (...) or we aren't going to make it... Look mate, I watch what I'm doing as well, I don't give more of myself than I have to anymore, we need you to help us with this'...”

-AKUA'S junior consultant-

In AKUA, internal motivation is assumed. This is not a very distinctive feature as many companies share this belief. Indeed, the official values consider motivation and teamwork as a cornerstone. However, what is more idiosyncratic is the fact that you should show your motivation deliberately. In other words, you should show you are personally committed to the firm, leaving aside other personal objectives. Accepting certain types of projects that entail personal sacrifices or participating in internal events is proof of how committed practitioners are to the company.

Internal motivation is also especially relevant in terms of guiding learning. It is their own internal motivation which pushes practitioners to learn by themselves, to invest time in learning. Although this internal motivation is assumed, superiors have sometimes to look for their team members' motivation, especially those for whom hierarchy does not mean following orders without questioning, as in the past. This is the case among the latest generation of recruits. If this is the case, practitioners are able to develop speeches which reflect rhetorical elements (pathos).

Finally, individual previous experience also counts, though it plays a different role depending on its characteristics. For instance, practitioners who have been working as consultants in other firms use their previous experience not to apply but to compare. They use their previous experience to be aware of the main differences between organisational contexts. They learn by contrast. As a consequence they speed up learning in comparison with those who lack this experience. On the other hand, practitioners who have experience in other practices are able to understand different perspectives and/or roles more easily. For instance, they identify themselves with clients and are able to put themselves in his clients' shoes. As a consequence, they may play a boundary role. However, in both cases, having previous experience in other companies may allow the practitioner to participate and be a member of external communities of practice which are highly valued when they come up against new projects or situations.

Nevertheless, most of the practitioners in AKUA lack these types of experience as they have been promoted internally. Then, we have practitioners who use their experience in the same practice (consulting) and in the same company. In this case, they use their previous stock of knowledge in order to frame and understand new problems. They resort to past experience in order to understand or solve anything which is new.

4.5.3. The Consulting Work in AKUA

"It's on a managerial level that you really begin to make direct contact with the client, as far as commercial management is concerned. Up to that point, it isn't assumed that you have to do it as part of your role. All the same, that doesn't mean that some smart student or other doesn't do it, but that is from managerial level onwards."

-AKUA'S manager-

"... and then, of course, they needed to look for a manager to manage the day to day stuff, because they're more involved in the sales side of things. Project start-ups are very difficult for managers when they haven't been in at the commercial phase. For example, it's a safe bet

that this didn't happen to XX [XX is a senior manager], because when you promote to senior manager you are already, so to speak, at the start of the project [with the potential customers], (...) Maybe the senior manager is less involved in the day to day running of the project and gets a bit lost and is a bit more out of it in terms of what the team is doing and the manager is still in the transition phase from consultant to other functions. The transition is much slower than I had hoped it would be.”

-AKUA'S manager-

“Then we decided what people we had to interview and when I saw the amount of interviews we had to do, I 'flipped' – just couldn't believe it. Because I'm all in favour of going to as many interviews as possible; all this nonsense of splitting us up to cover all of the interviews is fine, but you end up getting only half the possible information. So, not being able to go to most of the interviews - that worried me.”

-AKUA'S senior consultant-

The organisation and the individual practitioner will exert influence in terms of the bundle of knowledge and the epistemic work. However, they are not the only aspects to take into account. The nature of the work carried out by consultants and its characteristics also play a key role. For instance, one of the main characteristics of the consulting work in AKUA is the division of labour. This fact has further consequences. First, consultants' practice differs according to their position in the organisation. Lower hierarchical positions mean more project management activities and being more aware of technical and project knowledge. On the contrary, the higher up consultants reach on the hierarchical ladder, practice or typical situations faced by the practitioner will comprise more commercial activities and the use of less technical knowledge.

Second, division of labour causes a situation of distributed cognition. Practitioners cannot participate in the whole process: they merely see the part in which they participate. Therefore, they do not see the complete practice. This fact affects the learning process of practitioners as they have no access to the whole practice and as the legitimate peripheral

participation is discarded. Moreover, activities are also affected. In this scenario, boundary or intermediary roles and activities which connect different stages of the process are crucial. Indeed, these roles and activities are not formalised but practitioners carry them out without realising they are doing so. For example, in the kick-off meeting of a project, the senior manager who is the one who has access to the client, should transmit the idea to the other members of the team who will be the ones mainly focused on the development of the output. This transmission does not lack in complexity and interpretations.

“Not at all, they are completely different. One is a project of subjects related to social responsibility and reputation, which is quite trendy right now. And well, the truth is that it’s going really well, for XXX. And the other one is a project that I don’t know if it is coming along even better, but well, it is part of “The White Paper on Music”. The music agents have been interviewed, record labels, singers and musicians, (...) sales, and this is really great (...) in a very general project such as the one that XXX was working on I really learnt a lot about everything, because you got to touch on just about everything; in a project like XX’s, which is more specific and more technical, you learn less, but you also learn other types of things.”

-AKUA’s junior consultant-

“... Besides, you also work with different group leaders and different managers. That’s very important, you take what you like most from each one, ‘because I like how this person manages people’ (...)”

-AKUA’s senior manager-

Diversity is another characteristic of the consulting practice. Indeed, practitioners consider that it is an aspect inherent in the consulting practice and strongly linked to the motivation of learning. Indeed, participating in different types of projects stimulates learning. There are many sources of diversity. It may be caused by the project typology, the team members or partners who are responsible for the project, and even by different clients.

As previously mentioned, practitioners do not constitute formal working groups. Different projects may imply working with different colleagues we have never worked with before:

inferiors and/or superiors and/or colleagues. This knowledge is very important because it saves time and facilitates the development of the tasks as consultants know the likes and dislikes and ways of working of their superiors and at the same time, the superior knows his team and the different underlying group messages.

Projects may vary depending on a variety of different factors. These may include different methodological contents or different industrial sectors. However, if we talk about diversity the key criteria is whether or not the project is a standard and recurrent one or, by contrast, it is new to the company or highly customised. In the first case, practitioners resort to the stock of previous knowledge which conducts actions. In the second case, practice changes a lot. The degree of complexity and improvisation increases and standard and common courses of action are not very useful. Indeed, practitioners consider this type of project as “atypical” or “rare”.

Clients also change in each project as the consulting practice is not a continuous service. This fact introduces a degree of diversity in practice and consultants have to devote some time to getting to know the interlocutor or contact person for the client company in each project. This knowledge is really important especially in the data collection phase in order to write and present a good business proposal that gathers the precise and real needs of the client, which are often not so obvious. As a consequence, the more customised the project, the higher degree of diversity the practitioner is required to cope with.

“Anyway, nearly everything is very ..., you find that there is no standardised methodology like in an audit, and that you have to invent things for yourself, create them through talking to the client, seeing what it is he wants (...)”

-AKUA’S manager-

Indeed, customisation and co-production are other distinctive features of the consulting practice. These increase the level of diversity, complexity and improvisation of practice as the client is an uncontrolled variable in the delivery process who has an important and even decisive role in the development of the project.

Customised projects are the ones which lack a clear and defined methodology or standard procedure or, where this methodology exists, it is very vague and needs to be adapted to the idiosyncrasies of the client. However, the client is co-producer and this means that he is part of the delivery process. His role may vary depending on the project. For instance, the client participates in writing the proposal providing the standard documentation to be supplied by the consultancy firm (especially in projects for Public Administration).

The client also plays a key role in developing the solution to the problem. They participate in workshops where they work through different solutions proposed by the consultants. Indeed, it is a collective activity where consultants and people from the client company collaborate in order to find a consensual solution. In this scenario, improvisation, intuition and capturing subtle messages sent by the clients are crucial and they become key aspects when the practitioners have to get to know the context of the client company. Indeed, they should know what is politically acceptable in order to find not only good technical solutions but, in addition, good technical solutions that are viable and accepted.

“It is extremely important for you to meet a deadline – if it means not sleeping, then you don’t sleep (...). ‘I didn’t have time’, no, the words didn’t have time, simply don’t exist.”

-AKUA’S senior manager-

“And if something similar already exists, we’re not going to reinvent the wheel, after all. The whole field of knowledge management is very important and is based on that: if somebody has already prepared a proposal for XXX, for something related with a social work subject, well nobody need start from scratch, “here use this”. Otherwise, you are just wasting time.”

-AKUA’S senior manager-

“Well because there are objectives, which means that the internal objectives of the firm oblige you to make a maximum charge to the client, and the managers and project managers are also asked to make a charge via invoicing. So, the sooner you invoice, the better the objectives and the sooner you finish the project, the sooner you can start on another one. In other words,

there is a series of internal management implications at work in addition to how the company is set up: but to transfer those problems onto the client just doesn't seem right to me...

-AKUA'S senior consultant-

Another characteristic of the consulting practice in AKUA is that time exerts pressure. Meeting deadlines is compulsory although most of the time this pressure is internal. In other words, AKUA's organisational structure considers the consultant as a resource. Productivity means employing as little resources as possible and being in a project as little time as possible or employing the same resource in different projects at the same time (overlapping projects). This pressure is linked to hierarchy in the sense that the further down you are on the hierarchical ladder, the more you feel this pressure. However, as the practitioners say, you just have to “*grin and bear it*”. Therefore, the origin of this pressure is not the client's demands but it is a consequence of how AKUA is organised internally.

Due to this fact, stress is ubiquitous among the practitioners: there is a temporal gap between when formal training is received and the moment this knowledge is needed and it hinders the creation of collective knowledge. As previously stated, in order not to waste time the practitioners resort to previous documentation. In this case they learn by analogy and they speed the process up by “copy and paste”. However, the best solution is to go to the direct sources. This means interacting with colleagues who previously worked on the project or seeking the advice of outsiders who are experts in the field. Finally, this is such a prominent feature of their practice that many informal innovations carried out by working groups or individuals are intended to save time. This is the motto of their innovation.

As we have seen, the nature of the consulting work in AKUA has some distinctive features which affect practitioners and types of knowledge. Among these, division of labour, diversity, customisation and co-production as well as time constraints are especially relevant.

4.5.6. The Influence of Organisational, Individual and Practice Variables on Knowledge and Action

As we have seen, organisational, individual and practice characteristics exert an influence on knowledge and action in many different aspects. Therefore, the fact that some types of knowledge prevail over others is not an inconsequential and random aspect. Hence, they are active players. In this section, we summarise the most relevant influential aspects on knowledge and action and its further consequences.

As we have seen, organisational characteristics are ubiquitous throughout our study of practice. Although the case vignette is not intended as a thorough analysis of this issue, there do appear to be a number of recurrent variables. Organisational structure, for example, plays a key role in practice. As previously mentioned, AKUA has a matrix structure with two axes, and consultants are grouped by the solutions/products they offer and by industry/sector. As a result, it appears that from the company perspective, one's technical and industry knowledge takes prevalence over other forms of knowledge. The concomitant dominant position of individual-explicit knowledge has far reaching implications for the definition of experts within the company, hiring policies focused on employing knowledgeable individuals, professional development and formal training that foster this type of explicit knowledge, and so on.

The practitioners in the study also stressed that AKUA is highly structured and hierarchical. These features also affect practice, especially in terms of the tacit knowledge that the consultants develop. For example, practitioners devote a lot of time in capturing the implicit norms that allow them to cope with hierarchical pressures. They also attempt to develop the ability to "break away" from the formal structure and its rules in ways that allow them to appear as if they are conforming to expectations. Indeed, as similar analyses have suggested, practitioners attempt to transition from canonical practice to more non-canonical ones (Brown and Duguid, 1991). The canonical practice groups together all the formal descriptions of work (e.g. procedures, manuals, job descriptions). The non-canonical refers to the actual practices of the organisation's members. Brown and Duguid's discourse on

communities of practice is strongly supported by their analysis of a gap between those formalised procedures and actual practice.

Organisational size also affects practice. AKUA is a global company and therefore it resorts to standard and explicit artefacts to maintain control and homogeneity. However, its scale also generates the need for visibility: practitioners must take the initiative to make themselves visible and it is important to go where power resides (e.g. decision-making centres). In spite of the fact that AKUA is highly structured and hierarchical, power is often found away from formal and official structures and systems. This power resides in certain individuals, certain business divisions, certain branches and so forth. As a consequence, the consultants have to “read between the lines” to assess where the power centres are located and what would be the best way to approach them. This is why individual and collective tacit knowledge and, more specifically, the so-called “know-who” knowledge have such a prevailing role in AKUA.

