

**UNDERSTANDING KNOWLEDGE SHARING IN KNOWLEDGE INTENSIVE FIRMS:
THE CASE OF MEXICAN ORGANISATIONS**

by

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Dedicated to Rosaluz and Alfredo, my loving parents

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ABSTRACT

This thesis explores the issue of knowledge sharing in two knowledge-intensive organisations. It aimed to answer *how individuals in knowledge intensive firms (KIFs) understand and enact knowledge - sharing networks within their departments, what enablers and barriers they encounter and, how the context of these organisations contributes to these understandings*. The organisations were located in Mexico, which is portrayed by research as a country with specific cultural characteristics that could encourage bureaucratic structures, and one in which there is little existing research on the matter.

Knowledge sharing research that has an organizational learning perspective acknowledges the complexities of knowledge sharing, regards it as a social process and questions the manageability of knowledge. This research resonates with that perspective and highlights the experiences and understandings of knowledge sharing amongst network actors in the organisation. It addresses a gap in the literature by exploring the role of the organisational context in shaping these understandings, mainly through organisational structure, while being shaped by them as well. In order to access these understandings, in-depth interviews were carried out with employees in five departments in the participating KIFs. Standardized open-ended interviews were carried out to obtain data about the patterns of knowledge sharing interactions in the knowledge-sharing networks of each department. Elements of a bureaucratic structure and culture in both organisations were found to deter knowledge sharing. These were reflected in the patterns of knowledge sharing of the networks examined.

Also, an organisational discourse in Organisation X and a focus on accountability in Organisation Y appeared as influential in the understandings and enactment of knowledge sharing by actors. The findings of this research contribute to the growing literature that argues for more emphasis on the nurturing of organizational contexts that encourage social interaction and knowledge processes within it; a non-threatening environment and work arrangements that promote collaboration and learning through knowledge sharing.

TABLE OF CONTENTS

DEDICATION.....	ii
ACKNOWLEDGEMENTS.....	iii
ABSTRACT.....	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	xi
LIST OF FIGURES.....	xiii
<u>CHAPTER 1: INTRODUCTION</u>	01
1.1 Knowledge management research	01
1.2 Knowledge management and the Knowledge Intensive Firm (KIF)	02
1.3 Importance of understanding knowledge sharing	02
1.4 The subject of this research	04
1.5 The participating organisations	05
1.6 Research objective and research questions	07
1.7 Justification of the research	07
1.8 The scope and delimitation of the study	08
1.9 Philosophical underpinnings of this research	08
1.10 Outline of the chapters	09
<u>CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK</u>	12
2.1 Introduction	12
2.2 Knowledge intensive firms (KIFs)	14
2.2.1 Knowledge work and knowledge workers	16
2.2.2 Importance of knowledge management (KM) in KIFs	18
2.2.3 Research on knowledge sharing in KIFs	19
2.2.4 The social nature of knowledge sharing: assumptions for this research	22
2.3 Understanding knowledge sharing: the relevance of context	24

2.3.1	The national context: Mexico	26
2.3.2	Assumptions on the structure and agency debate	28
2.3.3	The organisational context: organisational structure	32
2.4	Different views of knowledge in organisational research	36
2.4.1	The positivist (cognitive-based) perspective	36
2.4.1.1	The positivist approach as the mainstream perspective for knowledge management	38
2.4.1.2	Cognitive-based approaches to the understanding of knowledge sharing	40
2.4.1.3	Social Exchange Theory, the Theory of Planned Behaviour and Social Capital Theory	40
2.4.2	The social constructionist (practice-based) perspective	43
2.4.2.1	Communities of Practice (CoPs)	45
2.5	The epistemologies of possession and of practice and a set of assumptions about knowledge for this research	47
2.6	Knowledge and its difference with information	50
2.6.1	Not all sharing is knowledge sharing: information sharing and knowledge sharing	51
 <u>CHAPTER 3: METHODOLOGY</u>		56
3.1	Introduction	56
3.2	Justification of the paradigm (ontology / epistemology)	57
3.3	Justification of the research strategy	60
3.3.1	Case study as the research strategy	60
3.3.2	Types of case studies	62
3.3.3	Rationale for the type used	64
3.4	Criteria for case selection (organisations & networks)	65
3.4.1	Selection of the organisations: Knowledge Intensive Firms (KIFs)	66
3.4.2	Selection of the departments where the networks were embedded: knowledge work	68

3.5 Methods and procedures	69
3.5.1 Access to participants	69
3.5.2 The interviews: the different stages	70
3.5.2.1 Standardized open-ended interviews: Population samples and the basis for their selection	71
3.5.2.2 Standardized open-ended interviews: Social Network Analysis (SNA) to analyse the data with different purposes	75
3.5.2.3 Standardized open-ended interviews and the instrument description	77
3.5.2.4 Analysis of the SNA data	81
3.5.2.5 Additional features of the networks used in the analysis	84
3.5.3 In-depth interviews	89
3.5.4 Unexpected changes during data collection	91
3.5.5 Non-participant observations	94
3.5.6 Analysis of qualitative data: techniques and procedures	95
3.6 Limitations of the methodology and how they were handled	96
3.6.1 Ethical considerations	96
3.6.2 Reflexivity	97
3.6.3 Role of the researcher: positionality	99
3.7 Evaluating rigour	102
3.7.1 Truth value / Credibility	103
3.7.2 Applicability / Transferability	105
3.7.3 Consistency / Dependability	106
3.7.4 Neutrality / Confirmability	107
3.8 Conclusion	108
<u>CHAPTER 4: BUREAUCRACY IN KIFs AND KNOWLEDGE SHARING</u>	109
4.1 Introduction	109
4.2 Post-bureaucracy and the participating KIFs	111
4.3 The prevalence of bureaucratic organisations	112

4.4 Bureaucratic structure and the patterns of knowledge sharing in the knowledge-sharing networks	114
4.4.1 Analysis of SNA data	115
4.4.1.1 Organising work and centralization	116
A) Organisation X – Experts Centre (HC network)	116
B) Marketing Department (MI network)	120
C) Organisation Y – Academic Consultancy (AC network)	121
D) Publishing Department (EC network)	124
E) Marketing Department (KM network)	125
4.4.1.2 Summary of the findings for the five networks in both organisations	127
4.4.1.3 Integration	129
A) Networks’ boundaries setting	129
4.5 Attenuated bureaucracy in the participating organisations	138
4.5.1 Elements of bureaucracy in the participating KIFs	138
4.5.1.1 Bureaucracy elements in employees’ narratives in both organisations	139
4.5.1.2 The participating KIFs as attenuated bureaucracies	144
4.6 Conclusions	146
<u>CHAPTER 5: “BEING THE EXPERT” – THE CASE OF ORGANISATION X</u>	148
5.1 Introduction	148
5.2 Organisation X: A typical example of a KIF	149
5.2.1 Organisation X participant networks	152
5.3 The discourse of expertise	155
5.3.1 Wanting to be an expert in the “Experts Centre”	

– the HC network	160
5.3.1.1 Experts that do not want to share	160
5.3.1.2 Experts that share to gain expert power	163
5.3.2 The marketing department: the MI network	170
5.3.2.1 “Becoming an expert not only to grow in the company”	170
5.3.2.2 “Others want to be recognised, but I like to help”	172
5.4 Conclusions	177
<u>CHAPTER 6: THE FOCUS ON ACCOUNTABILITY AND THE DEFENSIVE PRACTICES IN ORGANISATION Y</u>	180
6.1 Introduction	180
6.2 Organisation Y: a non-typical example of a KIF	181
6.3 Lack of knowledge management in Organisation Y	183
6.4 Organisation Y participant networks	185
6.4.1 The marketing department (KM network)	186
6.4.2 The academic consultancy services department (AC network)	188
6.4.3 The publishing department (EC network)	192
6.5 A new broom sweeps clean?	195
6.6 The defensive practices in Organisation Y	197
6.6.1 The fear of being exposed	199
6.6.2 The accountability issue	204
6.7 Conclusions	210
<u>CHAPTER 7: GENERAL DISCUSSION, CONCLUSIONS AND IMPLICATIONS</u>	213
7.1 Introduction	213
7.2 Discussion of the findings	216
7.2.1 How do individuals in knowledge intensive firms (KIFs) understand and enact knowledge-sharing networks within their departments?	218

7.2.2 How does the context of these organisations contribute to these understandings?	218
7.2.3 Organisations X and Y, similar results but different emphases	224
7.3 Contributions and implications of the findings	227
7.3.1 Contributions to Theory	227
7.3.2 Contributions to Methodology	228
7.3.3 Practical implications	229
7.4 Limitations of the study	232
7.5 Future research	233
7.6 Conclusions	234
<u>APPENDICES</u>	237
A. Material used in fieldwork	237
A.1 Standardized open-ended interviews (SNA questionnaire)	237
A.2 Choices of participants for in depth interviews	239
A.3 Sample questions for first in depth interviews	243
A.4 Sample questions for second in depth interviews	244
A.5 Sample interview transcript 1 (A3 – AC network)	245
A.6 Sample interview transcript 2 (E3 – HC network)	257
A.7 Informed consent (In Spanish)	268
A.8 Invitation letter for participants (In Spanish)	270
B. Social network Analysis (SNA): Tables and network maps	271
B.1 Degree centrality tables for each network and knowledge sharing purpose	271
B.2 Network maps for each network and knowledge sharing purpose	287
B.3 Summary of Reciprocity measures	295
<u>REFERENCES</u>	296

LIST OF TABLES

Table 1	Total number of participants from both organisations	72
Table 2	Participants interviewed in each stage of the research	73
Table 3	Job roles and seniority Organisation X (in-depth interviews)	83
Table 4	Job roles and seniority Organisation Y (in-depth interviews)	83
Table 5	Elements of Creswell and Miller’s framework used in this research	104
Table 6	Degree centrality HC network – Ask for information	118
Table 7	Degree centrality AC network – Ask for information	122
Table 8	Degree centrality MI network – Ask for information	271
Table 9	Degree centrality EC network – Ask for information	272
Table 10	Degree centrality KM network – Ask for information	273
Table 11	Degree centrality HC network – Ask for advice	273
Table 12	Degree centrality MI network – Ask for advice	274
Table 13	Degree centrality AC network – Ask for advice	275
Table 14	Degree centrality EC network – Ask for advice	276
Table 15	Degree centrality KM network – Ask for advice	277
Table 16	Degree centrality HC network – Share ideas, insights, opinions and experiences	278
Table 17	Degree centrality MI network – Share ideas, insights, opinions and experiences	279
Table 18	Degree centrality AC network – Share ideas, insights, opinions and experiences	280
Table 19	Degree centrality EC network – Share ideas, insights, opinions and experiences	281
Table 20	Degree centrality KM network – Share ideas, insights, opinions and experiences	282
Table 21	Degree centrality HC network – Ask for a different opinion or perspective	282
Table 22	Degree centrality MI network – Ask for a different opinion or perspective	283

Table 23	Degree centrality AC network – Ask for a different opinion or perspective	284
Table 24	Degree centrality EC network – Ask for a different opinion or perspective	285
Table 25	Degree centrality KM network – Ask for a different opinion or perspective	286
Table 26	Summary of reciprocity in the five networks	295

LIST OF FIGURES

Figure 1	Types of case studies	65
Figure 2	HC network – Ask for a different opinion or perspective	131
Figure 3	MI network – Share ideas, insights, opinions and experiences	131
Figure 4	AC network – Ask for a different opinion or perspective	132
Figure 5	KM network – Share ideas, insights, opinions and experiences	133
Figure 6	EC network – Ask for a different opinion or perspective	133
Figure 7	HC network – Share ideas, insights, opinions and experiences	287
Figure 8	HC network – Ask for advice	288
Figure 9	HC network – Ask for information	288
Figure 10	MI network – Ask for advice	289
Figure 11	MI network – Ask for an different opinion or perspective	289
Figure 12	MI network – Ask for information	290
Figure 13	AC network – Share ideas, insights, opinions and experiences	290
Figure 14	AC network – Ask for advice	291
Figure 15	AC network – Ask for information	291
Figure 16	KM network – Ask for information	292
Figure 17	KM network – Ask for advice	292
Figure 18	KM network – Ask for a different opinion or perspective	293
Figure 19	EC network – Share ideas, insights, opinions and experiences	293
Figure 20	EC network – Ask for advice	294
Figure 21	EC network – Ask for information	294

CHAPTER 1: INTRODUCTION

1.1. Knowledge management research

Despite the initial years of dominance of a positivist stance in the knowledge management investigations, there is now an important amount of studies using a subjectivist approach or which consider subjectivity in the body of research on knowledge management (Ikujiro Nonaka & Peltokorpi, 2006), particularly in the organisational studies literature (for examples see: Robertson & O'Malley Hammersley, 2000; Robertson, Scarbrough, Swan, et al., 2003; Spender, 2008). This thesis aligns and contributes to such literature, adhering to some debates and discussing some issues in it that will be summarised in what follows.

Among the knowledge activities studied within knowledge management research, knowledge sharing has been regarded as a key activity for the leveraging and creation of new knowledge and innovation in organizations (Cabrera, Collins, & Salgado, 2006; Foss, Husted, & Michailova, 2010; Nahapiet & Ghoshal, 1998; S. Wang & Noe, 2010). Due to its relevance, knowledge sharing is the knowledge activity this investigation looks at.

At the same time, the type of organisation approached; the Knowledge Intensive Firm (KIF) has been at the core interest of researchers of knowledge activities, since it is believed that knowledge management has a strong presence in it (Alvesson & Kärreman, 2001). As claimed by Robertson and O'Malley Hammersley (2000 p.41), "KM has always been of considerable interest to KIFs and KIFs have always been in the business of managing knowledge - knowledge being their primary asset and a source of competitive advantage".

1.2 Knowledge management and the Knowledge Intensive Firm (KIF)

The label “KIF”, as Starbuck (1992) explains, imitates other labels used by economists such as the capital-intensive firm and the labour-intensive firm, implying that in this type of organisation, knowledge is the most important production output, and as Starbuck explains, it is also the most important production input. Likewise, it is probably because knowledge is so important in this kind of organisations to do their work, that it can be thought that knowledge management strategies will be found within them, since they would allegedly have a stronger need to develop strategies to manage knowledge. Following Donaldson’s (2001 p.956) claim, “the creation, sharing and protecting of knowledge are vital to the health of a modern organization”, and given that “knowledge-intensive organizations depend upon the generation, utilization and uniqueness of their knowledge base...these processes take on added significance in those organizations”.

This is the first assumption about KIFs that the evidence from the cases in this research puts to question. Not all KIFs necessarily have a knowledge management strategy in place, which was evident in the first stage of data collection. Also, if they do have a KM strategy, this might not address all members of the organisation.

1.3 Importance of understanding knowledge sharing

In the so-called knowledge based economy, organisations (particularly KIFs) need to develop ways of sharing knowledge between their workers and often with third parties outside of them. Frequent knowledge sharing will contribute to their continuous learning, encourage innovation and ultimately, help the organisation survive in the market. However, knowledge sharing is a complex phenomenon and being volitional, it is dependent on the people who participate in it, not on the ones who would like to control it in the organisation (e.g. managers). Through knowledge management strategies and tools, managers might try to control knowledge sharing and their attempts to do so might prove ineffective if they are based on the wrong assumptions.

Knowledge sharing, whether it is mediated by technology or not, involves people working together; and thus in this investigation, it is regarded as a social phenomenon and the act of sharing knowledge is considered as social action, which is meaningful for the actor (Weber, 1978). Thus, a basic concern in this research was grasping the meanings that individuals ascribed to their knowledge sharing experiences, through the (subjective) intended meanings they ascribed to their knowledge sharing actions. The grasping of those meanings aided the understanding of the interpretations they made of knowledge sharing behaviours and interactions between themselves and other members of their networks. This in turn, helped in discerning how individuals understand knowledge sharing in the workplace.

Regarding how individuals enact knowledge sharing in the workplace, this research was based on the assumption that the people with which, individuals claim to spontaneously interact with knowledge-sharing purposes in their workplace conform their emergent knowledge-sharing network. From this, it can be inferred that they are also the people whose knowledge sharing actions and interactions are relevant for the individuals' understanding of how knowledge sharing happens in their workplace. Also, these informal knowledge-sharing networks are the contexts for the enactment of knowledge sharing interactions. Thus, understanding how these networks are enacted and understood by their actors, can bring us closer to deciphering what helps individuals to understand the process of sharing knowledge in the workplace. Increasing such understanding can guide organizational strategies to facilitate knowledge sharing in their knowledge sharing networks. This could then have a positive impact on other knowledge processes such as knowledge creation, learning and innovation, which in turn can contribute to the scaffolding of better organizational performance.

In the remaining of the chapter, an overview of this thesis will be presented, that aims at providing the reader with a general idea of what was investigated, how and what for. An outline of the chapters of this thesis will also be provided.

1.4 The subject of this research

This multiple case study was carried out in two knowledge intensive organisations (KIFs), and aimed to enrich our understanding of knowledge sharing in the workplace. The organisations were located in Mexico, which is portrayed by research as a country with specific cultural characteristics that could encourage bureaucratic structures and ways of organizing and where there is little research on knowledge sharing.

These assumed characteristics include: centralized authority, large power differences, a close family structure and social individualism (Howell et al., 2007). Even when organisational research in the Mexican context is scarce, Mexican culture is regarded in the existing management literature as group or family oriented, placing much importance on well-defined power and authority structures in the organisation and preferring certainty as well as predictability (Schuler, Jackson, Jackofsky, & Slocum, 1996). The importance of these assumed characteristics for the present research is that this type of national context would, in theory, create tension with the organisational structure of KIFs. According to Kärreman, Sveningsson and Alvesson (2002), it is assumed by some researchers, that KIFs have a post-bureaucratic structure, which is opposite to what this type of national context would facilitate. It would then be interesting to examine the influence of the national culture (an element of the national context) in these organisations and in consequence, in knowledge sharing within them. Allegedly, the way this national culture could be influencing knowledge sharing would be through the organisational structure (e.g. bureaucratic, post-bureaucratic) of the KIFs studied.

With few exceptions (for examples see: Finestone & Snyman , 2005; Voelpel & Han, 2005) much of the existing empirical research on knowledge management, knowledge sharing and knowledge intensive organisations, has been carried out in Western, developed countries, where cultural characteristics are considered to be very different to those in Mexico and other similar countries. Thus, some of the current assumptions about knowledge management and about knowledge intensive firms derived from such research and which are discussed in this thesis, were particularly difficult to

confirm in the Mexican context, as the findings of this investigation show. This enhances our knowledge and awareness of the importance of this aspect of the wider context around organisations and employees in organisational research and particularly in knowledge management and knowledge sharing research.

Within the last three decades, interpretive approaches to research have provided new means of investigating previously unexplored questions, leading management researchers to new forms of knowledge about management and organization (Sandberg, 2005). Furthermore, research on knowledge management, which for the first years of its story was based on the view of knowledge as an economic resource, has shown a tendency to shift from an emphasis on knowledge capture, codification and the use of IT tools, to the highlighting of knowledge creation and sharing through essentially, social means (Swan & Scarbrough, 2001). However, even when this shift has meant that there is now an important amount of research using a more subjectivist approach in the literature on knowledge management (Nonaka & Peltokorpi, 2006), there are still issues that have not been addressed by scholars in this strand. In this research, I specifically addressed the experiences of knowledge sharing of individuals in the workplace, with the aim of investigating how contextual constraints shaped and were shaped by their understandings of how knowledge sharing happened and in consequence, how they enacted their knowledge-sharing networks. I believe that this contributes to a better understanding of what has been considered a key process in the leveraging and creation of knowledge in organizations (Cabrera, Collins, & Salgado, 2006; Foss, Husted, & Michailova, 2010; Nahapiet & Ghoshal, 1998; Wang & Noe, 2010): the process of knowledge sharing.

1.5 The participating organisations

The concept of what a KIF is, is ambiguous (Alvesson, 1993, 2011; Von Nordenflycht, 2010). Still, scholars seem to prefer certain types of organisations they consider as KIFs and these have been the focus of most research on knowledge management in KIFs. However, organisations from other industries which are not the most commonly found in research could be doing intellectual work and have other characteristics that would

classify them as KIFs. Given these arguments, and this being a multiple-case study, I wanted to have variety within the cases I selected so the data would help in answering my research questions more fully. Thus, my criterion to sample the KIFs, which participated in this investigation, was that both organisations shared key characteristics of knowledge intensive or knowledge-based organisations, but that one of them was not from a field that was typical (frequently found) in research on KIFs.

A second element for comparison was not found until the first stage of data collection but was considered interesting to discuss. This was that one of them did not have a knowledge management strategy in place, and the other one did. The evidence as to whether the presence of KM makes a difference in knowledge sharing is unclear, probably because as will be discussed later in this thesis, KIFs are expected to actively manage knowledge and not the opposite. Still, it was an interesting aspect that I considered in my analysis and which I mention in my discussion of the findings.

Another assumption about KIFs that is addressed in this research is that they are exemplars of a post-bureaucratic structure (Kärreman et al., 2002). This assumption seems to be related to the need of KIFs to retain their advantages of flexibility and innovation (Starbuck, 1992). Researchers have also questioned the assumption that KIFs and the way they organize work are completely non-bureaucratic (Courpasson & Dany, 2003; Hodgson, 2004; Kärreman et al., 2002; Robertson & Swan, 2004), and as will be seen in this research, the evidence from the cases points at a contradiction between what is assumed about the structure and way of organizing of KIFs (that they are post-bureaucratic) and what was found in the cases studied. More importantly, and as explained before, this research adds to the literature that acknowledges the importance of context for knowledge sharing, (Currie, Finn, & Martin, 2007; Currie, Waring, & Finn, 2008; Robertson, Scarbrough, Swan, et al., 2003) and highlights the role that the organizational structure has in shaping the understandings of employees of knowledge sharing in their organisations, while also being shaped by them. In particular, a structure that is mostly bureaucratic is likely to have a negative impact in these understandings, encouraging hoarding behaviours, power-oriented actions and defensive practices that will in the end deter knowledge sharing.

Throughout the next chapter, along with the literature review and the outline of the theoretical framework chosen, I frame the questions that guided this thesis and which I believe enable the answering of the central problem of discerning how individuals understand knowledge sharing in the organisation. I also point out the significance of addressing each of these questions. However, I will also present them along with the research objective of this thesis in the following section.

1.6 Research objective and research questions

The purpose of this study was to understand the ways in which people in KIFs understand and enact knowledge sharing and their knowledge-sharing networks in the workplace, what barriers and enablers they encounter and how the organisational context shapes and is shaped by this understandings. For this research, knowledge sharing was generally defined as social action, which is embedded in some form of social interaction, and to which actors ascribe meaning.

The questions that guided this research were:

- 1) How do individuals in knowledge intensive firms (KIFs) understand and enact knowledge sharing networks within their departments? What barriers and enablers do they encounter to share knowledge in these networks?*
- 2) How does the context, of these organisations contribute to these understandings?*

1.7 Justification of the research

I believe that increasing our understanding of what helps individuals in the workplace to understand the process (and acts) of sharing knowledge can guide organizational strategies to stimulate knowledge sharing in knowledge sharing networks. If the organisations are interested in encouraging informal knowledge sharing between their employees, even when they cannot control it, this could then have a positive impact on knowledge processes and on the overall organizational performance. This is

perhaps the most relevant implication that the findings of this research were expected to have both in terms of the enhancement of the theoretical understanding of knowledge sharing and on the development of strategies that better aid organisations in the nurturing of knowledge sharing and its related knowledge processes.

1.8 The scope and delimitation of the study

This study was carried out in two organizational contexts. Specifically, the participants in the study came from branch offices of two multi-national knowledge-based organizations in Mexico City. None of the companies were originally Mexican. However, all of the participants were either Mexican or had been working and living in Mexico City for a considerable amount of time when the research took place. Additionally, the departments from which participants came carried out a specific type of job where knowledge was the main resource and where it was expected that among other elements, a low level of standardization demanded that employees engaged in problem solving, creative processes and in general performed knowledge intensive work.

1.9 Philosophical underpinnings of this research

This thesis is aligned epistemologically with an interpretive approach to research. Interpretivist thinking seeks to grasp our understanding of the “meaning” of “social phenomena for its participants. Interpretivists also acknowledge human agency and reflexivity. For interpretivists, the primary research object is individuals’ and groups’ lived experience of reality. However, ontologically speaking, at least in management research, most advocates of interpretive approaches want to reject going as far as taking a complete relativistic stance and so did I in this investigation. In this respect, this investigation is more aligned with the Subtle Realism proposed by Hammersley in 1992 (Hammersley, 2002) where it is acknowledged that there are real world objects apart from the knower. Still, we cannot separate ourselves from what we know and so, we can only know reality from our own perspective of it.