Focusing on the nature of the practice and its characteristics, it is important to note that consulting is a professional service (Schemenner, 1986). This means that the service has a high degree of labour intensity and a high degree of interaction with the client, with significant customisation of the service offered. As previously appointed, the output, therefore, varies depending on the client and the process – in which the client also plays a role as co-producer, leading to further variation. It is in this context that consultants must be able to draw on their own discretion. As a consequence, this practice is characterised by its complexity and the relatively large number of variables that cannot be controlled. These factors make generic and theoretical (explicit) knowledge of limited use from the vantage point of the individual consultant, and they must rely on their ability to improvise and anticipate future situations that are expressions of individual-tacit knowledge.

In this light, the organisation’s premise that homogeneity and coherence in a global company derives from the available common stocks of knowledge does not remain unchallenged. Clearly, it applies best to newcomers who tend to rely more on explicit knowledge. But in the case of old-timers, who acquire professional expertise as they develop

tacit knowledge, there is some doubt as to whether or not explicit knowledge keeps continues to provide internal coherence. Indeed, coherence is based more on specific rules such as “up or out”, which in turn reinforce specific types of knowledge (e.g. know-who). This creates a considerable gap between what the organisation perceives as crucial to become a good consultant and the knowledge necessary to acquire such a profile and what the individual consultants perceive as central.

Another relevant characteristic is the effect of time. Time exerts significant pressure and, as a consequence, practitioners must resort to previous work and experience in an effort to reuse existing knowledge or, even better, look for unofficial experts who can guide their actions in practice. These unofficial experts may be within or outside the company and they constitute real “communities of practice”. These actual communities, which transcend organisational boundaries, tend to be fuelled by previous work experience in the consultants’ history or by informal ties. In a sense they constitute a light version of an “ecology of practice” (Brown and Duguid, 2000a) within which knowledge flows based on personal friendships and/or previous work ties developed in other organisations.

In short, these various dynamics raise questions about who is really an expert in this practice. Officially, experts in AKUA are the individuals who are able to draw on their individual-explicit knowledge, and they are formally identified in the firm’s database as “experts” for an industrial sector or a solution. In actual practice, however, it appears that the real experts are those consultants who are able to identify all the relevant individuals within the organisation and interact with them in such a way that will ensure their survival and enable them to climb the firm’s promotion ladder. These experts are able to “read between the lines” of organisational messages, recognising “key” participants, realising who will (or will not) support them, and understanding how to develop a good rapport with them. In essence, these individuals are able to reframe their practice and their system according to their own goals. The expert practitioners appear to be skilled political players.

4.6. TYPES OF “KNOWING”

Our preliminary observations in this study point to the existence of not only different bundles of knowledge but also different types of “knowing”. In a number of instances, the practitioners resorted to “tacit knowing”. Here, we are referring to the term coined by Polanyi (1966), in which this type of knowing implies an application of theoretical and practical knowledge. Part of this knowledge is indwelled in us, in our subsidiary awareness while our focal awareness may be concentrated on other factors.

This dynamic is seen in the case of the senior managers (experts) when they present business proposals. They leave aside the theories or explicit documentation and focus on the reactions of the audience. At this moment, theories and explicit documentation, while helpful in guiding their responses, are secondary to their (tacit) ability to read the situation and improvise as necessary.

As Schon (1983) suggests, the practitioners turn into reflective practitioners and they reflect-in-action. In the case of customised and non-standard projects, this type of knowing is especially relevant and it is enacted in conversations with the clients and the consultants. In these instances, problems are reframed, hypotheses are tested, and a constant inquiry is maintained until a final solution can be achieved.

A last point can be made on the influence of Human Resource Policies in relation to Knowledge in AKUA. We have thus far made reference to the importance of considering organisational structure and specific practices vis-à-vis knowledge. It appears though that there are also important consequences that can be derived from a Human Resource perspective. Certain features – such as a hierarchical structure in combination with evaluation procedures that encourage consultants to strive for visibility and/or a culture of continuous ladder progression – can hamper the ability of AKUA to turn into a more reflective mode. Indeed, as consultants are supposed to get appreciative evaluations and these are partially based on the kinds of projects they are involved with, a hidden competence is sought that might prevent them from developing other kinds of expertise.

While this in turn might be functional for AKUA, it also has a differential effect in that “successful” consultants will be finally selected in terms of their ability to read the internal organisation (know-who). This competence may not be officially recognised, but it appears to be a crucial one for AKUA. The point here is that as long as this practice remains unacknowledged, the organisation is favouring an *internal focus* rather than a client or service perspective.

4.7. CONCLUSIONS AND FUTURE CONSIDERATIONS

In the light of the different trends in the study of knowledge, this chapter began by raising questions about “knowing” and practice, the relationship between knowledge and action, and the various dynamics that could affect “knowing”. Our data suggests that, in practice, “knowing” clusters around a range of elements that are interwoven. “Knowing” implies epistemic work and, hence, knowledge is an enabler, a “bundle of knowledge”-in-practice that is constituted by different expressions of knowledge.

However, the articulation of this bundle is not stable. It varies between experts and novices and with the contingent nature of practice: it is dynamic. As the case vignette indicates, context also plays an active role in knowledge and action. It is a constitutive element and not a mere container.

Questions remain as to how experts become “experts”, which is an interesting issue to explore more fully. In the study, we identified and analysed the differences between experts and novices, but did not explore *how* the relations between the experts and novices and their bundles of knowledge evolve over time. This is a productive field of inquiry in which knowledge types, knowing, practice and learning are interwoven.

The interaction between explicit and tacit knowledge at the individual and collective levels also suggests the need to re-examine and potentially reconsider a host of existing managerial practices. Currently, explicit and abstract knowledge play a prominent role in both the

theoretical and practical fields. According to our analysis, although these explicit artefacts and abstract knowledge play a role in practice, other types of knowledge should also be considered. Of course, paying such attention to other expressions of knowledge and “knowing” would involve reconsidering important managerial practices, from leadership and managerial style, to the hiring and training of employees. Such reflection, however, will be well worth our time and effort.

Chapter 5

UNDERSTANDING EXPERTISE*

5. 1. INTRODUCTION

This paper aims to continue along a line of research (Bou and Sauquet, 2005) focusing on how professionals develop and use knowledge in practice. It is aligned with a stream of research that understands that knowledge and practice have a rich, complex and productive relationship.

In this paper we take a closer look at the issue of expertise as part of the exploration of knowledge and practice. This is a central issue for professionals as they claim to have a special degree of expertise. However, expertise is a problematic issue. Philosophers have accurately questioned the possibility of developing expert judgement (Wittgenstein, 1953) on the basis of the problems involved in developing *expert* judgement and its complex relationship with rules, experience and learning. Indeed, this last statement comprises many of the central issues encountered in this research.

Professionalisation is central in a society which claims to be moving towards developing itself by way of incrementing its knowledge base (Lisbon declaration, 2000). Such a society

* This chapter is based on the paper Bou, E. and A. Sauquet (2004b): "Exploring the Dynamics of Knowledge in Action of Experts and Novices: An Empirical Study". In *Conference Proceedings of the 5th European Conference of Knowledge Management (ECKM)*, Paris, France; pp. 51-64. Reading: ACI Limited.

would develop through the constitution of specific fields of expertise and where professionalisation seems a natural consequence (Benveniste, 1977). It is reasonable to suppose that expertise is a well-established category.

Early on, interest in expertise was acknowledged and developed mostly within cognitive parameters (Simon, 1991). The dominant claim is that expertise would be the natural result of the process of mastering specified bodies of knowledge. Empirical studies on domains such as chess (Chase and Simon, 1973), physics (Larkin, McDermott, Simon and Simon, 1980), programming (Adelson, 1981) seem to have lent support to this claim. Professions are thus, perceived as being bounded to specific sets of rules. Despite the dominance of the approach there have been some attempts to frame expertise in a manner that assigns the expert a more active role (e.g. Schon, 1983) or which problematise practice (e.g. Lave, 1988). It is our interest to explore expertise in these kinds of projects.

This paper is the report on research conducted to explore and document the meanings of expertise in different organisations. Data was gathered longitudinally in two organisations and collected by means of participant observation and in-depth interviews.

The paper is divided into three main parts. First, we will analyse the different approaches used to study the differences between experts and novices. We will not attempt a comprehensive literature review. Rather, we will focus on the mainstreams under which relevant studies of expertise have been conducted and clarify the basic assumptions and goals prevalent to each stream. Second, the empirical study will be documented. The fieldwork entailed an ethnographic study of experts and novices in two service companies. After presenting the empirical results we outlined the scheme of a new general theory of expertise which may be complementary to other viewpoints previously mentioned. Finally, conclusions and further implications will be presented.

5.2. THE DOMINANT VIEWPOINTS OF EXPERTISE

Although interest in expertise runs parallel to the awareness on knowledge, expertise and experts came as a breakthrough in the late sixties with De Groot's (1965) works on master chess players. Current interest in knowledge and knowledge management within the organisation has renewed the importance of reaching a good answer to the question of what makes an expert and the process involved in becoming one.

For years, the most common approach for the study of expertise has been the cognitivist school. This trend leads away from focusing on observable behaviour towards the study of the mental processes. Despite this common framework, the way different authors have approached the phenomenon differs.

For the purpose of clarification we classify the contribution of different authors introducing a flow perspective which refers to the specific *inputs* of the mental processes, to the characteristics or steps of the *process* or if they focus on the *outputs* of such a process (see Table 17). We assume that this flow perspective is coherent with the main trends of cognitivism (Sauquet, 2004).

If we pay attention to authors who tackle the specific characteristics of inputs, we find that some of them highlight the relationship between expertise and the accumulation of knowledge (e.g. Bédard, 1989; Black, Carlile and Reppenning, 2004): the expert is the one who has accumulated more knowledge. For this group of authors, knowledge is a stockpiled commodity and it should be ready to be applied in practice. Expertise is therefore, a matter of accumulation. Two processes are then perceived as crucial: storage and recalling. For instance, Chase and Simon (1973) state that retaining in meaningful ways is the relevant aspect. That is why experts organised their knowledge in *chunks* which are stored in memory. In order to overcome short-term memory (Miller, 1956), individuals group information into chunks (Chase and Simon, 1973). Chunking means encoding information in a meaningful way. This means that experts structure their different experiences in categories of information instead of individual elements. As a consequence, the more expert a

professional is, the more complex and the larger their chunks. In sum, as accumulation and storage are crucial, good storage structures are what make the difference.

Second to storage, accessing to the available stocks of knowledge is equally important. Thus recalling is the central process of authors who underscore the outstanding role of *memory* (e.g. De Groot, 1966; Ericsson and Chase, 1982; Posner, 1988; Ericsson and Polson, 1988). For these authors, the attributes of this superior memory is not innate. It is based on repetition (e.g. Ericsson and Chase, 1982) or deliberate practice (Ericsson et al., 1993).

Although this is the general view held on expertise it is not the only one. Gardner (1983) defends the idea of expertise as an innate capacity; though his main contribution is the identification of different competencies and the importance of a good matching between competencies needed and competencies actually possessed by an individual. In fact, he states that exceptional performance results from a close match between the individual's intelligence profile and the demands of the particular domain. Therefore, expertise – or the possibility of becoming an expert – is understood within the singularity of each individual, offering a quite contingent approach to expertise.

Further to storage and recalling, some authors tackle the question of acquisition which likewise, is not exempt of controversy. For some authors, an expert is the one who has accumulated knowledge through practice or experience (e.g. Frensch and Sternberg, 1989), while others remark that the expert should have received formal training or both (e.g. Spence and Brucks, 1997; Sveiby, 1997). It is especially relevant that those who emphasise experience as the key aspect of acquisition, often remark that what is acquired is a skill or ability, and they do not necessarily employ the term 'knowledge'. This aspect gives rise to another group of authors who stress the aspect of skill acquisition (e.g. Anderson, 1982; Frensch and Sternberg, 1989). For these authors, the learning process is the core and most difficult aspect. However, dedicating attention to learning issues is quite exceptional as acquisition is not central for these authors and hence it is tackled rather superficially. Indeed, it has been put forward that cognitivists lack a learning theory (Poza, 1989; Spender,

1994). In sum, storage, recalling, acquisition and matching seem to comprise key aspects which mark the difference between experts and novices.