1.10 Outline of the chapters

Throughout the chapters in this thesis, I present this research in the following sequence in the remaining chapters:

In chapter 2 (Literature Review), the aims and purpose of this research are introduced and gaps in previous research on knowledge sharing in KIFs, which adhere to the perspective this research aligned with, are identified. The relevance of the context in shaping social life is discussed, along with my position on the debate of structure and agency. The characteristics of the national context in which, this research was carried out, and which are derived from cross-cultural research are presented. They could be thought to encourage bureaucratic forms of organization, which would clash with the assumptions about structure that some researchers of KIF have. The importance of the organisational structure in shaping knowledge sharing is considered and the research questions of this thesis are presented. I also present a review of the relevant literature on knowledge and knowledge sharing and discuss the assumptions, approaches and definitions that guided this investigation.

The review also talks about a representation of knowledge sharing interactions that was used in this research: the knowledge-sharing network.

Chapter 3 (Methodology) sets out the methodological basis upon which this study was carried out. The epistemological and ontological commitments of this research are discussed, as well as the selected research strategy and the rationale behind such choices. An explanation of the criteria for the selection of cases for this study is provided, followed by a discussion of the procedures used in the chosen research strategy. Methodological limitations and challenges presented by the research strategy are identified. Also, an account of the stages carried out in the research process is provided. A description of the population samples and the basis for their selection are presented. The analytical process through which findings were reached, ethical considerations and dilemmas are discussed, along with qualitative research criteria to judge this investigation.

In chapter 4 (Bureaucracy in KIFs), I present and analyse data to explain how some characteristics of the organisational structure and organization of work of the participating companies as well as the context in which these organizations are embedded (Mexico), are relevant to the way in which their employees understand knowledge sharing. I show that these elements are reflected in the participants' narratives about how knowledge sharing happens in their departments and in the patterns of knowledge sharing found in the maps of their knowledge sharing networks. The ideal bureaucracy type and a type of attenuated bureaucracy that both participating organisations fit in are discussed. At the same time, I discuss the post-bureaucratic type and some assumptions about KIFs having post-bureaucratic structures and how these do not apply to the KIFs studied. I discuss the ways in which work is organized in each of the departments studied, along with the results of the SNA interviews that shed light on bureaucratic attributes on the patterns of knowledge sharing represented in each network.

Chapter 5 (Being the expert – the case of Organisation X) - presents the case of Organisation X, a firm from a business field that is often found in research on KM (a typical KIF), and the one with a knowledge management strategy in place studied in this investigation. It discusses the influence of a form of normative control in the shape of an organisational discourse "Being an expert" on the understandings and enactment of knowledge sharing networks in two of its departments. It also discusses the way work is organised in X such that individualistic, power-based behaviours that deter knowledge sharing are promoted.

Chapter 6 (The focus on accountability and the defensive practices in Organisation Y) presents the case of Organisation Y, an organisation from a business firm that has been largely ignored in research on KIFS (a non-typical KIF), which did not have a defined knowledge management strategy at the time this research was carried out and which is studied in this investigation. A strong focus on accountability and the consequent "defensive" practices found in this organisation, are discussed and their influence on the understandings and enactment of knowledge sharing networks in three of its

departments are analysed. It also discusses the way work is organised in Y, and the negative effects of it on knowledge sharing are also considered.

Finally, Chapter 7 (Discussion, conclusions and implications) is focused on integrating the salient features from the analyses of the findings of this research as well as to relate them to the existing literature. The findings are discussed in relation to the literature while examining the ways in which they answer the research questions that guided this thesis. The final sections of the chapter are devoted to the discussion of the contributions and implications of this research for theory, methodology and practice in the field. Limitations of this research and potential avenues for further inquiry are considered and finally conclusions are presented.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Introduction

Knowledge management (KM) has been a subject of much interest both in research and between practitioners for more than fifteen years now (Hislop, 2010). It has been claimed, that it emerged as a managerial response to trends of the post-industrial era, where knowledge is considered a defining characteristic and which is associated with flatter organizational structures, de-bureaucratization and networked organizational forms (Scarbrough & Swan, 2001). These authors also claim that KM can be regarded as a reflection of a more positive agenda that emerged from the awareness of the key role that knowledge has in organizations.

KM has been considered a very broad concept (Alvesson & Kärreman, 2001) and the coherence of the KM label has been questioned, given the problems with the idea of the manageability of knowledge (Alvesson, Karreman, & Swan, 2002). However, it has also been named “one of the most influential management fashions of the recent period” (Scarbrough, Robertson, & Swan, 2005). Additionally, Hislop (2010) found that academic interest in the topic of KM has remained stable since 1998. From the body of research analysed by Hislop, it was also found that knowledge sharing and knowledge transfer are two of the three topics related to KM that have more evidently interested researchers increasingly over the past years. The third one is intellectual capital.

The interest in knowledge sharing stems from the fact that among other knowledge processes, knowledge sharing is thought to play an essential role in the performance of knowledge creation and innovation processes and some have even claimed that the “success of knowledge management initiatives depends on knowledge sharing” (Wang & Noe, 2010). According to Cummings (2003 p.1), “knowledge sharing research has recently moved to an organizational learning perspective”. This thesis acknowledges the relevance given to knowledge sharing and contributes to the body of research

targeting it, addressing the role of context (national and organisational) in shaping the understanding that employees have of knowledge sharing in their organisations.

With the move to a knowledge-based economy, both the relevance given to knowledge in organizations and to the management of such knowledge came along. Also, there was an increasing interest in investigating related categories such as “knowledge intensive firms (KIFs)”. These are considered to be among other things “current post-modern exemplars” and a model to look up to for more hierarchical organisations that want to be more flexible and perhaps more knowledge-based (McGrath, 2005). This research addresses the key issue of knowledge sharing in this type of organisation. It also contributes to the debate on the post-bureaucratic nature of the organisational structure of KIFs. The literature on knowledge sharing is rich in perspectives and sometimes ambiguous, thus, the purpose of this chapter, is to contextualise the present investigation and locate it within such literature. In order to do so, the chapter presents a review of the relevant literature for this research.

The chapter begins with a discussion about knowledge intensive firms (KIFs), the work they do (knowledge work) and their workers (knowledge workers). It also talks about the importance that knowledge management has been claimed to have within them. Research on knowledge sharing in KIFs to which this investigation aligns is summarized and gaps in the literature that this research aimed to address are identified.

After that, I advance my stance in terms of the nature of knowledge sharing, to position my research in the literature discussed. Then, I address the relevance of context in the understanding of social phenomena, particularly, of knowledge sharing. I explain the standpoint of this research in the debate of structure and agency and talk about a representation of knowledge sharing interactions that was used in this research: the knowledge-sharing network, presenting then, the first research question of this investigation.

The review continues discussing relevant aspects of context that could contribute to the understanding of knowledge sharing of employees in KIFs. The potential influence

of the national context is considered as well as the role of the organisational structure in shaping the employees' understandings of knowledge sharing in their workplace while being shaped by them as well. The second research question of this thesis is then presented. Also, a couple of contextual elements that were deemed interesting for this research are briefly discussed, before moving on to the second part of this literature review.

The second part of the chapter begins with a discussion on the views of knowledge in organizational research, including that furthered by mainstream literature underpinning KM and the alternative perspective, with which this research resonates. It then discusses the assumptions about knowledge that guided this investigation and differentiates knowledge from information.

2.2 Knowledge intensive firms (KIFs)

The rise of what has been called "the knowledge economy" created much interest in investigating the differences between traditional views of work, workers, organisations and the new trend, centred on knowledge (Powell & Snellman, 2004). It was in this context, that labels like: KIF (knowledge intensive firm), KBO (knowledge based organization) and KIO (knowledge intensive organization) (Makani & Marche, 2010) first appeared. All these labels refer to basically the same type of organization, which "relies on the problem solving capacity of its employees" (McGrath, 2005) to develop innovative and creative solutions to them (Alvesson, 1993). According to Blackler (1995), Knowledge Intensive Firms (KIFs) are defined in the literature as organizations staffed by a large proportion of highly qualified employees that trade knowledge itself, i.e. knowledge workers. Another basic characteristic of these firms appears to be their capacity to solve complex problems by developing creative and innovative solutions (Robertson & Swan, 2003), understood as knowledge work.

However, it is important to acknowledge that the KIF concept is as ambiguous (Alvesson & Karreman, 2011; Alvesson, 1993; Von Nordenflycht, 2010) as is the KIO concept (Makani & Marche, 2010). For example, there is no consensus between authors that clearly guides the differentiation between knowledge intensive and non-

intensive or less intensive organisations (Swart & Kinnie, 2003). Some researchers claim that in the knowledge economy, most organizations are knowledge intensive because they need to use knowledge to compete in their markets (Brown & Duguid, 1998; Nonaka & Takeuchi, 1995). Still, scholars seem to prefer certain types of organisations they consider as KIFs and these have been the focus of most research on knowledge management in KIFs (typical examples of KIFs). Some of these very frequently cited examples of KIFs are: specialist law and accounting firms; high-tech scientific and engineering firms and consultancies; general management and business consulting firms; public relations and advertising agencies (Robertson & Swan, 2003). However, it has been argued too, that it is inadequate to define a particular industry as knowledge-intensive (Robertson & O'Malley Hammersley, 2000; Swart & Kinnie, 2003) given that there may be great differences among organizations within a particular industry or even a particular firm and not all organisations within an industry can be said to be knowledge intensive. At the same time, organisations from other industries that are not the most commonly cited in the literature, (non - typical examples of KIFs) could be doing intellectual work and have other characteristics that would classify them as KIFs.

Research on knowledge sharing in KIFs highlights the characteristics of the type of worker in these organisations: the knowledge worker. It is believed that they are a different type of worker, with different needs and characteristics to other types. This view has been considered problematic too given the ambiguity of the definition of what they do (knowledge work) and the assumed intensiveness of knowledge in their jobs (Alvesson, 2001). However and based on some claimed characteristics of knowledge work and workers, participants in this investigation were regarded as such. The following section is a brief discussion of what knowledge work is as well as knowledge workers

2.2.1 Knowledge work and knowledge workers

In research on knowledge economies, there is an interest in a specific type of worker – the knowledge worker – and the work he does – the knowledge work. According to Blackler (1995), productivity is now dependent on the application and development of new knowledge and on the contribution of specialist knowledge workers. On the same line of thought, Drucker (1999) – who coined the term “knowledge worker” in 1989 - states that the most valuable asset of a 21st century institution (business or not) will be its knowledge workers and their productivity. Brown and Duguid (1996) define knowledge workers as learning persons who are at the core of knowledge transfer in an organization. Some of the “knowledge workers” firstly mentioned in the literature included: computer scientists, engineers, physical scientists, consultants, social scientists, accountants, and ecologists (Lee & Maurer, 1997). However, other occupations (e.g. doctors, teachers, lawyers, etc) can be and have been included in this category as probably what best describes a knowledge worker is not the name of his occupation but the actual work he does.

In fact, as Scarbrough (1999) explains, knowledge workers are not a discrete occupational group, even when most of the descriptions of this type of worker tend to lump together a variety of occupations and roles. He states that it is the lack of an occupational identity that is one of their most important features and perhaps the one that makes them be defined mainly by the work they do. It might be then, that trying to define knowledge work better, can give us some insights about what knowledge workers really are. After reviewing the literature on the subject of knowledge work, Pyöriä (2005) proposed a set of main “ideal” characteristics of it (based on non-routine problem solving) even when, as he acknowledges it, knowledge workers do not constitute an empirically homogeneous category. Among these characteristics are the following:

- Knowledge work requires extensive formal education and continuous on-the-job learning
- It uses transferable skills

- The nature of work is of a low level of standardization and involves working with abstract knowledge, symbols, and as Lee & Maurer (1997) claim, ideas and other abstractions (e.g. problem solving, design and planning of production processes)
- The medium of work are symbols and/or people

Knowledge workers are considered to represent a challenge to conventional management practices (Scarborough, 1999). According to this author, the basis of the conflict in managing these workers lies in “the tensions between the social conditions that promote the formation of knowledge and the economic conditions that allow the appropriation of its value” and “many of the sources of conflict are outside the control of management” (p. 9). Knowledge workers are also thought to be difficult to attract, motivate and retain (Horwitz, Heng, & Quazi, 2003; Lee & Maurer, 1997; Yigitcanlar, Scott, & Horton, 2007). This is allegedly because as Robertson and O’Malley (2000 p.241) state: “they are a valuable commodity and a relatively scarce resource within the labour market”, thus they are attractive for competitors that will want to hire them. In terms of their motivation, (Horwitz et al., 2003) found that in the literature, “factors put forward as important in motivating and retaining knowledge workers include challenging work, creating a work culture permitting relative autonomy, celebrating achievement and developing a sense of purpose, direction and excitement” (p. 28). Also, the “nature of their work often requires and allows them to work relatively autonomously”, which does not easily happen in traditional management systems, still prevalent around the world. Additionally, they “enjoy occupational advancement and mobility and resist a traditional command and control culture, with their commitment more occupationally than organisationally oriented” (Horwitz et al., 2003). In terms of knowledge sharing, Huysman and de Wit (2004 p.84) claim that knowledge workers find it difficult to engage in knowledge sharing because it is hard for them to express what is meaningful in their work and because often they are more focused on developing their solutions instead of using other’s ideas. They also found that this type of workers were resistant to sharing knowledge for fear that “going public would increase their vulnerability” (p.86). For these authors, knowledge

management success depends to a large extent on the willingness of knowledge workers to participate in it.

Knowledge management has frequently been addressed in research about KIFs. This might respond to the belief that KM initiatives are more relevant in KIFs than in other types of organisations, i.e. not knowledge-based. The following section discusses the alleged importance of KM for knowledge intensive firms.

2.2.2 Importance of knowledge management (KM) in KIFs

The label “KIF”, as Starbuck (Starbuck, 1992) explains, imitates other labels used by economists such as the capital-intensive firm and the labour-intensive firm, implying that in this type of organisation, knowledge is the most important production output, and as Starbuck explains, it is also the most important production input. Because of this importance attached to knowledge in this firms, it has been thought that more than any other type of organization, they need to share knowledge between their employees in order to gain the most from their intellectual capital and be able to compete effectively (and even survive) in the marketplace (Swart & Kinnie, 2003). Likewise, it is probably because knowledge is so important in this kind of organisations to do their work, that it can be thought that knowledge management strategies will be found within them, since they would allegedly have a stronger need to develop strategies to manage knowledge. McGrath (1999 p.40) also cited by Alvesson (2004) claimed that: “As KIFs primarily rely on the knowledge base of their employees... all management activity ought to be ultimately directed at the acquisition, development, protection, sharing and exploitation of knowledge within these firms”. Thus, like Makani and Marche state: “one might also argue that it is the more knowledge intense organisations that warrant a KM-driven organisational strategy” (2010 p.265).

Research carried out in KIFs has not only looked at KM but has also examined relevant themes that relate to knowledge sharing and what influences it in this type of organisation. The next section discusses such literature.

2.2.3 Research on knowledge sharing in KIFs

Research in KIFs has looked at knowledge sharing in these organizations from various approaches. However, this research aligns with the literature that considers knowledge sharing as a social process, embedded in socio-cultural and political relations that influence this phenomenon. This approach can be found particularly in research in organisational studies, organizational learning and critical literature. Additionally, and according to Currie and Kerrin (2004) the organizational learning perspective questions whether formal intervention by the executive management can be effective at all in managing knowledge. At the end of my discussion of the literature on this strand, I emphasise what my stance is, regarding the nature of knowledge sharing, thus what assumptions about knowledge sharing guided my approach to the phenomenon.

Among the recurrent themes about influences on knowledge sharing and success of KM which, are discussed in the literature that this research aligns with are: the role of HR policies, practices and processes in facilitating knowledge sharing; for example, Swart and Kinnie (2003) found that a particular set of HR practices encouraged employees to build knowledge networks and share knowledge. "These HR practices were focused on the sharing of knowledge and the provision of social supports for interconnecting various stakeholders in the knowledge sharing process" (p.70). For example, among other mechanisms, these practices involved ensuring that employees became familiar with "who knows what", "who is working on what" and "who to ask when particular questions were raised". They also encouraged employees to build knowledge networks inside the company, with clients and the local community. Other papers, which discuss the theme of HRM practices that influence knowledge sharing, are: Currie and Kerrin (2004), Scarborough and Carter (2001). These papers argue that if knowledge sharing is to be encouraged, then HR practices need to be consistent and reinforcing of each other and fit with the management system and the external environment of the organisation (Carter & Scarborough, 2001); also, the wrong HR practices such as performance management frameworks, can discourage knowledge sharing in the organisation (Currie & Kerrin, 2004).

Another example of a recurrent theme in this literature is boundaries, both professional and organisational, that inhibit knowledge sharing. For example: Currie and Suhomlinova (2006), examined the impact of organizational and professional boundaries on knowledge sharing within the context of the UK NHS, highlighting the effect of institutional forces in engendering such boundaries through their policies (specific government regulations) and inhibiting knowledge sharing. More papers discussing this theme, also related to the nature of knowledge and the politics and power of knowledge sharing are: Currie, Finn & Martin, (2007), Kimble, Grenier & Goglio-Primard, (2010), Willem & Scarbrough, (2006). In Currie, Finn & Martin, (2007), the managerialist assumption that claims that changes in organisational culture or an implementation of a knowledge management system are solutions for the lack of knowledge sharing is put to question. Instead, power differentials, different professional cultures, political behaviours, occupational boundaries and problems around the nature of knowledge are highlighted and identified as being exacerbated by the attempts to manage knowledge by the organisation.

A third topic that can be found in the literature is that of the management control mechanisms used in KIFs to encourage knowledge sharing. For example, Kamoche, Kannan and Siebers (2014), examined how the management of a KIF used a subtle form of control that researchers compare to Bourdieu's "symbolic violence", which relied on peer pressure to realize knowledge sharing. This resulted in employees (scientists) compliance but one where they would protect themselves, their reputation and identity by being very careful of what they were sharing, when and where. Other researchers that have looked at control issues in KIFs are: Robertson & Swan (2003), Kärreman, Sveningsson & Alvesson, (2002). One of the things that these researchers have found is that in KIFs, normative control engendered by a culture that embraced ambiguity, favoured collaboration, encouraging knowledge sharing (Robertson & Swan, 2003).

Additionally, researchers of knowledge sharing, particularly in the critical strand, have acknowledged the role that power struggles for knowledge sharing have, as investigating these struggles “helps to recognize how and why practitioners contest, accept, and/or further each other’s knowledge” (Heizmann, 2011, p.42). For example, in the study by Heizmann (2012), significant knowledge sharing issues between the head office and regional HR practitioners revealed power/knowledge struggles that hindered knowledge sharing within the dispersed network of HR colleagues in the same organisation. Another example of research looking at power and knowledge sharing is that of Willem and Scarbrough (2006), where the authors explored “the potentially negative effect of power and organizational politics on the role that social capital plays in knowledge sharing” (p. 1344), and found that social capital in its instrumental form can reflect opportunistic and political objectives, promoting a highly selective form of knowledge sharing.

Conflict has also been claimed to affect knowledge sharing in the organisation. For example, Cheng, Zhang and Vogel (2011) analysed how different types of conflict (task and relationship conflicts) affect psychological states and work engagement, which are related to knowledge sharing behaviours. One of the psychological states that these authors referred to is experienced safety, which “reflects that individuals believe they can behave and express themselves at work without fear of negative consequences” (pp.1014). These negative consequences can be different: some people might fear ridicule or fear that their sharing of knowledge will not be appreciated or rewarded. Others can fear losing their “unique value” and become replaceable, as explained in the study by Renzl (2006).

Researchers on knowledge sharing in KIFs have also examined the perceptions of employees in the organisation on specific themes related to knowledge sharing like the ones outlined before. Thus, the employees’ understandings, interests, stories and views related to these topics have been explored (e.g. Currie & Suhomlinova, 2006; Kamoche et al., 2014; Willem & Scarbrough, 2006). However, and even when knowledge sharing is assumed to be situated and inseparable from context by these researchers, as their investigations show, there is still a lack of studies that focus on

the influence that other specific elements of the context, such as the organisational structure have on the understandings that employees have of knowledge sharing. This interplay is the main interest in this research. There are other elements of the organisational context that are considered and discussed as well, but the main gap that this research aimed to address was that of investigating how employees in knowledge intensive firms understand knowledge sharing and how, organisational structure, as an element of the organisational context shapes and is shaped by the understandings of employees in knowledge based organisations. There was also another element of the wider context, outside of the organisation, that was considered for this research: the national context. Its relevance will be discussed, along with the relevance of the organisational context once my assumptions on the nature of knowledge sharing are advanced.

2.2.4 The social nature of knowledge sharing: assumptions for this research

An assumption about knowledge sharing that underlies this research and which needs to be acknowledged relates to what I refer to as the social nature of the knowledge sharing process. The perspective I am taking in this research on the process of knowledge sharing is based on a sociological stance, which sees knowledge sharing as social action, always embedded in context. I am interested in investigating the knowledge-sharing phenomenon at the micro-level but always embedded in a particular context, which shapes it and is shaped by it too. I oriented this investigation to look at how the understandings of employees of this social process underpin action, are shaped by their context and also shape that context. My position on the debate of structure and agency – the relationship between context and knowledge sharing – is discussed later in this chapter. Individuals, who are the actors in any social process, do not have a defining role in how knowledge sharing happens in the (organizational) context. In fact I believe that the individuals' understandings of this process, the other actors' behaviour, their roles and the others' roles in it are of the utmost importance for the shaping of how knowledge sharing happens.

The sociological stance that I refer to is that of considering knowledge sharing as social action, embedded in some kind of social interaction, which is symbolic in nature. To put it briefly, it is a perspective in which, social actions, (in this case knowledge sharing) are seen as “subjectively” related in meaning to the behaviour of others (Weber, 1981). They are thought to happen within social interaction, because, as Jonathan Turner (1988 p.13) explains, social interaction is defined as a situation where the behaviours of one actor are consciously reorganized by, and influence the behaviours of, another actor, and vice versa (behaviours here can include overt movements, covert deliberations, and basic physiological processes of individuals). Finally, these interactions are seen as symbolic in the sense that within them, human beings interpret each other’s actions instead of merely reacting to them; thus, their responses are based on the meaning they attach to such actions; social interaction is then mediated by the use of symbols (Blumer, 1969 p.79).

In the knowledge management literature, a simple conceptualization of knowledge sharing regards it as the act of making knowledge available to others within the organization (Ipe, 2003). However, this definition highlights what can be viewed as half the concept of the knowledge sharing process: the donation of knowledge. Instead, one can think that for it to be a knowledge “donation”, there needs to be a receiver of what is being donated: a “collector”, even if it is only a potential one. Therefore, the knowledge-sharing concept would be incomplete if we did not consider the other half of this social process: the collection of knowledge. For Cabrera et al (2006) these are just different ways of naming two knowledge-sharing behaviours: seeking and providing. But the relevance of this omission in the literature is that it does not clearly place knowledge sharing within social interaction, as a social process. For the remaining of this thesis it is important to clarify that I consider these two elements: donation and collection of knowledge as part of the social process of knowledge sharing. Furthermore, as proposed in the study by Teng and Song (2011) whenever we voluntarily give knowledge to others even without first receiving a request, (as can happen in shared practice) knowledge sharing occurs since the recipients now “share” the knowledge with us. In this process, not only can existing knowledge be shared but also new knowledge can be created with the other(s) within practice.

As explained before, my interest in this research was oriented toward the interplay between context and the understandings of knowledge sharing of employees in their workplace. In the following section, I will talk about the relevance of context for the understanding of social phenomena and in particular, for the understanding of knowledge sharing.

2.3 Understanding knowledge sharing: the relevance of context

The relevance of considering the context in which knowledge sharing happens or is expected to happen in KIFs lays in the understanding that, as explained by Pile and Thrift (1995 p.27) “each action is lived in time and space, and part of what each action is is a judgement on its appropriateness in time and space”. People live their lives always in context and they move through different contexts every day, e.g. at home, with their families and friends, at work and in their leisure time. Context is part of organisational life too. And as claimed by Halford & Leonard (2006 p.658,672), “only through attention to these contexts can we fully explore the relations between managerial discourse, worker subjectivities and organizational outcomes” because “context contributes to a deepening of our understanding of the nature of work subjectivities”.

Regarding research on knowledge sharing that has just been discussed, the recurrent themes in it are all aspects of the context (mainly organisational) in which knowledge sharing happens or is expected to happen. Human resources practices are derived from the strategy of the organisation. They are an element of the organisational context where employees work and live every day. Organisational boundaries are also set by the organisations and contribute to the same context where employees’ actions are embedded. The same can be said about ways of control that organisations use. Additionally, the organisational culture is an important element of context that has been regarded in the literature as “the most significant input to effective knowledge management and organisational learning” (Liao, Chang, Hu and Yueh, 2012 p.52) thus, it is also relevant for knowledge sharing.