Inputs		Expert as the one who....
<ul style="list-style-type: none"> ▪ Possession of knowledge or/and skill (or both) 	Anderson (1982) Frensch and Sternberg (1989) Prietula and Simon (1989) Bédard (1989); Shanteau (1992) Black, Carlile and Repenning (2004)	Experts know more
<ul style="list-style-type: none"> ▪ Retaining in meaningful or especial ways 	Chase and Simon (1973) Prietula and Simon (1989)	Experts structure information in complex units (bigger chunks)
<ul style="list-style-type: none"> ▪ Developing Memory 	De Groot (1966) Ericsson and Chase (1982); Posner (1988); Ericsson and Polson (1988)	Experts have superior memory
<ul style="list-style-type: none"> ▪ Innate capacity 	Gardner (1983)	Expertise as optimal matching between individual inherited competencies and job characteristics
Process		
<ul style="list-style-type: none"> ▪ Quality of problem representations (e.g. problem identification and representation; problem understanding) 	Simon and Simon (1978) Larkin et al., (1980) Chi, Feltovich and Glaser (1981) Silver (1981); Chi et al., (1982) Day and Lord (1992)	Experts categorise the problem and define it in a different way to novices, they go to the basis of the problem
<ul style="list-style-type: none"> ▪ Strategies for problem-solving (e.g. top-down or bottom-up strategies or forward vs. backward strategies; inductive vs. deductive strategies)) 	Simon and Simon (1978) Larkin et al (1980) Johnson (1988) Chi, Feltovich and Glaser (1981) Jeffries, Turner, Polson and Atwood (1981) Chi, Glaser and Farr (1988) Patel and Groen (1991) Mackay and Elam (1992); Knoradt (1992) Schenk, Vitalari and Davis (1998)	Experts use forward strategies to solve problems
Outcomes		
<ul style="list-style-type: none"> ▪ Differences in performance 	Chase and Simon (1973) Bereiter and Scardamalia (1986) Schaper and Sonntag (1998) Ericsson and Smith (1991); Ericsson and Charness (1994) Bédard and Chi (1993) Davis and Solomon (1989) Shanteau (1992) Abdolmohammadi, Searfoss and Shanteau (2004)	Experts perform faster, better and so on

Table 17 - Traditional Terms of Comparison between Experts and Novices

A related but different approach stresses the differences between experts and novices when they are running the mental processes (see Table 17). Differences in the way those processes are run seem to be crucial to understanding differences among both experts and novices (e.g. Simon and Simon, 1978; Chi, Feltovich and Glaser, 1981).

For instance, quality of problem representations and the way problems are categorised marks a difference between experts and novices (e.g. Chi et al., 1981; Day and Lord, 1992; Larkin et. al., 1980; Silver, 1981). Studies show that experts use more categories and incorporate more problem information. Moreover, experts categorise the problems on the basis of solution procedures or underlying concepts. In contrast, novices are prone to categorise based on surface features.

In turn, differences in problem-solving strategies between experts and novices have been widely documented (e.g. Larkin et al., 1980; Jeffries et al., 1981; Chi, Glaser and Farr, 1988; Johnson, 1988; Patel and Groen, 1991; Mackay and Elam, 1992; Konradt, 1992). The general understanding is that experts engage in forward reasoning to solve problems. Therefore, experts tend to solve problems from the givens. On the contrary, novices focus on goals and tend to work backwards from these goals.

Finally, some authors also focus on the outputs of these processes to study the differences between expert and novices. One common assumption of the authors who develop their theories under the cognitivist approach is that they all state the experts' superior performance over novices. In vein with this idea, they based their study of expertise on analysing "top performance" and on appointing those individual attributes or conditions to achieve it. Especially relevant within this group is the work done by Chase and Simon (1973); Bereiter and Scardamalia (1986); Davis and Solomon (1989); Ericsson and Smith (1991) and Schaper and Sonntag (1998). For these authors, top performance is the evidence of the existence of special cognitive abilities (e.g. the capacity to structure information in meaningful and special ways) or cognitive processes (e.g. problem-solving strategies). Table 17 summarises the traditional terms of comparison.

This last aspect confronts the point of view of the decision-making perspective. The most relevant difference and contribution is that this perspective defends the belief that there are no clear differences in the quality of the judgement of experts and novices (e.g. Camarero and Johnson, 1991; Shanteau, 1992). Thus, the assumption that experts outperform novices is, for them, not valid.

Despite this, studies on expertise differ in terms of their focus; they do however share some common features. First, these studies have been conducted in experimental settings. This makes the experimenter determine the ex-ante definition of the problem, and he also works on the premise of a best-way to solve the problem. Some exceptions to this are Shaper and Sonntag (1998) who based their study on observing maintenance technicians while diagnosing. As a consequence, most of the studies have appointed individual attributes or conditions in the comparison between experts and novices, paying little or no attention to contextual aspects or idiosyncratic elements of the tasks. In reference to this last aspect, Shanteau (1992), Brucks (1985), and Punj and Stewarts (1983) consider the influence of task characteristics in the development of expertise.

Second, the need to study the underlying cognitive processes of actors makes many researchers resort to verbal protocols. This means that the actor should think aloud when he is solving the problem. De Groot (1965) established the basis of this methodology with chess players and it later became widely used (e.g. Ericsson and Simon, 1980, 1984; Bouwmann, 1984; Mackay and Elan, 1992, Shenk et al., 1998). As many authors focus on study performance differences between experts and novices, this obliges researchers to compare a) well-defined tasks in which b) performance measures are easily gathered.

Ultimately, these studies assume – whether they state it or not – an implicit “cognitive ideal” both in the framing of the problem as well as in the solving process which have been determined a priori by the researcher.

After the analysis of the dominant ideas within the field of expertise, main differences and common features, it is important to underline some assumptions under which these studies

are conducted. First, as previously mentioned, most authors consider knowledge as an external object. It is present in the world, in the cultural milieu and ready to be obtained through specific means. It is an available resource and stock. Thus, the main challenge is how to store knowledge and keep it available in memory.

Second, these studies assume that there are differences between experts and novices and that there is an evolution towards expertise. Depending on the meaning of expertise, this transition will consist on accumulating more knowledge or developing specific abilities or memory.

Finally, beneath this cognitivist approach there is an implicit knowledge theory. For these authors, whatever the problem, it is *per se* defined, objective and stable and, hence, it is waiting to be understood and solved. This stable problem is faced by the individual who has to train and prepare himself to approach and solve the problem. In a way, it echoes Plato's approach to knowledge and truth. As a consequence, the way to frame a problem and solve it should not differ from individual to individual. There are only different types of problems. These ideas comprise a correspondence theory of knowledge.

5.3. ALTERNATIVE STANDPOINTS OF EXPERTISE

Although dominant, the cognitivist perspective is not the only one used to approach the study of expertise. This is partly due to the unsolved problems stemming from within this stream of thought.

On the one hand some studies do not show the presumed efficiency of experts over novices. For instance, experts and novices did not differ in the number of generated hypotheses (e.g. Mehle, 1982) and experts may spend more time deciding how to solve complex problems, than would novices (e.g. Voss and Post, 1988). Biedermann and Shiffer (1987) showed that novices, following well-structured instructions, may be able to outperform experts. Lesgold and Lajoie (1991) conclude that experts on diagnosis are not better at electronics or that they

go about problem solving differently. The key was that experts have a far deeper understanding of the system than non-experts. Similar controversial results can be found in recent studies by Fuller and Unwin (2004) and Summer et al., (2004).

Second, from a methodological point of view, verbal protocols although widely used, present limitations in the identification of heuristics (Schenk et al., 1998, pp. 32-33). Authors state that "heuristic use is often informal and occurs without awareness on the part of the problem solver. Thus, it is feasible that heuristic behaviour did indeed occur ..., but because the subjects were not aware of this behaviour, they did not verbalise the heuristics". In the same vein, Schaper and Sonntag (1998) state that though they use verbal protocols, the validity of their results may be validated in real contexts. The reason is double. On the one hand, automated aspects cannot be verbalised and therefore, they will go unrecognised. On the other hand, the fact of studying problem-solving in "the context of abstract or artificial tasks" is a drawback, as genuine behaviour in a real context situation will not be exhibited.

This last consideration points to a second group of limitations which states that experimental situations offer a weak representation of processes that take place in real contexts. In actual workplace settings, the level of uncertainty is higher, the tasks are complex and they are not divided into micro-operations and, finally, it is extremely difficult to define or quantify successful performance.

Third, most of the studies concerning expertise are framed within problem-solving or decision-making situations. However, although our daily work includes these types of situations, it is not restricted to them. Indeed, practitioners are rarely conscious of solving problems.

Moreover, in such a tradition it is the researcher who defines whether a problem exists or not. The assumption is then that problems are there waiting to be solved. While this explains a number of situations, it does not consider that in complex situations it is the practitioner who may turn a fact into a problem. It should be a "problem" for him.

Fourth, the concept of expert has been associated to a number of years of ‘practice’ which just involves repetition of tasks. This definition is quite controversial. For instance, Hatano and Inagaki (1986) distinguish between “routine expertise” which is focused on solving familiar and standard problems and “adaptive expertise” which develops *ad hoc* strategies for solving unfamiliar problems. So, not all experts are the same, and neither is all accumulated experience. In the same vein, Bereiter and Scardandia (1993) state that expertise is not only experience, considering the latter as amount of work performed. They stress the role of an individuals’ attitude and the existence of experienced non-expert and experienced experts. Considering the lack of a unified definition for an expert, some authors advocate claiming the notion of “expert” as a relative concept (Shanteau, 1992; Fuller and Unwin, 2004) and accepting that it will have different meanings in different contexts.

Fifth, most of the studies that focus on the concept of expertise as accumulation of knowledge rest on the idea that previous knowledge is an antecedent that guides action. This rationalist view is quite controversial and confronting perspectives have revealed its shortcomings. For instance, Gilbert Ryle (1949) states that in order to perform a sensible action we do not have to think first and then act. Ryle stresses the idea that people do not think via a set of rules or procedures and then act, but in practice that it all happens at the same time:

" ...'thinking what I am doing' does not connote 'both thinking what to do and doing it'. When I do something intelligently, i.e. thinking what I am doing, I am doing one thing and not two. My performance has a special procedure or manner, not special antecedents." (p. 32)

Finally, as most of these studies have focused on individual conditions, it has prevented researchers from considering contextual, cultural or professional-related aspects in the traditional study of expertise.

Leading away from this pure cognitivist level of analysis, there are some alternative views on expertise. Schon’s seminal works (1983) describe an expert who does not conform to being a user of technical rationality. According to him, professional practice would not be

the result of the application of pre-specified bodies of knowledge and on the contrary, his expert reflects in action, gathering awareness of what is happening and introducing his own elements and even values in the problem-solving process. For instance, in his famous example of the senior and junior architects, the expert helps the novice to reframe the problem through a reflective conversation with the situation. Unlike the novice, he is not interested in making the shape of the building fit into the slope of the terrain. He focuses on his idea of a good building in which to educate children. He anticipates implications. His expert shapes reality through goals and values.

In turn, Lave (1988) tackles the problem of knowledge transfer to stress that practice develops in specific places and therefore, contexts are not mere recipients of predetermined sets of activities but are to be analysed with care as they actively shape the unfolding of the activity. Her expert does not merely transfer knowledge, but shapes the reality considering both material and social context.

In this vein, there is substantial research that questions the rationalist claim, according to which canonical knowledge is distributed and applied within organisations (Orr, 1990; Brown and Duguid, 1991) and the reports which stress the importance of the social milieu and the relevance of the positions individuals occupy (Lave and Wenger, 1991).

Traditional viewpoints of expertise have pointed out that expertise is the natural outcome of practice, though other inspiring studies have highlighted that experts' ability is not merely linked to hours of performance. For instance, some works stress that experts differ from novices in their ability to break official rules (Scribner, 1986; Dreyfus and Dreyfus, 1988 and Laufer and Glick, 1998) or in their ability to organise action (Lewin and Rupp, 1928) or to intuit (Sadle-Smith et al., 2004; Leonard and Swap, 2005) or in the tacit dimensions of their knowledge (Leonard and Swap, 2005). Therefore, these authors add new terms of comparison between experts and novices: their relationship with the context and the kind of knowledge.

Moreover, some authors remark that individuals' attitude and motivations (e.g. Bereiter and Scardamalia, 1993; Laufer and Glick, 1998), the nature of the tasks (e.g. Brucks, 1985; Punj and Stewart, 1983; Shanteau, 1992) and how work is organised (e.g. Fuller and Unwin, 2004) may exert influence upon the development of expertise. However, at this stage we should point out that there is a lack of empirical work to offer a more comprehensive explanation of how these factors may exert such an influence.