Organisational culture, as the set of practices, symbols, values, assumptions (Schein, 1990) beliefs and work systems that organisational members have in common regarding appropriate behaviour (Sanz, Naranjo, Jiménez, Pérez, 2011), could encourage or deter knowledge sharing and organisational learning, since organisational culture affects the behaviours of employees (Alavi & Leidner, 2001; Sanz, Naranjo, Jiménez, Pérez, 2011). According to De Long and Fahey (2000) organisational culture shapes employees' assumptions about whether knowledge is important and what knowledge is worth managing; it shapes the processes by which new knowledge is created, legitimated and distributed; and it creates the context for social interaction that ultimately determines how effective an organisation can be at creating, sharing and applying knowledge.

Other studies have claimed that cultural values influence knowledge sharing behaviours by shaping patterns and qualities of interactions where sharing can happen (Alavi et al., 2006; De Long and Fahey, 2000). For example, in the study of Wiewiora, Trigunarsyah, Murphy and Coffey (2013), the cultural values of the organisations they studied impacted the willingness of project teams to improve internal knowledge sharing. Another example of research linking organisational culture to knowledge sharing is the study by Al-Alawi, Al-Marzooqi and Mohammed, (2007), where they identify critical success factors such as trust, communication, information systems, reward systems and the organizational structure as elements of the organisational culture that have a strong influence on knowledge sharing.

Furthermore, there are other elements of the context, that are relevant and which in this research are regarded as important contributors to how knowledge sharing happens in the organisation. They then are considered significant in the shaping of employees' understanding of knowledge sharing in their workplace.

We can think of context on multiple levels e.g. internal and external to the organisation. The main focus of this research is on the internal context, the organisational context. Still, I highlight that this context is influenced by its external

context i.e. political, economic or cultural. The element of the external context that I will talk about in this research is the wider national context. The national context is not the immediate context where employees share knowledge. However, looking at the national context, one acknowledges that organisations too are embedded in specific contexts where they operate, and that these contexts are different in different parts of the world, providing different meanings, norms, beliefs and in general, shaping organisational life differently. Elements of the national context could thus shape knowledge sharing even if indirectly, through their influence on the organisational context. In fact, researchers have explored how an element of the external context: the national culture, influences knowledge sharing in organisations. Particularly, Michailova and Hutchings (2006) have claimed that the national culture influences knowledge sharing in organisations in Russia and China. The difference of their argument with mine is that they do not discuss how this element of the external context (national culture) influences organisational structure and then shapes knowledge sharing but they only propose how it influences individual attitudes, social relations and approaches to knowledge sharing in those countries. Therefore, and in order to clarify how the national culture of the countries where organisations operate, can influence knowledge sharing through the organisational structures it encourages, I will discuss the Mexican context in the next section. After that, I will move on to talk about an aspect of the organisational context that this research focused on and which is likely to be influenced by this national culture: the organisational structure.

2.3.1 The national context: Mexico

The main argument behind my rationale of choice of a national context for this research was the relevance of carrying out organizational and management research in countries with emerging economies, whose workforce are very often, culturally diverse to that of countries with developed economies (Walumbwa & Lawler, 2003a). Particularly, research on knowledge sharing in emerging economies is scarce and few published examples can be found of it. Furthermore, the existing research has not covered many geographical areas. For example, Burke (2011) focused on two countries

in Eastern Europe; Voelpel and Han (2005) carried out their research in China, same as Zhou and Li (2012), Hutchings and Michailova focused on Russia and China (2004, 2006). Mexico is considered an emerging economy (Hoskisson, Eden, Ming Lau, & Wright, 2000), yet published research on knowledge sharing or knowledge management has not been carried out in Mexico. Furthermore, it has been claimed that the success of managerial practices and implementation procedures depends on an appropriate fit between the assumptions, values and beliefs inherent in them and the ones held by the workforce, which are permeated by their national culture (Robert, Probst, Martocchio, Drasgow, & Lawler, 2000). Additionally, the rise of the knowledge based economy and KIFs has not been claimed as exclusive of developed economies. Certainly, this type of organisation also operates in such countries. Research on knowledge management and knowledge sharing in these contexts is then relevant to enrich our knowledge on such topics.

In cross-cultural research, there are some dimensions which have been studied in different models and that are consistent to a certain degree in the case of Mexico. These can provide us with indications of tendencies of a national culture that might encourage bureaucratic ways of organizing in Mexico. For example, the respect and importance given to hierarchical structures and distribution of power that the dimensions of power distance and cultural hierarchy represent. Also, the need and respect for rules, security, order, consistency, formal procedures and maintaining the status quo that the dimensions of uncertainty avoidance and embeddedness refer to. If these tendencies are facilitating bureaucratic structures and ways of organising, this could give rise to tensions between a move to a Knowledge based economy, and the non-traditional organisational forms that KIFs are assumed to have. Particularly, given that the knowledge intensive nature of KIFs, has been assumed to have an influence in the way these are structured, which would clash with bureaucratic contexts.

Acknowledging the importance of context in organisational life and particularly in knowledge sharing implies not only the recognition of the relevance of national context but also the recognition of the key role of elements of the internal context i.e. organisational context in shaping social life because this is also part of the context

where knowledge sharing happens. The main aspect of the organisational context that this research examines in relation to knowledge sharing is organisational structure. However, and given that my stance in this regard is not deterministic, I also acknowledge the role of human agency in social phenomena. Following Hays (1994 p.62), “people make structures at the same time as structures make people: through everyday practices, the choices made by agents serve to create and recreate structures continuously”. Before moving on to talk about the organisational context and elements of it that were looked at in this research, it is important that I clarify my position regarding the debate on structure and agency. I will also advance my first research question after this discussion.

2.3.2 Assumptions on the Structure and Agency debate

The relevance of clarifying my position on the structure and agency debate lies in the fact that this position is integral to my understanding of knowledge sharing as always embedded in context and context influencing knowledge sharing. In terms of structure and agency, I am considering organisational structure and how it shapes (and is shaped by) social action, in this case, knowledge sharing. I am acknowledging the importance of both, structure and agency in social action. Therefore, a brief discussion on the basis of my position is pertinent.

The agency versus structure debate in social sciences dates back to the emphasis made by Lockwood in 1964, of the distinction between “social” and “system” integration (Archer, 1996). This debate is directly related to the assumptions made by researchers about human nature, which are “central in organization studies, as in all social sciences, since human life is essentially the subject and object of inquiry” (Battilana, 2006 p.654). To this day, the agency versus structure debate is relevant and still divides scholars who view structures as powerful and dominant as well as responsible for causing the behaviour of individuals from the scholars who believe that individuals are the ones who plan, decide, and perform their actions.

However, there have been some scholars who have opted for dualistic views where structure and agency are reconciled (Reed, 1997). With their corresponding differences, some of these researchers are: Berger and Luckmann, Bourdieu, Giddens, Mouzelis and Archer (Depelteau, 2013). This is also the position of this research. It is a position that acknowledges the importance of both structure and agency in organizational life and the behaviour of actors in it.

I believe that both structure and agency should not be separated into polarized views but that they should be part of a view where they operate together because individuals always have some agency and intentionality whatever the situation and that at the same time they are always partially determined by the structures in which they live, work, grow, etc. In particular, I am more sympathetic with the recent work of Margaret Archer, who proposes an analytical dualism where “she recognizes that the causal powers of structural (and cultural) conditions are always mediated through human agency. There is no structure without human agency even if the former pre-exists and “conditions” the latter” (Depelteau, 2013). For researchers following this view, “structural constraints are seen as operating only through the intentional motives and actions of agents, and are thus inherently tied to their capacity to act and ‘make a difference’ (Reed, 1997 p.32). As Hays explained (1994 p.62) “structures should be understood as the creation of human beings as well as the mold that they fit”.

This view resonates with a previous concession made a while ago by Herbert Blumer (1962) that “social organisation enters into action only to the extent to which it shapes situations in which people act and to the extent to which it supplies fixed sets of symbols which people use in interpreting their situations” (in Archer, 2000 p.471)

Taking this view in the study of knowledge sharing lies in the fact that trying to understand this social phenomenon as only determined by structure or as merely a product of individual’s agency will yield a partial view of it. Knowledge sharing actions are volitional and people can decide if they want to participate in knowledge sharing interactions. But also, people are constrained by the structures in which they live and

work that shape them and are shaped by them as well. In this research, the structures looked at were not only the organisations where the investigation was carried out but also the ones reflected in the informal knowledge-sharing networks that participants were part of in their departments, which were viewed as representations of the knowledge sharing interactions between participants in their departments.

A useful view to talk about such networks is that of Sheldon Stryker. This view sees societies as composed of organized systems of interactions and role relationships and as complex mosaics of differentiated groups, communities, and institutions. It also sees social life as mainly taking place not within society as a whole but within relatively small networks of role relationships, many of which (or rather most) are local (Stryker, 2008). Common groups where social life happens and that contain networks of relationships are one's family, friends, religious groups, professional communities, and (I suggest), the networks people participate in within their workplace. It is important to note that the concept of network here refers to a unit of social interaction, not just a set of persons who identify themselves with a social category. One of the implications of this image of societies and social life is that it suggests that more attention should be placed on the impact that social structures have on social interaction and it suggests a more role-theoretic sense of social structure.

According to Stryker, in a highly simplified form, one of Mead's framework claims was: "Society shapes self, shapes social behaviour." In Stryker's view, Mead's "social behaviour" became "role choice behaviour" (Stryker & Burke, 2000). For him, these roles are other's expectations of appropriate behaviour attached to the positions that actors occupy in the networks of relationships they belong to.

Thus, if "society shapes self, shapes role choice behaviour", and networks are the unit of social interaction where phenomena like knowledge sharing happens, we can think of the existence of "knowledge sharing networks", i.e. networks where knowledge sharing interactions happen and where people might behave according to the role they occupy in the network. The way they understand and enact these networks would

then be useful in deciphering their understandings of how knowledge sharing happens in their organisations.

From what has been discussed so far, the following research question results:

RQ1: How do individuals in the organization understand and enact knowledge-sharing networks in their departments/areas? What barriers and enablers do they encounter to share knowledge in these networks?

The idea that knowledge is shared within networks between actors has been proposed and investigated before (Chow & Chan, 2008; Hansen, Mors, & Løvås, 2005; Hansen, 2002; Rangachari, 2009; Reagans & McEvily, 2003). However, the existing research is grounded on the assumption that depending on the quality of the ties (relationships) between the actors and the amount of ties that actors have in their knowledge networks, they will have better or more opportunities for locating (and acquiring) knowledge within their organizations or even outside of them. This research though, was oriented differently to mainstream research (Borgatti & Cross, 2003; Hansen et al., 2005; Hansen, 1999; Hansen, 2002; Reagans & McEvily, 2003; Reinholt, Pedersen, & Foss, 2011; Singh, Hansen, & Podolny, 2010). My interest was on examining basic characteristics of the patterns of the knowledge sharing networks, which I viewed as emergent and underpinned by the experiences and understandings of actors in them. The objective of this examination was to understand the sense people made of these networks and in that way, discern what drives the knowledge sharing interactions in those patterns.

In a way, I wanted to capture the pattern and nature of social interactions for knowledge sharing in informal networks embedded in the formal structure of departments, which in turn are part of larger organizational contexts.

Examining these patterns of interactions was also aimed at identifying structures in them and what these reproduced e.g. the larger organisational structure. In the following section, I will discuss why these reproductions could be happening.

2.3.3 The organisational context: organisational structure

Following the discussion so far, this research recognises that social action (e.g. knowledge sharing) happens always in context. It also acknowledges that these contexts are relevant in the shaping of the social phenomena they embed. The national context, national culture in particular, has been proposed as the element of the wider context which influences organisational life even if done indirectly i.e. through the encouragement of particular ways of organising and structures. At the same time, I have stated my position towards the structure and agency debate, aligning with researchers that see structures as produced by humans but also producing certain types of humans in everyday practice. These humans then reproduce these structures through their choices of action e.g. in social interactions. Because knowledge sharing is regarded in this research as a social action embedded in social interaction, it was considered that it is influenced by context and structure and that structure is reproduced in it via patterns of knowledge sharing that humans (employees) maintain, either consciously or not. The level of social structure that I refer to is organisational structure. It is part of the organisational context and it was targeted in this investigation because the organisational context is where knowledge sharing, relevant to the organisation, is frequently expected to happen.

Common dimensions of organisational structure that have been discussed in research are: centralization (of authority and control), formalization (of rules, procedures and policies that govern behaviour) and integration (of functions and units) (Rapert & Wren, 1998). These refer essentially to how organisations deal with the fundamental issues of task allocation and coordination. They could be reflected in the patterns of knowledge sharing that employees perceive in their knowledge sharing networks and the way they understand this phenomenon given that they provide a framework for action in the organisation. In this sense, these features might shape knowledge sharing, facilitating or hindering it and the patterns of knowledge sharing, along with the accounts of the participants of this research would be fairly consistent in reflecting them.

Another possibility is that employees are actively taking alternative courses of action to the ones, which match the organisational structure, and then these would also be reflected in the patterns of knowledge sharing in the networks. The patterns and narratives of participants of this research then would tell a different story to the one expected given the structure of the organisation and its management systems. Both possibilities exist, since it has been discussed before that structures are a product of people but also shape their social life and are reproduced (or contested) in it by people through the choices they take in everyday practice.

The question that remains then, in reference to the first research question is:

RQ2: how does the context, in particular, the organisational structure of these organisations contribute to these understandings?

Additionally, there is an interesting debate that has grown among researchers about the organisational structure of KIFs. It seemed interesting for this investigation, given that, as proposed before, the national context where the research took place, could be expected to encourage a specific type of organisational structure (bureaucratic), yet KIFs have been assumed to have a different type of structure, which would clash with this national context.

Among some researchers it is assumed that KIFs are exemplars of a post-bureaucratic structure (Kärreman et al., 2002), at least in that they move away from bureaucratic characteristics and have become flatter, more networking, and more flexible organizations. This assumption seems to be related to the need of KIFs to retain their advantages of flexibility and innovation (Starbuck, 1992). Researchers have also questioned the assumption that KIFs and the way they organize work are completely non-bureaucratic (Courpasson & Dany, 2003; Hodgson, 2004; Kärreman et al., 2002; Robertson & Swan, 2004). Though the reasons researchers have found for KIFs to maintain bureaucratic practices or structures are varied. Some of them are: dominant management logics at the sector level, i.e. “a set of macro-level beliefs and values that strongly influence management practice and theory” (Dijksterhuis, Van den Bosch, & Volberda, 1999 p.570); controlling professional elite workers legitimately (Robertson &

Swan, 2004); and coping with the management of workers involved with irregular assignments (Hodgson, 2004).

This research aligns with the questioning of the assumed post-bureaucratic structure of KIFs. It also adds to the literature that acknowledges the importance of context for knowledge sharing and related knowledge processes (e.g. Currie et al., 2007, 2008; Robertson, Scarbrough, & Swan, 2003). At the same time, it highlights the lack of research in this strand of the literature that questions the role that the organizational structure has in shaping the understandings that employees have of knowledge sharing in their organisations.

Aside from having a bureaucratic or a post-bureaucratic structure, KIFs may also have knowledge management strategies in place that could be playing an important role in shaping the understanding that employees have of knowledge sharing within these organisations. This was also an element of the organisational context that was regarded as interesting to look at.

Knowledge management involves managerial efforts to promote knowledge activities like acquiring, creating, sharing and disseminating knowledge by individuals and groups in the organisation (Demarest, 1997; Jennifer Rowley, 2001). These efforts can take different forms depending on the approach to knowledge and knowledge management that the organization adheres to. However, and regardless of the approach that the organization takes to knowledge, knowledge management and / or knowledge sharing, if there is an overt and defined strategy to encourage knowledge sharing in the organisation, it can be expected that these efforts are visible either in the way knowledge activities are performed or in the way they are understood and enacted by employees in the organisation (e.g. knowledge workers). It has been discussed, that KIFs, can be expected to be more aware and attentive to their knowledge sharing activities and how to make the best of them if they are aware of their knowledge intensive nature. In fact, and as mentioned in the previous chapter (Introduction), they are expected to actively manage knowledge. This may be especially true for “typical examples of KIFs”, the ones which are often found in

research. Their participation in research on the matter and that of their competitors, as well as the access to both academic and practitioners' literature on KM might make them more aware of their knowledge intensive nature if they ever were unaware. Thus, they might try to manage knowledge and attempt to encourage knowledge sharing more actively than non-typical examples of KIFs. At the same time, this could be then reflected in the understandings that employees had of knowledge sharing in their organisations.

Research in KIFs has mainly reported cases from "typical examples of KIFs". Research comparing phenomena in different KIFs has largely ignored the need of using examples from the industries which are not commonly found in research, and that are knowledge intensive too. It seemed relevant for my sampling strategy, to consider both types of KIFs when approaching potential cases for this investigation. Indeed, the participating organisations, which responded to my invitation, were representatives of both types, the ones commonly found in research and the ones largely ignored by research.

So far, two research questions have been presented, which guided this investigation. To be able to address these questions, I carried out an inductive research. In the second half of this chapter, I will present the assumptions about the nature of knowledge and their implications on the assumptions about knowledge sharing that underpinned this investigation. I will also discuss the different perspectives taken to the study of knowledge and knowledge sharing in the organization.

Before moving on to the discussion of those assumptions and the existing perspectives in the relevant literature, it is important to remind the reader that research to which this investigation is aligned, highlights the complex nature of knowledge. Hence, it questions the feasibility of "managing knowledge" in the organisation. My position in the existing literature on knowledge, knowledge management and knowledge sharing is one that resonates with practice-based perspectives instead of the mainstream literature, which tends to align with cognitive-based perspectives. However, I will

discuss both in the following section, to provide the reader with a fuller discussion of the existing debates in the field.

2.4 Different views of knowledge in organisational research

As claimed by Schultze and Stabell (2004), assumptions about the nature of reality and knowledge important in knowledge management research because they relate directly to what is being researched. In fact, knowledge sharing itself has been approached from different perspectives, which seems to be deeply related to different assumptions of how and where knowledge is created, learned, transformed and even who can “claim” ownership of it.

In general, literature on knowledge in the organization can be categorized in two highly influential strands: the “oldest one”, the cognitive-based perspective, which is rooted on ideas from conventional cognitive psychology, and the most recent, the practice-based perspective, which draws more on sociological accounts of practice and knowledge (Marshall, 2008). We will begin by discussing the oldest of the perspectives, the cognitive-based.

2.4.1 The positivist (cognitive-based) perspective

One of the main differences between practice-based and cognitive-based perspectives to knowledge in the organization is that within the latter, knowledge is individually created and kept in the mind of the employees (as their asset), and it is generally of little value to the organization unless it is shared with other members of it. Because knowledge is viewed as an asset, with the role of progressing individuals, organizations and society to the ideal state of enlightenment (or competitive advantage)(Schultze & Stabell, 2004); it then becomes a priority for the organization to find ways to transform it’s workers’ individual knowledge (at least some of it) into organizational knowledge.

One of the ways in which organizations have tried to do this, following a cognitive-based perspective is by promoting knowledge sharing within knowledge management

strategies that follow the basic model of a transmitter/receiver, where the transmitter produces explicit, codified knowledge (on his own, as knowledge is created in his mind). He then transfers this knowledge to the receiver, who takes it and is able to understand it (because it is codified), and use it, requiring no other interaction with the sender. This last assumption has been questioned recently (Roberts, 2001) and in fact, there have been efforts to enhance knowledge sharing and production by promoting some forms of mandated communities and networks, trying to emulate some ideas of the practice-based perspective, but aiming to direct them. Typically, these attempts have been and will continue to be unsuccessful because as explained by McAdam and McCreedy (2000 p.161), there is “a mismatch between conception (of knowledge construction) and approach (to knowledge management)”

According to Cook and Brown (1999), most of the research that is based on the cognitive-based approach tends to implicitly privilege individual over group knowledge as well as explicit over tacit knowledge (a form of knowledge which will be explained later in the chapter) by suggesting that one type is subordinate to another and/or that it can be made up of another. As a researcher, I acknowledge the existence of these four forms of knowledge (individual/group, explicit/tacit) in the organization as well as I acknowledge the existence of knowledge as part of action and I explain this further later in the chapter, along with a set of assumptions about knowledge that underpin this research.

The cognitive-based approach, and its basic assumptions of knowledge viewed as an asset, individually created and kept in the minds of people, have guided the mainstream research on knowledge management and are the basis of the assumptions on which a lot of the KM research and strategies are developed. It has also had implications for the study of knowledge sharing and the disappointing results of KM initiatives following its principles have been discussed in research. The next section talks more extensively about how this perspective has shaped research on KM and knowledge sharing.

2.4.1.1 The positivist approach as the mainstream perspective for knowledge management

For some, knowledge management has been so vaguely defined in the literature that it could well refer to a “loosely connected set of ideas, tools and practices centering on the communication and exploitation of knowledge in organizations” (Scarbrough & Swan, 2001). However, most researchers would also agree that KM is difficult to define. What seems to be contributing to this phenomenon is that research on knowledge management as a research subject did not originate only in one place but it comes from three different research groups who started publishing about KM in the early 90's. Back then, their research topics were:

- Studies on Artificial Intelligence and the enhancement of learning with technology done in the US; led by Karl Wiig
- Studies on innovation and speeding up its process in larger corporations in Japan; led by Ikujiro Nonaka
- Studies on the creation of an organizational strategy with knowledge and creativity of the employees as the only production factors and knowledge as the only resource, done in Sweden; led by Karl-Erik Sveiby

Looking at the differences between the main topics of these research projects one can infer how knowledge management studies, approaches and strategies started growing in different directions, thus appealing to a broader audience but also making it more confusing and less cohesive. As stated by Scarbrough (2001), “...ambiguity makes KM amenable to multiple interpretations and remouldings which potentially extend its relevance across different communities of practice”. That is probably why, the notion of knowledge management has been translated accordingly into “KM systems” among IT professionals, “knowledge elicitation techniques” among artificial intelligence experts, “the development of human and intellectual capital” among personnel management specialists, “the measurement of intangible assets” among accountants; and the list could go on (Alvesson et al., 2002).

Alavi and Leidner (2001) also point out that the different perceptions of knowledge management that are found in organizations (i.e. implicit in their KM strategies or initiatives) are influenced by different views of knowledge. Knowledge management systems and strategies are thus, as varied as approaches to knowledge.

However and as argued by Spender (2008 p.159), the shift in the interest towards knowledge management means that (many) researchers and practitioners assume “that the organization’s knowledge can be managed, stored, traded and applied in the same way as its more tangible, financial and physical assets”. For him, the knowledge management agenda in general “deals with the practicalities of identifying the organization’s knowledge assets, then collecting and storing them, optimizing them in the manner suggested by scientific management, and finally delivering the result to the locations where it can be integrated and turned into value” (p. 160). This resonates with a cognitive-based view of knowledge as well as the view of knowledge as an economic resource and it is the basis for most mainstream research on knowledge management, which also favours the use of sophisticated IT-based systems and tools to create, capture, store and distribute knowledge in the organization (Alvesson & Kärreman, 2001; Newell & Swan, 2000). The effectiveness of taking such approach to knowledge and its management in the organization has been questioned and documented in research (e.g. Newell & Swan, 2000; Storey & Barnett, 2000).

The cognitive-based (positivist) approach is rooted in a dualistic orientation that views cognition as separated from action, knowledge as residing in the heads of the persons, and organizational knowledge as the aggregate of the individual cognitions of the organizational members (Marshall, 2008). It also views knowledge as an asset (Davenport & Prusak, 1998) not only for the organization but also for the individual. This view of knowledge in the organization has some implications to the understanding of knowledge sharing, as will be elaborated in the next section.

2.4.1.2 Cognitive- based approaches to the understanding of knowledge sharing

The importance of discussing the main approaches taken to the study of knowledge sharing lies in the fact that a lot of the KM literature and management practice, particularly for the first part of the history of KM, is built on these views. Knowledge sharing, the focus of this research, is one of the main knowledge activities that KM strategies and programmes aim to control and thus the importance of this discussion for this research. There have been researchers and theories that challenge the more rational view of knowledge sharing which down plays the social and political nature of it. As can be inferred from the assumptions listed before about knowledge sharing, this research is aligned with such approaches, not only acknowledging, but highlighting this social nature of the knowledge sharing process and the complexity of it. With that in mind, the approaches presented below will be briefly analysed, highlighting the identified limitations of those, which do not align with the perspective that this research is aligned with. We will start then, with the approaches that share a cognitive-based basis: Social Exchange Theory (SET), Theory of Planned Behaviour (TPB) and Social Capital Theory.