Finally, some authors offer a perspective of expertise linked to social aspects. For instance, Burdenson (2003) coins the term "perceived expertise" to point out the importance of being legitimised as an expert within the group. This viewpoint is implicit in Lave and Wenger's (1991) emphasis on participation where the possibility of the interaction between the novices and the group leads to becoming a full member of the group and thus achieving expertise. As Bruner aptly pointed out, learning is nothing more than becoming.

Stressing this social aspect, Engeström (2004: 145) shifts away from a concept of expertise linked to individual aspects. According to him "there is a new generation of expertise, not based on supreme and supposedly stable individual knowledge and ability but on the capacity of working communities to cross boundaries, negotiate and improvise 'knots' of collaboration in meeting constantly-changing challenges, reshaping their own activities...". Analysing this idea we find similarities with Brown and Duguid's (2000a) concept of 'ecologies of learning' in which overlapping communities of practice organise themselves in order to learn from each other and constantly evolve. Indeed, within the CoP approach (e.g. Lave and Wenger, 1991; Brown and Duguid, 1991 and Wenger, 2000), authors pay especial attention to the relationships between experts and novices. However, one of the most interesting aspects of this discourse is that expertise depends on the existence of a community. For instance, Wenger (2000: 234) states that "deep expertise depends on a convergence between experience and competence". And it is precisely the community which defines what it takes to act and to be recognised as a competent member.

Taking all these contributions into account we aim to shed light on the field through the study of experts and novices in two different companies. Company A (J.O.B.) is a public

employment service company devoted to job placement. Company B (AKUA¹⁹) is an international management consultancy firm. It delivers industry-focus assurance, and legal and advisory services. Not only do they belong to different sectors, but their organisational structures are also different. Whilst the former is a simple structure, the latter is a professional bureaucracy. As previously mentioned, it is an exploratory study and data was gathered longitudinally. Before examining the empirical data, the following section explains the details of how the research was designed.

5.4. THE EMPIRICAL RESEARCH DESIGN

5.4.1. Formulation of Theories and Hypotheses

Drawing on the previously mentioned contributions we can outline possible findings which comprise our hypotheses. These hypotheses can be made on an individual or organisational basis.

On an individual basis, cognitivists sustain that knowledge is stable and accessible to the individual from the outside world, ready to be possessed by the individual. By its characteristics this knowledge is individual and explicit. One consequence of this principle is that the expert should be the one who has acquired and accumulated more knowledge.

- Hypothesis 1: Experts will be those individuals who acquire and apply the largest amount of individual explicit knowledge.

Dominant viewpoints of expertise sustain that experts and novices differ in the performance of tasks. There is no evidence of differences in task framing. The distinctive feature between experts and novices focuses on the performance and not on the modification of the problems they encounter.

¹⁹ J.O.B and AKUA are pseudonyms of the participating organisations.

- Hypothesis 2a: The difference between experts and novices when performing the same action will not show differences on the framing of tasks.
- Hypothesis 2b: Differences between experts and novices will be apparent through results or through process.

As previously mentioned, dominant viewpoints of expertise sustain that accumulating knowledge is crucial. As a consequence, in organisational terms, firms will promote expertise by capturing and storing this knowledge.

- Hypothesis 3: The use of knowledge repositories or alternative systems which provide accessible individual explicit knowledge will bear some relation to individuals' excellence performance.

Cognitivists sustain that the superior performance of experts is evidence of the acquisition of a large amount of factual explicit knowledge. Hence, the organisation would promote practitioners who have better performance. In turn, these would be those who are more expert and have more available knowledge.

- Hypothesis 4: Moving up and down the organisational structure would be based on the amount of knowledge possessed by the practitioner.

Dominant viewpoints of expertise do not show evidence of differences between experts and novices in different contexts. According to these results, contextual aspects do not have a substantial effect over experts and novices.

- Hypothesis 5: The fact of analysing experts and novices in different organisational structures will not show overall differences.
- Hypothesis 6: The relationship between experts and novices in different contexts will be the same, independently of the type of knowledge which prevails in each context.

Hypothesis	Based on...
Hypothesis 1: Experts will be those individuals who acquire and apply the largest amount of individual explicit knowledge.	e.g. Simon (1980); Frensch and Sternberg (1989); Bédard (1989)
Hypothesis 2a: The difference between experts and novices when performing the same action will not show differences on the framing of tasks. Hypothesis 2b: Differences between experts and novices will be apparent through results or through process.	e.g. Chase and Simon (1973); Ericsson and Charness (1994); Shaper and Sonntag (1998)
Hypothesis 3: The use of knowledge repositories or alternative systems which provide accessible individual explicit knowledge will bear some relation to individuals' excellence performance.	e.g. Zack (1999); Myers (1996); Zander and Kogut (1995); Hedlund (1994)
Hypothesis 4: Moving up and down the organisational structure would be based on the amount of knowledge possessed by the practitioner.	Formal company discourse (e.g. "So, to be a boss you've got to have shown that you've got capabilities up to level three for example... That's in writing... And there's an evaluation committee, ...)
Hypothesis 5: The fact of analysing experts and novices in different organisational structures will not show overall differences.	
Hypothesis 6: The relationship between experts and novices in different contexts will be the same one independently of the type of knowledge which prevails in each context.	
Hypothesis 7: Company A will foster collective tacit knowledge.	Lam (2000)
Hypothesis 8: Company B will foster individual explicit knowledge.	Lam (2000)

Table 18 - Hypotheses

In addition, considering these last aspects, there are some authors who establish a relationship between knowledge and contextual aspects. For instance, Lam (2000) argues that different organisational structures may foster different types of knowledge²⁰. Hence, taking into account that Company A is a simple structure with J-form similarities and

²⁰ According to Lam, the professional bureaucracy sustains the development of individual explicit knowledge; the machine bureaucracy fosters collective explicit knowledge; the operating adhocracy harbours individual tacit knowledge; and the J-form organisation supports collective tacit knowledge.

Company B is a professional bureaucracy, we can assume that the former will foster collective tacit knowledge, whilst the latter will pursue individual explicit knowledge:

- Hypothesis 7: Company A will foster collective tacit knowledge.
- Hypothesis 8: Company B will foster individual explicit knowledge.

5.4.2. About the Kind of Empirical Tests for the Hypotheses Used

Many researchers associate hypothesis testing only with statistical tests, which are quite recent in science and were introduced following the work by Pearson in 1900. However since the scientific revolution of physics in the seventeenth century, researchers informally used other methods, which have been studied by K. Popper in *The Logic of Scientific Discovery* (1959), which develop the concept of falsification of theories: when the proposition that formulates the result of an experiment contradicts the proposition of a universal law or theory, then the theory is falsified. When observational propositions do not contradict the proposition of the universal law, then the theory is corroborated, but it is not verified because further results may eventually falsify it.

For the application of this Popperian method, we can comment on two points. First, falsificationism is directly applicable to universal laws, but it can be adapted to laws that are not universal but which refer to specific kinds of contexts. Second, we have to consider whether or not the empirical results are correct and relevant and have not been influenced by other factors (*coeteris paribus*). The cases that we present in our empirical research about experts and novices in two companies fulfil these conditions.

Taking these hypotheses and ideas into account, we approach the empirical study which has been conducted in two different companies belonging to two different sectors and whose structures also differ. This empirical study is explained in the following section.

5.4.3. Empirical Research

Company A, J.O.B., is a public employment service company devoted to job placement. It delivers a range of services to local companies and the unemployed in order to help them either to find a job candidate or a job. The structure of the company is quite flat. There are only four hierarchical levels and few possibilities for vertical promotion.

Each department offers a different service and has a certain degree of autonomy. Despite this independence, the organisation has formalised all of its processes as part of its quality system implementation based on ISO standards. According to Schemenner's (1986) service classification, Company A provides a mass service and therefore, it has a high degree of labour intensity but a low degree of customisation.

Company B, AKUA, is an international management consultancy firm. It delivers industry-focused assurance, legal and advisory services. Company B is quite hierarchical. The system entails a vertical ladder and it is expected that a successful consultant will focus on climbing the ladder as high as possible. Its structure meets the requirements of a typical professional bureaucracy and its service is a professional service (Schemenner, 1986). This means that the service has a high degree of labour intensity and a high degree of interaction with the client in addition to customisation.

These two companies were chosen because they provide different types of services, and therefore, their task characteristics differ. On the other hand, their organisational structures were opposite. As previously stated, these last aspects may affect knowledge issues.

Qualitative methodology was employed in the study²¹. Table 19 offers a summary of the data collection methods used.

²¹ Due to the fact that preceding chapters have already explained the methodological issues, these aspects have been omitted in order to avoid redundancy.

Data Collection Methods	Company A (J.O.B.)	Company B (AKUA)
- Documentation	✓	✓
- Direct Observations	<ul style="list-style-type: none"> • 4 meetings • 32 recorded hours of daily work • 13 people • Field notes • Photographs 	Five consulting projects: <ul style="list-style-type: none"> • 11 meetings • 26 recorded hours of daily work • 22 people • Two validation meetings • Informal conversations • Field notes
- In-depth Interviews	11	15

Table 19 - Data Collection Methods

One important characteristic of this study is that we accompany experts and novices during their daily work – shadowing. Moreover, the object of analysis has not been special problem-solving situations or business crisis but we focus on studying the actual practice of practitioners

5.5. COMPARING THE PRACTICE OF EXPERTS AND NOVICES IN TWO DIFFERENT COMPANIES

5.5.1. The Job Placement Practitioners in J.O.B.

According to J.O.B., expert and novice practitioners may be identified taking into account a) time: number of years of experience and b) outputs as results in the job placement process. Hence, our experts were those who had been in the department the longest and who had a better score in placing unemployed job-seekers in employment. This company definition coincides with previous approaches in the literature linking expertise to accumulation of knowledge through time and to superior performance.

After the analysis of our empirical data we can highlight certain findings. First, the kind of knowledge used by experts and novices coincides but only to an extent. In fact, in J.O.B. both, expert and novice follow the same standard procedures. However, a closer look offers a picture in which compliance with the procedures has a different function in the relevancies assigned by expert and novice (Bou and Sauquet, 2004a). It was evident in the analysis that our novices focused on canonical practice, being much more concerned with following the rules and procedures of the organisation and mainly resorted to explicit individual knowledge. On the contrary, the expert was more oriented toward practice, learning more on hunches, intuitions, feelings and soft skills.

For instance, during the interview with job-seekers, repeating the information aloud while the fields are entered into the database is apparently a common habit for expert and novice, although the latter only does it if and when he remembers to do so. The novice resorts to his academic knowledge and reminds us that it is a technique. The expert's arguments are different:

Researcher: *And it's at this point that you usually speak out loud?*

Expert: Yes.

R: *And why do you do that?*

E: *So as not to have that awkward silence when you're writing down a candidate's personal details. I try to put myself in the other person's shoes and try not to lose sight of the fact that I'm interviewing "you", that I'm communicating with "you". Right now I'm taking down your details but I'm talking to you at the same time... I mean, we have each other's attention the whole time (...) I manage to get the other person to listen to me (...)*

R: *So how did you come up with this?*

E: *Well, in the first interviews I ever did, I noticed how people would sort of tune out. They were just small observations: things like the interviewee leaning back in his chair. I mean I noticed how at that point the interviewee was saying: "Great, he's writing, so I can switch off". The other person had seen that I was writing and this made him feel uncomfortable and nervous. I mean, I tried to do other things like shuffling through papers, or... I realised it was*

one of those times when writing was not really appropriate, because the other person didn't feel at ease. Neither did I, actually. Because I was writing while the other person sat there watching me and they could see that I was uncomfortable as well. So, I started to repeat what I was writing – out loud. Not during everything we did, just for some of the questions (...) and when I discovered that they were answering... not that they were answering per se, but that they had just given me the information and (...) in the database, it would quite often be the case that, as they could see what I was typing in, they would look down at the telephone number and say, "No, it's not 4-5" and I would say, "Oh, sorry". And it even had its plus side for me.

For the expert, speaking out loud is more than a technique. He avoids an uncomfortable situation for him and for the other person. Moreover, he uses it in order to complete all the information needed as the job-seeker is the one who finishes the sentences. He also uses the technique in order to avoid possible mistakes due to the fact that he allows interviewees to see what he is writing. The use of this approach has nothing to do with remembering a theory but is incidental. Hence, in the daily routine while he was interacting with an interviewee, he found himself repeating the information out loud and afterwards, he could see that this technique worked.