2.4.1.3 Social Exchange Theory, the Theory of Planned Behaviour and Social Capital Theory

In Social Exchange Theory, social exchange involves a series of interactions (exchanges) that generate obligations and which are interdependent and contingent on the actions of another person (Cropanzano & Mitchell, 2005). According to SET perspective, people somehow calculate the overall worth (value) of a particular relationship (e.g. series of interactions) by subtracting its costs from the rewards it provides. Individuals of course, generate expectations of their relationships. From these arguments, it is easily understood that for researchers using the SET perspective, knowledge is a valuable to share; included in the “resources” stock of the person to exchange in his interactions. The individuals’ knowledge donating behaviours are then, mainly rational and based on rewards, depending on their future expectations of positive returns over the costs of donating what they consider “their” knowledge (Wu, Lin, & Lin, 2006). A

problem with this view is that it ignores the cultural context and in some cultures, for example, people might not be seeking rewards in their relationships. Not every relationship can be reduced to an exchange of resources or rewards but they seem more complex than that. In this research, the cultural context is important and is taken into consideration when studying the knowledge-sharing phenomenon.

Another paradigm that has often been used to explain knowledge sharing and that shares its cognitive-based roots with SET is the Theory of Planned Behaviour (TPB) (Brock, Zmud, Kim, & Lee, 2005; Gagné, 2009; Kuo & Young, 2008). In TPB the most immediate and important predictor of behaviour is the person's intention to perform (it). This intention is determined by two other constructs: attitude and subjective norm. Attitude refers to the individual's overall evaluation of what it would be like to perform a behaviour (e.g. "doing it" would be good/bad, fun/boring, convenient/harmful, etc.); and subjective norm refers to the individual's perceptions of social pressure to perform (or not) the behaviour (Madden, Scholder Ellen, & Ajzen, 1992). It is important to highlight the fact that TPB is mainly based on cognitive processes and it does not consider emotional states, feelings or moods in the model, again considering sharing behaviours as purely rational. The problem with this when studying knowledge sharing is that feelings and emotional states can influence a person's decision to share, for example feeling afraid or threatened in some way can prevent someone from sharing knowledge or information at a specific moment. Studies based on this theory have provided insights into what causes individuals to share knowledge basically through the testing of hypotheses or propositions of a chosen framework. This is not surprising as positivistic scholars examine social phenomena through cycles of hypotheses development and testing, seeking to produce objective and predictive theories (Nonaka & Peltokorpi, 2006). This research however, is not a positivistic one and does not analyze the knowledge sharing phenomenon with positivistic methods.

A third paradigm (and the most purely sociological of the three discussed so far) that has been frequently used to explain knowledge sharing is Social Capital Theory (Chang & Chuang, 2011; Inkpen & Tsang, 2005; Widén-Wulff & Ginman, 2004; Yang & Farn,

2009). This theory also shares some cognitive-based basis with the previous two. The central proposition of it is that networks of relationships constitute a valuable resource that provides their members with the “collectivity owned capital”, which basically offers benefits for them (Portes, 2000). Some authors have also named the substance of social capital as the “goodwill” that others have toward “us” (Adler & Kwon, 2002). In terms of knowledge sharing, it has been claimed that an individual with higher/stronger social capital in his social network will be prone to behave in ways that benefit other members of it (the network), which might mean that he will be willing to share his knowledge with others (e.g. co-workers) in order to maintain an interpersonal (reciprocal) relationship with them (Yang & Farn, 2009). This would imply that actors share knowledge only out of goodwill and for the sake of maintaining the strength of their social capital, yet it is probably limited to say that individuals share knowledge only out of goodwill. Additionally Bourdieu’s (the original developer of the concept) conception of social capital does not focus on social interactions but on the social relations that allow actors to accumulate social capital (Portes, 2000). This research on the other hand, focuses on social interactions where knowledge sharing happens and not on social relations that allow knowledge sharing, even when they are acknowledged in the knowledge-sharing networks studied.

Implied in the understandings of these three theories (SET, TPB and SCT) is the perception of knowledge as something that individuals consider “their own”, thus having the alternative of deciding if they want to share it or not. This again, is congruent with the cognitive-based approaches to knowledge in the organizations discussed before, that consider knowledge as an asset, stored in the heads of individuals and that ignore the knowledge that does not reside in there but which is collectively created and maintained. These approaches privilege individual and explicit knowledge over other forms of knowledge, like is claimed by Cook and Brown (1999).

Given the assumptions about knowledge for this research, any of such approaches would represent a partial view of knowledge in the organization and to the explanation of any knowledge process happening within it, including knowledge sharing. However, there is an important amount of research taking a different

perspective, acknowledging knowledge that cannot be separated from action and which cannot be possessed by individuals. This type of approach will be discussed below.

Additionally, research performed within these approaches is generally carried out with an “objective” lens and is not particularly interested in (and has even been claimed as hostile to) context and subjective aspects of humans and their experiences (Nonaka & Peltokorpi, 2006), which, as has been explained, are of key relevance in this investigation, that highlights the complexities of knowledge sharing and the influence of context in social life. Interpretive philosophies like the ones informing this thesis emphasize subjective contextual processes (e.g. the understandings of experiences and phenomena) and are thus able to provide rich descriptions of processes and embodied meanings (Nonaka & Peltokorpi, 2006). Furthermore, practice-based perspectives to knowledge in the organisation are also supported by the philosophical underpinnings of this research, which will be further discussed in the next chapter.

In the following section, the more recent approach to knowledge in the organization, and the one this research is aligned with will be discussed: the practice-based approach.

2.4.2 The social constructionist (practice-based) perspective

The social constructionist (practice-based) perspective emerged from the need for an alternative perspective to the existing one (cognitive-based). It highlights the inability of cognitive-based perspectives to “depict the socially and materially situated character of cognition as a dynamic and relational process that does not purely happen ‘in the heads’ of individuals and it is neither a wholly collective phenomenon where the individual is submerged in a seamless collective agency” (Marshall, 2008 p.417). The practice-based perspective assumes that knowledge is not out there but is socially constructed in space and time, and seeks to explore questions regarding the social practices in organizations through which what is regarded as knowledge attains this status and with what effects (Tsoukas & Mylonopoulos, 2004). From this perspective,

there are different views on how knowledge is shared, but what is common to all of them is that they regard knowledge as a social construction (Brown & Duguid, 2001; Gherardi, 2000; Robertson, Scarbrough, & Swan, 2003; Tsoukas & Mylonopoulos, 2004; Yanow, 2004) and it is this construction, together with social processes, that act as the mechanisms to share knowledge (Fernie, Green, Weller, & Newcombe, 2003). These social, cultural and political processes are also embedded in and shaped by their particular contexts, and like suggested by Fernie, et al (2003 p.180), “any analysis of an organisation’s processes and practices must be executed in full awareness of the context within which the practice is embedded”

For theorists in the practice-based approach, knowledge is embedded in a community, generated and maintained by it (Brown & Duguid, 1991; Lave & Wenger, 1991). It can therefore, be considered a public good; which means that being created by the community, it is owned by it and not by individual actors, so knowledge exchange is motivated by a community interest rather than by narrow self-interest (McLure Wasko & Faraj, 2000). This way, people can and do share knowledge within their practice and their community even if not all of it is explicit or rationalized and sharing is thought to happen as a product of social interaction (Fernie et al., 2003). This is possible because in this view, knowledge is not something that people possess in their heads, rather is something that people do together (Gergen, 1985). What people do together is then a generative source of knowledge, and a vehicle for the sharing of knowledge. Within this perspective we could think that an ideal scenario for knowledge sharing in the organization would be one where employees are willing to share knowledge because they do not see it as theirs but as communal property. However, the fact that knowledge is created and maintained by the community does not mean that knowledge is always shared equally among members of it. In fact, it has been accepted by theorists in this strand, that conflict may arise between participants of these communities and that power dynamics within the community can influence the degree of participation that some members, for example newcomers, are allowed to have, thus the access to the community’s knowledge can be restricted to some participants of it (Handley, Sturdy, Fincham, & Clark, 2006).

In sum, for practice-based perspectives, knowledge is co-constructed in the community, it is situated (e.g. embedded in work practices) always in context and it is not an individual good. Yet, knowledge sharing, being linked to participation in shared practice (repertory of shared resources) might not necessarily carry mutual or equal benefit to all participants of a community since social interaction between them is subject to power dynamics, that can constrain participation.

Within this perspective to knowledge in the organization, a specific type of group: communities of practice (CoP) have been the target of research dealing with how knowledge can be shared. Research on knowledge sharing in CoPs has been mostly based on qualitative case studies (Zboralski, 2009). One broad definition of a CoP is: a self-organized group of individuals concerned with a specific practice (enterprise) that are learning how to improve this practice through regular interaction (Borzillo, Aznar, & Schmitt, 2011). This approach informs this research importantly and it is discussed as follows.

2.4.2.1 Communities of Practice (CoPs)

The term communities of practice (CoPs), refers to informal groups of people that share an interest or specific problems about which they deepen through joint activities. This activity and what members of the group learn through it keeps them bond. Any community of practice is defined in three dimensions: a joint enterprise (activity), mutual engagement and a shared repertoire (of knowledge, experiences, stories, tools, etc) (Wenger, 1998). Investigations on communities of practice place them related to knowledge management, knowledge sharing and organizational learning (Allee, 2000; Brown & Duguid, 1991; Handley et al., 2006; Hendry, 1996). It is this way because learning and the sharing of knowledge are part of the nature of these communities (Wenger, 1998).

As mentioned before, CoPs were initially proposed as informal groups, characterized by voluntary participation and not subject to external management (Wenger, 1998). It is then contrasting that nowadays there are companies that “launch” communities of

practice as part of their knowledge management strategy (du Plessis, 2008; Scarso, Bolisani, & Salvador, 2009). From the reported results of some of these attempts comes the first insight that the CoPs approach offered to this investigation.

This is, that attempts to manage, direct or dictate what and how people share in their communities will very likely be unsuccessful (Bate & Robert, 2002).

Management cannot establish a community of practice they can only support it (Roberts, 2006). What is more, and following Alvesson and Karreman's (2001) claims of the perspective of KM as community, "the favoured vocabulary – community, sharing, caring, nurturing social relations – is far from the conventional ideas of management as a bureaucratic phenomenon associated with hierarchy, formalization, control and direction from above through 'rational' measures." (p.1006). Thus, the role of management in this approach should be very limited and almost only restricted to encouraging a context that supports communities, and an environment that highly values knowledge sharing.

Within a community of practice, knowledge sharing is thought to happen through discussion, collaboration, sharing of stories and in general the doing of the "practice" that the community is gathered around; knowledge is highly dependent on context and is embedded in the community (McLure Wasko & Faraj, 2000). This of course, does not mean that everything is consensual and that power dynamics are not part of these communities. Furthermore, a second lesson we can learn from research on CoPs is that "an organization's overall power structure may be reflected in the power relations within its communities" and that "(shared) meanings in these communities may continue to be merely a reflection of the dominant source of power in the organization" (Roberts, 2006 p.627 - 628).

Even when I did not use CoPs as the unit of analysis in this research, it is the approach that has been more useful to the framing of it, in terms of what it tell us about how people go about sharing knowledge every day. The lessons drawn from research on knowledge sharing in CoPs can be applied to the knowledge sharing process in the knowledge-sharing networks targeted in this investigation even if we are not referring to CoPs in specific because as Amin and Roberts (2008) claim, there are different

“kinds of situated practice” if by practice we mean “undertaking or engaging fully in a task, job or profession” (Handley et al., 2006 p.645) and there are different “socialities of knowing in action” (p. 354). In this sense, the collectivities targeted in this research, share characteristics with CoPs like a high degree of shared understandings and shared repertoire and they had worked/interacted face to face for extended periods of time, often creating strong bonds between the actors. Many of the people in these collectivities knew approximately the same things, and experienced things similarly. It is true that it cannot be said that these were CoPs but it is also true that the CoPs approach was a useful reference in the study of knowledge sharing in these collectivities.

In the following sections, I will discuss assumptions about knowledge, knowledge sharing and its difference with information and information sharing.

2.5 The epistemologies of possession and of practice and a set of assumptions about knowledge for this research

Paraphrasing Hargadon and Fanelli (2002): “(I) agree with Simon (1991:125) that, “learning takes place inside individual human heads” (but I do not believe all of it does) ; just as I agree with Boland and Tenkasi (1995 p.335) that “the individual does not think in isolation and is not an autonomous origin of knowledge.” This is in line with Spender's proposition (1998) that there are both, individual and social modes of knowing, thus knowledge can reside both in the private (individual) and in the public (social). It also resonates with Cook and Brown's (1999) claims that each of the four categories of knowledge: explicit/tacit and individual/group, which are commonly found in the literature, is a distinct form of knowledge and that none of them is subordinate or made up of any of the others. Yet, as Cook and Brown say, together they constitute a more appropriate focus of the “epistemology of possession”, since they are typically treated as something people possess i.e. because people tend to believe that they own them.