According to the standard procedure, entering general data in the database should be done once the previous candidate's professional experience has been gathered. The novice follows this course of action because, as he says: *"We agreed with it (...) we thought it was much better to leave this information till the end as it is very "cold" and structured. (...) It is in the procedure (...)".* By contrast, the expert enters this data first. In his opinion, he changes the order because this information goes into the database first and because he thinks there is not much difference.

Therefore, the role that individual explicit knowledge plays is different. For the novice it is crucial whilst the expert relies more on individual tacit expressions of knowledge. For the latter, intuition, feelings and perceptions take on more importance. For instance, due to the scarcity of resources and in order to give a good service to the employer's company, one of the main requisites in order to be considered a good candidate is to be motivated: to be

willing to work. The expert relies on his feelings in order to perceive if the interviewed person is willing to work or not. It is not rational. It is a hunch. On the contrary, although novices also use their intuition to consider this willingness, they try to confirm their suspicions by developing some “tests” which give them more objective proof as to the motivation of the candidate.

Second, not only do experts and novices differ on the type of knowledge they resort to, but their actions also differ. Hence, although some observable acts apparently seem to be the same, they constitute two different actions with different knowledge bundles and at the same time with different scales of relevance.

For example, when practitioners are interviewing job-seekers in order to find out the professional profile of the candidate, they ask for and make a photocopy of their identity card, which is a practice that is not in the procedure. Nevertheless, the novice does it because he observed some of the technicians also doing it when he first started in the job. This is an example of vicarious learning (Bandura, 1977) quite frequently used by novices.

The novice understands that this documentation is required in order to have proof that the person actually came to the company and as a tool in order to correct possible data entry mistakes. For him, this is an informal requirement of the procedure. However, the reason the expert provides for making a copy of the identity card is a different one. Indeed, as remembering the candidates is important, experts resort to the photograph on the identity card in order to a) avoid mistakes and b) help them remember. It is a tool or a memory aid.

Moreover, data reveals that experts and novices were not performing the same practice. Indeed, a novice’s job consists of gathering factual data during the interview, entering as much data as possible into the database and at the same time trying to avoid the use of subjective expressions which may lead to misunderstanding in the event of another practitioner reading the report. He fills in the scheme trying to maintain accuracy and technical aspects. At the same time he is required to do the job in forty-five minutes. Once the candidate has been interviewed and the data entered into the database, practitioners

should select candidates according to the job offers and pass this information on to the salesman. This practitioner is in charge of going to the company to present possible candidates. At this final stage the novice focuses on giving objective and technical data to the salesman and therefore, mainly reads from the database (see Table 20).

Process Phase	Novice	Expert
Interviewing the Candidate	<ul style="list-style-type: none"> ▪ Focus on: procedure, accuracy, technical aspect ▪ “Doing the job in 45 min” ▪ Technical knowledge ▪ Questions to verify feeling ▪ Remembering data 	<ul style="list-style-type: none"> ▪ Focus on: candidate’s story ▪ Understanding ▪ Feelings, hunches ▪ Intuition ▪ “Getting a picture” ▪ Visualising ▪ Remembering the person and his story <p>+ Innovation + Omits formalised questions</p>
Selecting Candidates and their “Selling”	<ul style="list-style-type: none"> • No collaboration • Giving objective data • Reading from the database 	<ul style="list-style-type: none"> • Collective Activity • Creating a story • Story telling <p>Helping to remember Wining salesman’s trust</p>

Table 20 - Differences between Job Placement Practitioners

In contrast, the expert’s goal consists of a process in which winning the interviewee’s trust through attitude and personal aspects plays a central role. His aim is to “get a picture”, visualising the interviewee and remembering him – the person and his story. Hence, the expert emphasises data that evokes the person, the story and the interview. In the final phase of the job placement process, proposing candidates is more a collective than an individual activity. Using his own and other technicians’ information on the candidate, the expert is able to tell the salesman a story full of details. “Telling the candidate’s story” is how the expert provides data, wins the salesman’s trust and helps him to remember. The

expert designs a story taking into account what he remembers from the interview (relying on the information from the database) and the input of other technicians who also met the candidate. The use of a story livened up with anecdotes and quotes related to the candidate helps the salesman to “remember” and feel confident about a candidate that he has never met. For the expert, helping the salesman to remember and winning his trust are crucial aspects so that the salesman can successfully propose the candidate to the company. Table 20 summarises these findings.

Therefore, although apparently both do the same job, data seems to point to different actual practices. Whilst the novice fills in forms, obtains data, analyses it and resorts to objectivity to support decisions, the expert is focused on the process of creating a story: he constructs a coherent plot and he tells the story in such a way that he is able to convince and make others “visualise” the candidate and his situation.

Expertise in J.O.B. is related to the ability to perform within a system (the organisation), complying with rules and procedures, but in a way in which these are taken advantage of and used for another purpose, but one that in the end helps the organisation as a whole. Experts in J.O.B. seem to reframe (Schon, 1983) but in a different way from Schon’s practitioner. Schon’s expert reframes problems whilst our expert reframes his job as a whole, reconciling at the same time the demands and needs of different stakeholders. In essence, he is a reframer.

5.4.2. Management Consultants in AKUA

AKUA defines an expert consultant as one who has accumulated a lot of general (e.g. technical knowledge) and specific (e.g. industrial knowledge) knowledge. This definition is coherent with Simon’s description of an expert as one who had acquired a substantial amount of domain-specific knowledge, accumulated over time (on average he refers to a minimum period of ten years). It is also coherent with expectations that the professional

bureaucracy sustains the development of individual-explicit knowledge (Lam, 2000). As a consequence, we could assume that the role of explicit knowledge – both individual and collective – should be more relevant than other types. However, our data does not seem to point in that direction.

Research on expert and novice consultants (Bou and Sauquet, 2005) shows evidence that the combination of different types of knowledge used in practice (bundle of knowledge) by the consultants evolves in a different direction from that predicted by the literature. According to knowledge literature, experts would display steady increments in their individual explicit knowledge base. However, at different rungs on the hierarchical ladder, the prevailing knowledge that practitioners resort to in practice changes.

For instance, on the lower rungs of the hierarchical ladder (novices), practitioners quite often resort to explicit knowledge (individual and collective) and to implicit collective rules. However, when practitioners reach higher positions in the hierarchy, explicit-individual knowledge (e.g. technical knowledge) turns out to be less crucial and becomes subsidiary. On the contrary, 'know-who' and collective tacit knowledge are especially relevant in order to interact with superiors and to understand underlying corporate messages. 'Know-who' knowledge comprises not only knowing who is who within the organisation, but it also implies detailed and subtle components. For instance, consultants resort to this type of knowledge in order to know which member they should approach and how; to understand a partner's body language; or to understand the implicit messages of his words. This definition of 'know-who' knowledge differs from that used by other authors. For instance, Leonard and Swap (2005) called know-who the knowledge of the network that enables us to fill knowledge gaps. For these authors, it is a type of knowledge linked to social capital.

These results do not meet Lam's ideas or the company official definition of an expert. Although it is supposed that the professional bureaucracy would foster individual explicit knowledge, this is not the prevailing knowledge when acting. Furthermore, according to practitioners this type of knowledge has some limitations at the moment of acting and as a

consequence they should resort to other types of knowledge. The following excerpt illustrates this point of view:

“... [they] could give me the theory of this subject, but I thought it was going to be more valuable to get others’ experience... it was going to be more useful than the theory”.

Hence, individual explicit knowledge is not the prevailing knowledge. Results show that know-who or social knowledge is gaining more and more importance for experts. To understand why this is the case we have to look elsewhere and assess the role HR policies play. Actually, the hierarchical ladder is the one which rules the existence of the practitioner. It means that in order to survive in this organisation you have to accept the informal premise “up or out”.

Hence, although consultants focus their attention on how the consulting process is run, which resources to use and how to handle client encounters, the higher they are in the hierarchical ladder the more important their internal selling becomes. At this stage the consultants are neither concerned with becoming more knowledgeable, nor with achieving client satisfaction. Their efforts are focused within the company: towards its internal market. They have to read between the lines of the organisation’s messages and discover who the key players are; how best to approach them; identify the organisation’s strongest divisions and, therefore, who has greater possibilities of becoming a new partner. To know a partner implies more than getting to know superficial information about a person’s likes or dislikes, for instance. It implies being able to understand the implied messages expressed by their words, gestures and/or body language.

However, the need for and the importance of this social knowledge is not formalised or recognised by company policies (e.g. Human resources) which, on the contrary, stick with the idea of the official expert. The comments of a senior manager illustrate this situation:

Senior Manager: In that case it means that there is a formal and an informal structure. The formal structure is designed for performing the job, the day-to-day work. And the informal structure for developing as a person (...) you might have tools (...) but no tools can tell you how to behave. And this is an organisation that is not hierarchical, in theory. Although, even if it were very hierarchical, hierarchy doesn't come in little boxes. I mean, hierarchy comes from informality, because in theory a consultant can deal with a partner. That is, there is no chain of command as there might well be in other organisations. But nobody would dream of going to speak with a partner directly, not even if you were a consultant. Isn't that right?

(...) We were just commenting on that over lunch – here you sign a normal contract, your professional contract, and then you sign an emotional contract that says: "If you make a real effort, someday you'll be made a partner". But you won't see that written down anywhere (...) And people work with that point of view towards the future (...) And starting off from there, in that case, we can see the informality of the organisation, because it's built on the basis of an un-written commitment.

(...) I have two things to add: one, I really like having my own view on things, but then I try to triangulate. I mean, to look and see if other people think more or less the same way, or to look for situational behaviour where everybody goes to the same office and you say: "I think I've got it all wrong". (...) You see that there's an office door with cobwebs all around it, if you're always getting into that office, man, when you come out (you'll regret it)'.

In Company B experience and hierarchy seem to develop along the same path. Therefore, the job of a novice/junior consultant is quite different to job of senior/expert consultants. The more expert one is acknowledged as being, the more complex the tasks and the more variables are considered by the practitioner. The distribution of tasks and positions are predefined by the organisation and therefore, job boundaries are clearly established. For instance, the director has the responsibility of negotiating proposals with the client, whilst

the junior consultant who effectively writes down the report or any other client delivery may never actually meet the client.

<p style="text-align: center;">Experts (Senior Managers)</p>	<p style="text-align: center;">Novices (Managers)</p>
<ul style="list-style-type: none"> • Practice is more complex. It takes more variables into account • Anticipate, foresee some situations • Improvisation (although they feel awkward to admit it) • Prioritise between aspects and as a consequence speed up practice • Technical knowledge is subsidiary, it is instilled in them. This makes them self-confident and they pay attention to other aspects • Usually resort to tacit-individual knowledge (to interact with clients) and to tacit-collective knowledge (to interact with partners) • Know-who more complex and subtle, tacit components prevail • Give “orders” in a subtle way • Storytelling to subordinates is frequent 	<ul style="list-style-type: none"> • Limited number of variables are considered • None, or scarce anticipation • If possible, everything prepared in advance (avoid improvisation) • Technical knowledge is critically important in their daily practice • Feeling insecure when handling client’s demands • Usually resort to formal training • Know-who • Sometimes storytelling to subordinates • Making themselves visible is more crucial for them

Table 21 - Differences and Commonalties between Experts and Novices

After comparing experts and novice consultants, we realise that some findings fit in with the ones obtained in the case of job placement practitioners (see Table 21). The experts consider more variables and prioritise certain aspects of the task and, as a consequence, speed up practice. They also anticipate future events or client reactions and improvise when unforeseen events occur. The novice considers fewer variables, rarely anticipates and, if possible, avoids improvisation. These findings are coherent with previous studies on expert and novices (e.g. Dreyfus and Dreyfus, 1988; Leonard Barton and Swap, 2005). However,

one relevant aspect is that although experts provide instances of their improvisation and intuition to perform their daily work they feel reluctant to admit it.

The fact of feeling uncomfortable with admitting the role of improvisation and intuition is quite similar to that described by Schon (1983) between traditional legitimised experts and the reflective practitioner. In this situation, our expert also struggles with the idea of the canonical expert and, in actual fact, what he does. If he keeps in mind the idea of the canonical expert, he is presumed to be knowledgeable, and must claim to be so, regardless of his level of uncertainty. He should maintain distance from the client and stick to his role as 'expert'. He is neither expected to doubt, nor to improvise nor test. On the contrary, if the consultant plays his role as a reflective practitioner he discards this possibility. He is willing to learn with his client about the situation he faces through reflective conversations with him. There is no need for maintaining a professional, superior façade. Both consultant and client work, and reflect together, towards establishing a relationship.

It is interesting to note that although expert consultants actually play the role of a reflective practitioner they try to overlook this fact. The following excerpt from a working meeting at the early stage of a consulting project illustrates the dilemma. The practitioners are discussing which future actions are going to be taken with the clients.

Senior Manager (expert): The thing is that although we don't need it till next month, we're going to make a list with all the information we need in order not to give the impression that we are improvising: "Listen, we need this and that and... But we don't need it till next month, so we're giving you time to prepare it".

Senior Consultant: But we are improvising.

Senior Manager: Well, yes. But we're the only ones who know that.

In the above excerpt, the expert consultant (senior manager) is aware that they are improvising. It is a customised project and there is no standard reference. As a consequence,

he and his team are improvising courses of action – on the hoof. However, he does not want to give this impression to the clients. The expert consultant presumes that improvising is something that should be covered up.

After considering these findings we can return to our starting point. Officially, AKUA identifies the expert consultant as the one who possesses a huge amount of explicit individual knowledge. Hence, these experts could be identified in the official databases of the company. However, after considering our findings we must redefine the concept of expert.

On the one hand, data shows that the evolution from novice to expert rests on different knowledge combinations or bundles of knowledge used in practice and different scales of relevance that makes the prevailing knowledge vary according to the level of expertise. In this evolution the know-who or social knowledge seems to gain importance at the top of the hierarchical ladder. This fact relates to HRM practices, both at the formal and informal level.

However, differences between experts and novices go beyond being merely related to knowledge type matters. In this consultancy firm, the expert consultant is the one who is able to reframe the system he belongs to. He focuses on constructing his own ecosystem with its key players, supporters, enemies, opportunities and threats. He discriminates between who is relevant and who is not. Once again, the expert is a reframer but unlike the job placement practitioners, our expert consultant does not reframe his job but does reframe the system. Discussing this issue will be the objective of the next section.

5.5. DISCUSSION

Having presented the empirical data, we should analyse the initial hypotheses or assumptions based on previous knowledge, expert and novice literature. Based on previous works, we assumed that if knowledge is stable and outside in the world ready to be possessed, the expert will be the one who has acquired and uses more individual explicit

knowledge (hypothesis 1). As previously mentioned, our results do not confirm this assumption. Indeed, neither of our experts differ from novices through having more individual explicit knowledge. Intuition and the predominance of other expressions of what is commonly termed 'tacit knowledge' is usually a distinctive feature of high levels of expertise (e.g. Dreyfus and Dreyfus, 1980; Leonard and Swap, 2005). More precisely, our job placement expert resorts to a myriad of individual tacit expressions of knowledge to perform his job, whilst our expert consultant employs more collective tacit knowledge and the so called "know-who".

These results have further consequences on organisational terms. On the one hand, we can discard hypotheses 7 and 8 as AKUA does not foster individual explicit knowledge nor does J.O.B. foster collective tacit knowledge. On the other hand, we assumed that if expertise is based on accumulating knowledge, knowledge repositories or alternative systems which provide accessible individual explicit knowledge will bear some relation to individual's excellence performance (hypothesis 3). Our results do not confirm this assumption. In fact, both companies resort to tangible repositories to store and keep knowledge and these are used canonically by practitioners. However, as we have seen, they are not used in actual practice. Practitioners consider that they are of little use as they do not comprise the complexity of actual practice or the different situations they face. They also ascribe lack of time as a reason for not using them. Finally, they mention that the critical aspects of practice are not down on paper, which is why resorting to colleagues' experience is a better alternative (see Table 21).

Taking into account that an expert is the one who possesses more factual explicit knowledge and superior performance is evidence of this, we assume that moving up and down the organisational structure would be based on formal evaluations (hypothesis 4) which would measure to what extent practitioners excel. Our data seems not to point in that direction. For our consultants, being more knowledgeable doesn't mean succeeding in their professional careers. By contrast, possessing a certain social image among the influential members of the organisation becomes more valuable in terms of professional advancement. That is why

“internal selling” becomes crucial. In a certain way, these results are coherent with the idea of “perceived” expertise as explained by Bunderson (2003).

These findings indicate that, in contrast to previous works, our experts not only employ different types of knowledge from that used by novices, but they reframe their whole job. In J.O.B., our expert job placement technician has turned into a storyteller who is able to develop a plot which wins others’ trust in order to achieve his objective: placing his candidates. In AKUA, our expert consultant is not the “wisest” or the one who manages clients the best. He is the one who has been able to sell himself internally. It is an internal market and he should be able to handle it. His focus is internal instead of external. At the same time, being able to manage this internal market means identifying its main actors, how to approach them and how to behave. It is an ecosystem with its own players and rules within the formalised organisation.

These findings also fit in with previous works (e.g. Brown and Duguid, 1991) which state how experts shift from the canonical practice to non-canonical practice, very subtly breaking the formalised rules . At the same time these results do not support our assumption which states that the difference between experts and novices when performing the same action will not show differences in the framing of tasks (hypothesis 2a). Neither is hypothesis 2b confirmed, which states that differences between experts and novices will be apparent through results or through processes. Indeed, although their acts may seem similar, experts and novices carry out different practices with different scales of relevance. Hence, their priorities differ. Table 22 summarises these aspects.

Hypothesis	Results	Evidence
Hypothesis 1: Experts will be those individuals who acquire and apply largest amount of individual explicit knowledge.	Not confirmed- Experts do not resort to individual explicit knowledge to make a difference.	Company A: our expert resorts to individual tacit expressions of knowledge. Company B: our expert employs many collective tacit expressions of knowledge and “know-who”
Hypothesis 2a: The difference between experts and novices when performing the same action will not show differences on the framing of tasks. Hypothesis 2b: Differences between experts and novices will be apparent through results or through process.	Not confirmed. Experts reframe their whole practices: either their tasks, the system or context.	Company A: our expert has turned into a storyteller Company B: our expert has turned into an internal seller within a self-defined ecosystem. <i>“being very pro Company B, or rather... getting noticed in the company, making yourself known, getting noticed, letting them see who you are, although you don’t do anything, but at least you’re seen there and people know who you are, you talk to people, you talk...”</i>
Hypothesis 3: The use of knowledge repositories or alternative systems which provide accessible individual explicit knowledge will bear some relation to individuals’ excellence performance	Not confirmed- Knowledge repositories- formalised but little use on action	<i>“our daily work is richer, more complex. It’s impossible to detail everything without losing the “art” of practice”</i> <i>“... [they] could give me the theory on this subject, but I thought it would be more valuable to get others’ experience... It would be more useful than the theory.”</i>
Hypothesis 4: Moving up and down the organisational structure would be based on the amount of knowledge possessed by the practitioner.	Not confirmed. Being the more knowledgeable doesn’t mean to succeed in their professional careers	<i>“... doing things right... you’ll get on in Company B. “Get on”, quote-unquote... It’s not always related to becoming a partner. There are other factors as well.”</i> <i>“Quite often the person in charge isn’t the one who knows most about, for instance, the public sector,... He’d have to be responsible, well, as he’s the manager, but not necessarily the one who knows most about the projects.”</i>
Hypothesis 5: The fact of analysing experts and novices in different organisational structures will not show overall differences.	Not confirmed- Organisational structures exerts influence	
Hypothesis 6: The relationship between experts and novices in different contexts will be the same one independently of the type of knowledge which prevails in each context.	Not confirmed- Context exerts influence	
Hypothesis 7: Company A will foster collective tacit knowledge.	Not confirmed-	Company A: our expert resorts to individual tacit expressions of knowledge.
Hypothesis 8: Company B will foster individual explicit knowledge	Not confirmed-	Company B: our expert employs many collective tacit expressions of knowledge and “know-who”

Table 22 - Confirmation of Hypothesis

In sum, the difference of experts and novices goes beyond mere differences on knowledge types or carrying out different single tasks. According to our findings the essence of expertise is the expert's ability to reframe his practice according to his new scale of relevance. Hence, although experts and novices may seem to perform the same practice, their actions are different. These results echo previous research conducted by Laufer and Glick (1998) who show the importance of the interplay between organisation rules and new meanings and motives as they are introduced by experts. At the same time, they are also coherent with the idea of the individual ability for reflection-in-action and the ability to reframe problems (Schon, 1983) as shown by the introduction of different scales of relevance. Research results suggest that experts reconstruct their practice in a similar way to the terms pointed out by Potter and Wetherell (1987: 54) as they stated that "[the] object can be constituted [...] and the person's [...] is directed towards these specific formulations rather than some abstract and idealised object". The constitution of the object is the result of the interplay between individual's, the organisation's and colleagues' interpretations. Expertise would not only be an individual achievement but the result of a collective and contextual definition.

Finally, previous works on experts and novices has placed little relevance on organisational aspects and context, and that is why we did not expect to find any difference between Company A and Company B, with the exception of the knowledge domain to which practitioners resort (hypotheses 5 and 6). For traditional viewpoints of expertise, context is a mere container with no role to play. However, our results do not seem to point in that direction. Contextual variables play an active role and they exert influence on (a) the prevailing types of knowledge employed by the experts and (b) the reframed object, or what is the same, the aspects reframed by the expert practitioner.

For instance, in J.O.B., the organisational structure is simple and does not exert a major influence upon individuals. It is a flat organisation where promotion does not play a prominent role. In this setting, individual aspects gain more importance. Furthermore, the relationship between the practitioner (individual) and the activity is very close. The

practitioner performs most of the delivery process on his own. The division of labour is low and he participates in the whole process from the beginning. As a consequence, the level of discretionality is considerable. Moreover, this close relationship with the task activities determines the identity of the practitioners. They are “professionals devoted to job-seeker placement”. In addition, the characteristics of the job mean that standard corporate procedures are of limited use as they have to adapt to the specific problems of specific job-seekers.

These are some of the main aspects that influence the fact that the prevailing knowledge expressions are tacit and individual. This type of knowledge allows them to perform within the system reconciling the needs of different stakeholders (e.g. the official objectives, the diversity of clients etc.). It affords experts flexibility to use intuition and hunches. In the same vein, it is not by chance that the expert job placement technician reframes his job. Although apparently both expert and novice perform the same practice, their actions are different: their intentions are different. Actually the expert is creating stories and helping others to remember the story in order to achieve his objectives.

In AKUA, the professional bureaucracy exerts considerable influence over practitioners. As previously remarked, hierarchy is strongly established and linked to the execution of different tasks. The individual consultant does not participate in all of the steps in the process and many activities are collective. As a consequence, collective knowledge is decisive and the way work is organised fosters a high distribution of knowledge and the need to transfer roles between different steps of the process. Furthermore, the fact that there is a strict division of labour hinders the process of becoming a full member of the organisation or in Laves and Wenger’s terms, Legitimate Peripheral Participation (LPP).

At the same time, the types of tasks entailed in the consulting work have a high degree of customer co-production and customisation. These characteristics increase the level of uncertainty and complexity. In fact, these aspects are fuelled by a high degree of diversity stemming from the need to deal with different customers, working in different types of consulting projects and working with different people and teams. Facing this situation,

individual explicit knowledge is of little use and on the contrary, tacit expressions of knowledge gain more importance. In addition, in this setting the professional's identity is determined by the fact of belonging to that specific organisation and the position they occupy in it. They are proud to belong to AKUA. It is a distinguishing feature which makes them different from other consultants.

In this setting, it is not by chance that know-who and collective tacit knowledge prevail over others. Collective components have a considerable influence on individual practitioners and know-who, and collective tacit knowledge lets them move within a complex setting which becomes more opaque the higher they ascend on the corporate ladder. This is coherent with the fact that the expert AKUA consultant is the one who is able to reframe the system. He constructs his own ecosystem with its key players, supporters, enemies, opportunities and threats. In any case, he is again a reframer according to his scale of relevance.

In sum, how work is organised, the nature of the tasks and the organisational structure seem to play a more relevant role than that of a mere 'container' of practice. In fact, they have an active role which affects knowledge types, certain knowledge dynamics and the concept of expertise in different settings.

5.6. CONCLUSIONS AND FURTHER RESEARCH

- "How are you so good (at playing cards)?"
- "(...) I see the faces (...) not the cards."

Rounders by John Dahl

We started this chapter reviewing the main trends regarding the study of experts and novices which, in general terms, focus on the individual and the cognitive processes that take place in their mind. Knowledge was considered to be context-free and available in the world at large. Hence, the expert should be prepared to accumulate as much knowledge as

possible over time. As a consequence, his performance will be outstanding in comparison to that of novices.

Following our empirical study we can state that our findings do not support these beliefs. First, experts and novices differ in the composition of their bundle of knowledge employed in action. The bundles of knowledge of experts and novices prioritise different knowledge expressions.

Second, expert and novices do not perform the same actions although their acts may seem the same. So, the difference between them is not a problem of “doing the same task better, faster or more accurately”. Indeed, their actions are different.

Third, the results show evidence that the difference between expert and novices does not only consist of differences in knowledge types or carrying out different activities. In fact, experts reframe their whole practice based on their different scale of relevance. Hence, the essence of expertise lies in considering the expert as a reframer. This implies considering the expert as a reflective practitioner and creative actor.

These findings fit in very well with Tsoukas and Vladimirou's (2001) work on organisational knowledge. According to these authors, experts rely on a body of knowledge (e.g. rules, procedures and so on) which comprise the canonical practice. These work as a tool to experience reality in the same way a blind person uses a stick. However, this body of knowledge does not play an active role, but remains subsidiary. Their expert focuses not on applying rules (canonical practice) but on accomplishing some objectives of practice/experience. Rules, explicit organisational knowledge, explicit individual knowledge are indwelled, or in other words, tools are assimilated. This is similar to the example of a blind person. He does not have to think about how to handle the stick. This tool is already part of him. He focuses on perceiving reality. Therefore, experts would be the ones who are good at transforming experience into subsidiary awareness. Our findings match with these ideas but they go a bit further. In our understanding, the expert is even more active. He transforms “practice” or reality. He plays an active and creative role in reframing.

Finally, it is important to stress that this approach does not only focus on the actor agency. Furthermore, in this approach the nature of the job, organisational and other contextual aspects have an influence on knowledge types, their relationship with action, and they will actively determine what being an expert means in different settings.

As a consequence, these findings can offer new insights into the study of expertise in organisations which has further implications in aspects such as the type of knowledge fostered by the organisation and HR policies. Hiring, on-the-job training, career development, performance measurement and professional evaluations are closely related topics which should be reconsidered.

Chapter 6

CONCLUSIONS

6.1. INTRODUCTION

This thesis set out to understand the relationship between knowledge and action. Despite many contributions from different fields, such a relationship is not exempt of controversy. In fact, there are two confronting standpoints in the current knowledge management discourse. One group of authors develops their work based on the underlying assumption that knowledge should be ready in order to be *applied* by individuals. For them, knowledge is a precedent to action, which is the consequence. Focusing on knowledge and its characteristics, this stream encourages the possession and accumulation of knowledge and its subsequent practical initiatives emphasise knowledge codification, storage and distribution.

On the other hand, a practice-based perspective groups different authors who discard the emphasis on knowledge and knowledge types and focus on practice and/or *knowing*. They focus on practice and its relationship with the individual or with the group or community. In this framework, they discard the idea of a clear boundary between knowledge and action and lead us to understand that they are mutually constituted. However, this relationship between knowledge and action tends to become blurred. In general, this stream has studied *knowing* as a whole which comprises an amalgam of different aspects among which is knowledge. Therefore, these authors have not specifically tackled knowledge issues, but the

whole knowing phenomenon. We think this explains why some recent theories and works within this perspective are unclear.

Drawing on the practice-based perspective this research has aimed to fill this gap by closely studying the relationship between knowledge and action: in other words, in a new way. Exploring and *understanding the complex relationship of knowledge and action* has been the overarching research problem that has framed this study. In this endeavour we have conducted an empirical study in two different companies in order to study practitioners' practice *in situ*.

As a consequence, the overarching question framing this research has developed some corollary research questions:

- Many studies have defended and/or assumed that knowledge is a precedent to action. Hence, the moment in which action occurs, knowledge is applied. However, some authors discard this rationalist approach claiming other alternatives. Taking these aspects into consideration, we aim to shed light on *how knowledge is articulated in practice*.
- In the knowledge management literature and in many practical initiatives, explicit knowledge has taken precedence over other knowledge types. In this study we have explored *the role of different types of knowledge in action*.
- The study of the relationship between knowledge and action has led us to focussing attention on the possibility of dynamics which are caused by such interplay. Hence, uncovering these dynamics has been part of the research: *What are the key knowledge dynamics in action?*

- Understanding the relationship between knowledge and action has included studying the different variables which can exert an influence on it. In this line, the research has paid attention to *how different contextual and organisational aspects affect the relationship between knowledge and action*.
- And, finally, we have aimed to investigate the *meaning of expertise* as a consequence of studying the relationship of knowledge and action and their dynamics or evolution.

Subsequently, we have reappraised these research questions and their answers and drawn up the main conclusions of the study. We then discussed what implications these conclusions have in theoretical and practical terms. Finally, we have considered the scope and limitations of the current study and future work which will follow this research.

6.2. MAIN CONTRIBUTIONS

6.2.1. On Knowledge and Action

In order to shed light on our research objectives a multiple case study has been conducted which involved studying the practice of job placement technicians and consultants.

In Chapter 2 the relationship between the process and the actual practice was explored with a two-fold objective. First, management had resorted to explicit documentation in order to implement organisational systems and to control how the work was done. However, there is a lack of empirical research to clarify to what extent explicit documentation reflects actual practice. Second, it is assumed that practitioners apply these rules and explicit norms in order to act: they precede action.

Considering the results of the empirical work, we can state that explicit documentation, such as process procedures or flowcharts, reflects practice in a limited manner. In Chapter 2 we found evidence that practice cannot be made explicit due to three main reasons:

- Practitioners are unable to explain their practice in words. They are unaware of many aspects which are involved in their own practice: but even more relevant is the fact that in practice they resort to intuition, feelings and other unstructured resources. This type of knowledge is ineffable, it cannot be expressed in words.
- Complexity and uncertainty cannot be reflected in the documentation. In fact explicit resources assume that practice is stable and predictable. However, practice is complex and entails different levels of uncertainty and unpredictable aspects. For instance, in our case studies the job-seeker, the manager looking for a candidate or the consultancy firm's clients participate in the delivery of the service (co-production), influencing and affecting the final results and practice. The level of uncertainty of these client encounters cannot be predicted.
- Finally, practice cannot be made explicit because it comprises a combination of different expressions of knowledge. Therefore, practitioners do not use a single type of knowledge but many different types of knowledge at the time they are acting. Some knowledge is or can be made explicit, but other knowledge cannot.

Taking this last consideration into account, we accomplished our second objective. Contrary to technical rationality defended by positivism, practitioners do not follow rules in order to act. Our practitioners did not apply knowledge when acting. This fact was evident from the instance in which we were able to distinguish when practitioners were following predetermined actions, (canonical practice) and when they were not following formal

schemes (non-canonical practice). They were faced with situations and resorted to using a myriad of different expressions of knowledge to succeed.

As a consequence, in contrast to the rationalist approach and the idea of applying rules or procedures when acting, practitioners seem to resort to a complex combination of knowledge expressions simultaneously to action. In this way, we were able to show evidence of the composition of practitioners' different bundles of knowledge in Chapters 3 and 4. In those chapters we identified the different combinations of knowledge linked to each practice and classified the different knowledge components into four groups: individual-explicit; individual-tacit; collective-explicit; and collective-tacit knowledge. To this initial classification, know-who knowledge was added in Chapter 4 in order to align the framework with the empirical results obtained. So, when acting, knowledge is articulated in a bundle of knowledge or, in other words, through a combination of different knowledge expressions which interplay simultaneously in action.

Subsequently, these results discard the predominant role of explicit knowledge and the need to codify all knowledge in order to be ready to be used. Moreover, Chapter 2 shows evidence that the explicit representations of practice should be interpreted and hence, they are not as universally understood as was expected. Participating in the codification process is therefore crucial in order to be able to read and fully understand the explicit outputs. One reason is that during this joint codification process, new collective tacit knowledge is created. This finding has further consequences. On the one hand, one of the most revealing results is the consideration of these codification processes as knowledge-sharing situations and their explicit outputs as tools for learning and reflection. On the other hand, the flowchart and the process documentation turn out to be boundary objects that embed collective tacit knowledge, having meaning only in the community in which they have been designed. In other words, the study might be suggesting – rather than entering into the debate between tacit and explicit knowledge – that both are closely interrelated, pointing to fruitful areas of interaction between them.

Setting out from these findings, results show evidence that the role played by different types of knowledge differs. First, results in Chapters 3 and 4 show evidence that the bundle of knowledge in job-placement practice differs from that of consultancy practice. Their composition is different and the prevailing knowledge is also different. In terms of the job-placement practice, individual-tacit knowledge played a key role in superior performance, whilst tacit-collective and know-who knowledge were crucial in consultancy practice.

Second, not only do the knowledge combination and the role of different knowledge types differ among practices. Even if we study the same practice, the importance of different knowledge types evolves over time. Hence, in the same practice, the novices' bundle of knowledge differs from that of experts. The prevailing knowledge of the bundle is different.

These findings lead us to conclude that indeed, the relationship between knowledge and action is dynamic and evolves over time through practice; this implies an active interplay and the fact that learning is inherent to it.

However, the fact that some types of knowledge prevail over others is not a random and inconsequential aspect. Context plays an active role in this. Chapter 4 shows how the characteristics of the job and how individual, organisational and other contextual variables affect the composition of the bundle and the fact that certain types of knowledge prevail over others. In this sense, for a specific practice it was identified that aspects such as: organisational structure; hierarchical ladder; type of service; degree of labour intensity and customisation; division of labour; level of practitioners' discretionality; and personal motivations are key aspects which exert an influence on how the knowledge bundle evolves.

These results seem to point to the fact that context plays an active role in the relationship between knowledge and action as it fosters certain types of knowledge and hinders others. It is a constitutive element and not a mere container.

Therefore, the bundle of knowledge linked to a practice varies depending on the idiosyncrasy of the practice and also on the organizational structure and other contextual

aspects. This means that depending on the practice and the organizational form and context this bundle will be constituted in a different way and its evolution will also be different. Subsequently, not only will organizations be described as a combination of different types of knowledge but also considering their different practices of knowing.

6.2.2. On Expertise

Although expertise has implicitly appeared throughout the whole study, Chapter 5 deals with this topic in depth. This chapter gathers previous findings from preceding chapters, but seen from different perspectives.

Following our empirical study we can state that our findings challenge the traditional cognitivist approach to expertise and offer new insights into the understanding of this concept.

First, experts and novices differ in the composition of their bundle of knowledge employed in action. The bundles of knowledge of experts and novices give preference to different knowledge expressions. So, expertise has a relationship with knowledge types.

Second, experts and novices do not perform the same actions, although their acts may seem the same. So, the difference between them is not a problem of “doing the same task better, faster or more accurately”. Indeed, their actions are different.

Third, the results show evidence that the difference between experts and novices does not only consist of differences in knowledge types or in carrying out different activities. In fact, experts reframe their entire practice based on their different scales of relevance. Hence, the essence of expertise lies in considering the expert as a reframer. This implies that the expert is a reflective practitioner and a creative actor who transforms “practice”.

Finally, it is important to stress that this approach does not only focus on actor agency. Furthermore, in this approach the nature of the job, organisational and other contextual aspects will actively determine what being an expert means in different settings.

6.3. IMPLICATIONS

6.3.1. Implications for the Knowledge Management Field

On the Study of Knowledge and Action

This research provides interesting insights into the relationship of knowledge and action.

First, the idea that practitioners apply knowledge seems not to be wholly sound. As a consequence, theories and practical initiatives based on capturing knowledge in order to prepare it to be applied should be reconsidered.

In the same vein, studies on knowledge should acknowledge the close link between knowledge and action. They are mutually constituted and, therefore, we cannot study knowledge without considering action; neither can we study practice without considering knowledge. Therefore, the theoretical approaches which focus either only on knowledge or only on practice may benefit from this research.

The research has clearly stated that the possibility of capturing actual practice in explicit resources is impossible. This fact and its analysis discard the ideas of many authors and managers who have developed their theories and practical initiatives in the belief that, even when it is difficult, most knowledge can be transformed and codified. The research offers insights on reconsidering this approach in practical and theoretical terms.

On the Study of Contextual Influences

This research fulfils a need for research expressed by some authors in the field of knowledge management (e.g. Edelman et al., 2004): the need for more empirical studies into contextual

influences. This research may provide some new insights. First, it shows evidence that context is not a mere container but is an active actor which exerts influence on the composition of the bundle of knowledge, the prevailing type of knowledge and the definition of the concept of expert.

Reconsidering Cook and Brown's Model

Cook and Brown's model has been widely referred to in knowledge management literature. However, much as we have been inspired by it, in the light of the aforementioned conclusions, it should be reconsidered.

On the one hand, this model has been a good framework to identify the different types of knowledge though, at the same time, it is a hindrance. There are some knowledge examples which are very difficult to classify. This is the case of the unwritten rules identified in the case study. There are unofficial norms which may be written down, but which are not written down; they are implicit. According to Cook and Brown this could be explicit collective knowledge as "things that are also expressed explicitly yet typically are used, expressed, or transferred in a group" (1999: 391). However, they are highly contextual and not as objective as explicit collective knowledge should be. In order to understand them, collective tacit knowledge is needed. Cook and Brown label this form of knowledge as "genre" and they claim "the genre provides a frame for interpreting a given text" (1999: 391) or communication.

On the other hand, based on our conclusions, Cook and Brown's model fails to identify the role or predominance of certain knowledge expressions in comparison with others. This research shows evidence that for different practices, practitioners rely on different types of knowledge. Moreover, even for the same practice, different practitioners' bundles of knowledge differ depending on their level of expertise. The model does not explore this knowledge evolution or transition.

In general, Cook and Brown's model is rather static. According to our findings, Cook and Brown's model needs to be developed to acknowledge diversity. As we have seen

previously, knowledge bundles and their evolution are different depending on the practice being studied. Considering possible influential aspects, in that case, becomes crucial.

On Methodological Aspects

Some in the field of knowledge management have expressed the need for investigation into the research methods and the process that researchers employ in studying knowledge issues. As a consequence, these methodological aspects have been considered as an emerging area for future research (e.g. Lyles and Easterby-Smith, 2003). The existing difficulties associated with studying knowledge issues have discouraged many researchers from resorting to empirical research and, subsequently, this field is characterised by a certain lack of empirical studies.

Considering these aspects, the current research adds extensive empirical work to the field and due to its research methods and inquiry process offers new insights to the field in methodological matters. In line with this aspect our use of photography, mediated tools, validation workshops or shadowing is especially relevant. Carrying out the empirical study in situ and observing and participating in the daily routine of practitioners is an important and decisive aspect for two reasons. First, because many recent studies on practice have been run based on gathering data through interviews and without having real contact with the actual practice. We think that this is a shortcoming and a serious limitation which affects not only methodological aspects but also the research results. In fact, as our research shows, practitioners cannot verbalise the complexity of their actual practice and, besides, they are not really aware of several aspects which comprise practice.

6.3.2. Implications in Operations Management Field

This research has further implications in fields other than the knowledge management field. The fields of operations management (O.M.) and human resource management (H.R.) may benefit from some of its conclusions.

For instance, operations management theory has based the implementation of its systems on explicit artefacts to control how work is carried out. Hence, practitioners should follow them as a way of guaranteeing successful performance. Otherwise, a deviation will occur. As an example, the current quality and process management theories defend that the implementation and deployment of their systems be based on manuals, procedures, flowcharts or blueprints. According to our results, these tools cannot gather the actual practice and, therefore, this should be taken with a pinch of salt. Moreover, methodologies representing processes should be reviewed, especially those which do not foster the full participation of practitioners in the codification process; on the contrary, most of the efforts are made by consultants interviewing individual practitioners. As we demonstrate in the study, codification processes and their outputs are fruitful, knowledge-sharing situations and learning tools, but to take advantage of this, full participation is needed.

These ideas bring us to a more in-depth reflection on this field. One of the changes that the advent of the Knowledge Society claims to offer is the abandoning of the previous "industrial paradigm". This shift is rooted in the fundamental changes taking place in economic systems, the increase in services in the economy, especially the services known as informational or knowledge-intensive services. Due to the advent and development of these types of services, the work and well-established theories on economics and management are beginning to be taken with a pinch of salt. Jacques de Bandt (1999) states that the economic theory based on the industrial paradigm is inadequate for taking into account the specific realities of these services, and that current theories are ill adapted to them²². Moreover, a new mode of knowledge production (Gibbons et. al., 1994) has led us to identify companies as places where knowledge is created through their operations. This fact has far-reaching implications. Not only is knowledge considered an input for the company, but it is an output as well. This is reinforced by the fact that the number of knowledge-intensive firms, such as consultancy, professional and communications firms are increasing steadily.

²² These comments are not new. In 1982, in their book *An Evolutionary Theory of Economic Change*, Nelson and Winter introduced the role of knowledge in the study of economic and production theories, and argued that another theory is needed for the contemporary organisation.

These aspects affect the O.M. theory full on, as this comprises the function that designs and operates processes to give the firm a sustainable competitive advantage (Krajewski and Ritzman, 2002). It deals with processes which are the fundamental activities that the organisation uses to work.

This research shows evidence that when consultants or job placement practitioners are working, they are not following rules, they are not following instructions to prepare a business proposal or to interview a job-seeker. Knowledge is not a stock: it is created in the course of the working process and plays a key role in its operations.

Acknowledging these aspects becomes crucial for managing operations in contemporary companies, especially if they provide services. For the moment, O.M. theory has overlooked the role of knowledge within its operations and if it is dealt with at all, it is just as a stock gathered in an information system. O.M. theory is still immersed in the principles of the “industrial paradigm” and service operations management being run based on the same theory as manufacturing companies.

The results of this research, therefore, are a source of reflection for reviewing well-established operations systems and to start looking at the company as a knowledge system. Work practice entails knowledge dynamics which have not been contemplated or considered by operations management theory and these are crucial in order to carry out the work.

6.3.3. Implications on Other Managerial Fields

The results of this research have further implications on the field of Human Resources. For the moment, many companies have developed human resources policies prioritising the role of individual explicit knowledge. Therefore, hiring, training, evaluation systems and development have been based on fostering this single type of knowledge.

Taking into account our results, practitioners need and in fact resort to a multitude of knowledge expressions to develop and carry out their practice successfully. Hence, human resources system should consider this fact. Furthermore, the results show evidence that different practices resort to different combinations of knowledge. This implies that a first step would be to identify the specific bundle of knowledge employed by practitioners and, based on it, design human resources policies.

In the same vein, it is a fact that the role of different types varies within the same practice and the identification of the prevailing knowledge for excellent performance especially affects the development and training systems. As a consequence, these systems should be flexible enough to encourage different types of knowledge at different stages of career development.

Finally, this research offers new insights on the meaning of expertise which entirely affects how organisations identify, manage and promote their experts. Moreover, the fact that expertise resides in the ability of reframe and that it implies a reflective practitioner are key aspects to be considered in the human resource perspective as there may be policies which can hamper the ability of the organisation to develop a more reflective mode. In that sense, there would be a gap between the knowledge and type of knowing linked to actual practice and that fostered by formal systems and human resource policies.

6.3.4. Practical Implications on Managerial and Educational Issues

Despite our main objective being to understand the complex relationship between knowledge and action, and not to offer normative practical guidelines, the final results have further implications on different practical fields, especially in terms of management and education.

For many years both fields have prioritised explicit knowledge over other expressions of knowledge and this has resulted in managerial and educational systems being designed considering the prioritised knowledge.

This work shows that other expressions of knowledge are crucial and that different practices in different settings will foster the development of different prevailing knowledge. Therefore, a key aspect will be to identify the key knowledge relevant to each organisation.

Another crucial aspect is that this prevailing knowledge evolves over time and it is strongly related to the level of expertise that is fostered or hindered by contextual aspects. Taking these considerations into account will be vital if we are to manage the relevant organisational knowledge.

To sum up, this research helps managers and executives to reflect on the following aspects:

- What knowledge should be managed;
- What knowledge expressions are fostered by the organisational structure and other organisational systems;
- What are the dynamics of knowledge and their role in the daily operations.

As a result of the previously mentioned, the educational system which prepares these professionals is affected. The existing models in universities and business schools have prioritised a professional who gathers as much theoretical knowledge as possible (explicit-individual knowledge) with the aim of the individual being able to apply this knowledge in practice. As we have pointed out, the organisational scenario does not reflect this situation and requires other types of knowledge. These changes should therefore be considered by the educational/training programmes which will have to make amendments as much in "content" as in methodological aspects in order to adapt them to this reality.

Broadly speaking, this research helps the educational sphere to reflect on:

- How to bring practice closer to the business school or university;
- Which learning tools and methodologies foster the learning off the actual practice (e.g. simulation methods, new learning tools that combine distilled experience, etc.).

6.4. LIMITATIONS

This research aimed to increase the understanding of the complex relationship between knowledge and action. Nevertheless results from this study are subject to limitations. Some of these limitations correspond to the research methodology and have already been noted in relation to discussing reliability and the limits as to the validity of this research. However, we can appoint out some other aspects to be considered.

First, the research includes a multi-case study which entails two companies. Although the fact of being multi-case lends greater validity to the research, we cannot neglect to mention that only two companies have been considered, which presents certain limitations. Though our main purpose was not to generalise results, if we were to proceed to theory building, we would need to gather more field data.

As stated in previous chapters, comparing experts and novices has been a proxy variable for our research purposes. Had we wanted to study how the bundle of knowledge evolves, the best way to do this would have been to follow the same individual over time. It is a limitation we were aware of.

Observation may cause some distortion of the practitioners' behaviour which may influence the study. However, even though we could not make it a totally neutral research method, we tried to diminish the bias. First, Company A – J.O.B. – was familiar with the researcher as who had been doing consultancy work in the company for some years. Therefore, the practitioners were relatively used to researcher's presence. Second, due to the fact that the researcher was shadowing the practitioners for a long time, they finally got used to the

situation. As a consequence, the researcher was included as another member in corporate events (e.g. team lunches) and was somehow seen as a confidant by practitioners. This last aspect was evident in the informal conversations held after working meetings with different practitioners, as they revealed very sensitive information about themselves and the company. Moreover, we made sure that they knew that their participation was part of a research project. This fact was reinforced with the confidentiality statement where the terms of the collaboration were explained. Finally, the researcher took great pains not to interfere in their daily work. Questions about practice or about what had been observed were asked once the practitioners had finished their work, in informal conversations or during the interviews.

6.5. FURTHER RESEARCH

Far from being final output, this research opens up many areas for future work. For instance, conducting the same empirical study in other settings is relevant in order to clarify the role and influence of different contextual aspects. We are considering conducting an empirical study in another consultancy firm with a different organisational structure to AKUA's. Therefore, our aim would be to compare results taking into account that the nature of practice is the same (e.g. consulting work) but that the firms have different structures.

In the same vein, we would conduct the same study but with other practices which have different characteristics to the ones seen until now. For instance, it would be relevant to study a service industry (e.g. a hotel) or a manufacturing company with a machine bureaucracy structure. In this way, our aim would be to build a theoretical model which generalises the findings.

The research has also opened up many possibilities for going further into the study of expertise. Questions remain as to how experts become "experts", which is an interesting issue that should be explored more fully. In the study, we identified and analysed the differences between experts and novices, but did not explore how the relationships between

the experts and novices and their bundles of knowledge evolve over time. This is a productive field of inquiry in which knowledge types, knowing, practice and learning are interwoven.

Due to the difficulty of carrying out empirical work in terms of knowledge and practice issues, we are interested in following up on this track of research. In other words, we think that conducting studies on research methods and the inquiry process linked to studies focused on knowledge would help our community to develop more valuable and consistent empirical work. What is certain is that theoretical results would benefit from this.

Finally, these results may be a prompt to start reconsidering present managerial practices. Currently, explicit and abstract knowledge play an outstanding role in both the theoretical and practical fields. Concepts, models, manuals and documentation are considered key elements in order to carry out work. Practitioners should follow them as a way of guaranteeing successful performance. According to our results, although all of these explicit artefacts and abstract knowledge play a role in practice, other types of knowledge should also be considered. Drawing attention to other expressions of knowledge would mean reconsidering important managerial practices such as leadership and managerial style, the hiring and training of employees and operations management, amongst others. Conducting further research on how these aspects affect traditional managerial practices offers a whole research field full of possibilities. In line with this last reflection, we are interested in researching how services, and especially the so-called knowledge-intensive services, should be managed. This implies reconsidering human resources and operations management perspectives. Reflecting on this will be well worth the effort.

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