A brief description of these four forms of knowledge, as described by Cook and Brown (1999) refers to the distinction between tacit and explicit knowledge by using the example -previously used by Polanyi (1966) of riding a bicycle. In it, they explain that there's something known by all the people who can ride a bicycle that most cannot say; for example, which way to turn the handlebars to avoid a fall (and stay upright). This would be an example of tacit knowledge. This tacit knowledge is acquired through action but it is not action itself. On the other hand, what people can say about how to ride a bicycle is an example of explicit knowledge but will not on its own, enable someone to ride; whereas the tacit knowledge will not on its own, enable a rider to say which way to turn the handlebars to stay upright. A bicycle rider possesses the tacit knowledge that allows him to stay upright, just as he can acquire and possess the explicit knowledge of where to turn the handlebars to stay upright.

Regarding the categorization of knowledge into tacit and explicit, these authors are among the ones who agree with the interpretation of Polanyi's (1966) work that understands that all knowledge has both an explicit and a tacit dimension (Alvesson et al., 2002; Cook & Brown, 1999; Jakubik, 2007) and that one cannot be converted into the other (Tsoukas & Vladimirou, 2001). Tacit knowledge then, contrary to what some researchers propose, cannot be made into explicit or codified form and thus cannot be shared the way explicit knowledge can. This form of knowledge though, is very relevant in organisations because "it is ingrained in analytic and conceptual understandings (know what) and within practical skills and expertise (know how)" of their employees (Finn & Waring, 2006). Thus, tacit knowledge is acquired through experience and cannot be separated from the practice in which it is developed. Because it is an essential part of the know what and the know-how of professional knowledge, it is key in the organizational performance.

Going back to the description of the types of knowledge that are part of the epistemology of possession, Cook and Brown (1999) also explain the differences between individual and group knowledge using the example of copier technicians - previously used by Orr (1996). In this example, an individual technician can have a sense of how a particular photocopying machine should sound when it is operating properly, but it is the group of technicians that possess "war stories" about what

unusual noises can mean. Hence, the group of technicians as a whole possess the “body of knowledge” about copier repair and they draw on in the group’s actions. Whereas individual technicians possess bits of knowledge about their field and draw on it in their individual actions too.

Additionally, Cook and Brown (1999) claim that not all of what is known is captured by the understanding of these four forms of knowledge and that complementary to the “epistemology of possession” there also needs to be an “epistemology of practice” that refers to “the epistemic work done by human action itself” (knowledge as part of action) or what they call “knowing”; which is a facet of human action itself and cannot be possessed by people.

Following Cook and Brown’s claims, I now list the assumptions about knowledge which inform this research

1. Four forms of knowledge co-exist in the organization (and are used in action), these are: individual, group, tacit and explicit knowledge.
2. These forms of knowledge constitute the “epistemology of possession” and people tend to hold beliefs of ownership of them.
3. There is also knowledge that is part of action, which cannot be possessed by people and that constitutes the “epistemology of practice” (i.e. knowing)

In addition to these assumptions there are other considerations that underpin the definition of knowledge for this research and that basically refer to the difference between knowledge and information for this research. These considerations are developed as follows.

2.6 Knowledge and its difference with information

If one is interested in doing research about knowledge in organizations, there is an important issue that should be considered to avoid later disappointment or frustration. This consideration is the fact that knowledge itself, has proven to be really difficult to define in the history of thought, and research on knowledge management or knowledge in organizations does not seem to be getting closer to a consensus on its definition (Schneider, 2007). According to Alvesson and Kärreman (2001), researchers sometimes make reference to so many different forms of knowledge, and express such a variety of ideas on the nature of knowledge that it becomes almost impossible to make a general definition of it. In any case, it was not an aim of this research to develop a new taxonomy of knowledge or an “operationalized” definition of the concept; rather the focus of this study was on the knowledge sharing process. However, it is important to discuss the differences between information and knowledge, given that this research does make a distinction between the sharing of information and the sharing of knowledge.

In the knowledge management literature, there are other terms that seem closely related to the concept of “knowledge”. Sometimes, they are even used interchangeably with the latter. There are, however, some researchers – especially in the Information Science field - that have discussed and underlined the differences between such terms as: knowledge, information, data and even wisdom. For example, Ackoff proposed a hierarchy in 1989, which is often cited as the “Knowledge Pyramid” or the “DIKW hierarchy”, and which organizes these four terms with respect to one another; being data at the lowest level and having the potential to be transformed into the next level: information; which in turn, can be transformed into knowledge, that can be transformed into wisdom (Rowley, 2007).

The DIKW hierarchy has been criticised (Alavi & Leidner, 2001) and there have been authors that have proposed a reversed version of the hierarchy (Tuomi, 2000) to abandon it as a whole (Fricke, 2008). However, it remains as one of the most often cited and used in the information management, information systems and knowledge management literatures (Rowley, 2007).

On the other hand, and in a perspective more aligned with the one in this research, Brown and Duguid (2001) highlight at least three core distinctions between information and knowledge: knowledge involves a knower; knowledge is much harder to separate, transfer and share than information; and knowledge is more difficult to assimilate and understand than information.

Even when some researchers have consciously decided not to differentiate between their usage of the terms knowledge and information, claiming that there is not much practical utility in doing so (Bartol & Srivastava, 2002; Huber, 1991) they have also agreed that they are in fact different and will normally assume that “knowledge” is a generally richer and more complex concept than that of information. I would add that information is explicit and codified, thus cannot include the tacit dimension that knowledge has, making it a much simpler concept, easier to manage and to share. The consequent differences between knowledge sharing and information sharing will be discussed below.

2.6.1 Not all sharing is knowledge sharing: information sharing and knowledge sharing

According to Max Weber, an action is “social” if it takes account of the behaviour of others. This type of action is more than mere contact of individuals. It is in fact meaningfully oriented (intentional) toward the behaviour of others (Tucker, 1965). In all of the explanations to knowledge sharing mentioned in this chapter, individuals take into account the actions and reactions of other individuals to shape their behaviour (e.g. through expectations or reciprocity, perceptions of social pressure, perceived contribution to the relationship, engagement in the “practice”) we can easily infer that the act of sharing knowledge is implicitly regarded as being of a social nature; a social action. It is important to note, however, that most approaches to knowledge sharing do not deal directly with the meanings and understandings that knowledge sharing has for the individuals. Instead, they look at relations, underlying conditions, rules of exchange and group dynamics to explain the knowledge-sharing

phenomenon. Capturing the complex meanings and experiences underpinning knowledge sharing actions is only looked at by constructionist approaches.

From the literature on knowledge management and knowledge sharing, Haas and Hansen (2007) highlight the need to distinguish between two main types of knowledge sharing. The first one happens through direct contact between individuals, which means that the sharing of knowledge requires direct interaction between the provider and the receiver of the knowledge. Examples of how this can happen are meetings, phone conversations, informal face-to-face conversations or even via e-mail (the latter because it involves an exchange between individuals who know each other's identities, and it is informally tailored to meet the needs of the recipient i.e. not for everyone). The second type of knowledge sharing that these authors refer to, is done via written documents that are generally stored in databases, which can be accessed by employees when needed. This document-to-people sharing separates the provider and the receiver i.e. the receiver of the document does not have to contact or speak to the provider directly but can use the document as a stand-alone resource. These are often called boundary objects or artifacts (Carlile, 2002) in the literature.

This second type of sharing, even when being the basis of many knowledge management strategies, which rely heavily on the use of information management tools, has been discussed as ineffective when it comes to knowledge sharing (Jacky Swan, Newell, & Robertson, 2000). The reliance on IT and codified knowledge has been claimed to have limitations for sharing knowledge, and it is not surprising since IT based knowledge management strategies basically put aside the social aspect of the sharing of knowledge, the interactions, the human side. This is not a new idea and researchers have discussed the risks of using information management tools to design knowledge management systems and strategies (Huysman & de Wit, 2004; McDermott, 1999). A possible explanation for this ineffectiveness is that one of the main challenges that this kind of sharing entails relates to the difficulty (if not impossibility) of codifying tacit knowledge. If, like Tsoukas (2003) claims, tacit knowledge "cannot be 'captured', 'converted' or 'transferred', but only displayed and

manifested, in what we do (action)”, then tacit knowledge couldn’t possibly be shared in any kind of document (or database).

Furthermore, and as was mentioned previously in the chapter, Michael Polanyi (1966) proposed, that all knowledge has a tacit dimension. This has been interpreted by Tsoukas (2003) as two sides of the same coin and not as two parts of a continuum like claimed by Nonaka and von Krogh (2009). Following the first interpretation, it is understood that tacit knowledge cannot be transformed into explicit (because a coin will always have two sides). Furthermore, Cook and Brown (1999) also claim that each type of knowledge, (tacit and explicit) does what the other cannot, so they cannot be transformed into each other.

Databases can only store knowledge in its explicit (codified) dimension, and because tacit knowledge cannot be codified; databases cannot really be regarded as “banks of (complete) knowledge”, for what they store is probably more similar to what has been proposed in literature as “information”.

Given these understandings and in line with the assumptions discussed so far, I consider that what Haas and Hansen (2007) distinguish as a second type of knowledge sharing, (i.e. the use of databases) is in fact just a type of information sharing. An example of a similar view is the one proposed by Kogut and Zander (1992) when they define information as knowledge that can be transmitted without loss of integrity, versus know-how as the knowledge that is found in the regularity of the structuring of work and of the interactions of employees conforming to explicit or implicit recipes. What this implies, is that knowledge (as know-how) cannot be transmitted in the same way as information because it would lose its integrity. Additionally, because in face-to-face social interaction one can share knowledge in both, its explicit dimension (e.g. through the use of language) and its tacit dimension (e.g. displayed in “action”), it follows that face-to-face social interaction is the (only) means by which individuals can (and do) share complete forms of knowledge. Moreover, McDermott (1999 p.108) proposes that “sharing knowledge involves guiding someone through our thinking or using our insights to help them see their own situation better and to do this, we need

to know something about those who will use our insights, the problems they are trying to solve, the level of detail they need and maybe even the style of thinking that they use”.

There is another element that I included in my understanding of the knowledge sharing process which demands clarification and that is based on a theory that informed this research. I have said before that the sociological inclination I refer to, considers knowledge sharing as social action, always embedded in some kind of social interaction, which is symbolic in nature. I am now referring to the last part of that claim, the symbolic nature of knowledge sharing interactions.

Understanding knowledge sharing as social action, always embedded in social interaction, implies thinking about the actors of the interaction and the way they shape their behaviour (knowledge sharing) in it; this is because social interaction consists not only of actions and reactions, but on mutual adaptation between two or more individuals. In social interactions, the actors have to build up their behaviour by constantly interpreting each other's on going lines of action. This requires that individuals take account not only the other's behaviour (resonating with Weber's concept of social action) but of their own behaviour too. They have to note and interpret their and the other's actions to figure out what to do next. They are then, reflexive, thinking beings, active participants who construct their interactions by organizing their own understanding of it and giving it meaning.

Within the assumptions of this study, I highlight the understanding of human beings as reflexive actors, who are not only aware of their actions and those of the others during social interaction; but that actually shape their behaviour on the basis of what these actions mean to them. I assume this to be true in all (symbolic) social interactions; the only ones within which full versions of knowledge can be shared. This would mean that knowledge sharing behaviours and the knowledge sharing process are constructed by individuals on the basis of their interpretations of their and the others' actions. It is important though, to remind the reader that I believe that structure also plays an important role in the shaping of behaviour. In fact, one of the characteristics of

knowledge sharing that I have discussed throughout the chapter is that it is always embedded in some type of social interaction, which in turn, happens within a context and is part of it as well as it is influenced by it.

In the following chapter (Methodology), I will discuss my philosophical stance as well as the methodology I chose to use to carry out this research.

CHAPTER 3: METHODOLOGY

3.1 Introduction

In the Introduction and the Literature Review chapters, the aims and purpose of this research have been introduced. Issues about previous research on knowledge sharing in the workplace, particularly in KIFs, within a national context that encourages bureaucratic forms of organization (Mexico) have been identified and discussed. Given these issues and that the meanings of social phenomena as experienced by individuals in their contexts are important for social inquiry this study is concerned with grasping the ways in which people in knowledge intensive firms understand and enact their knowledge-sharing network, what enablers and barriers they encounter to share knowledge in these networks and how their organizational context impacts these understandings. In the last chapter, knowledge sharing was generally defined as social action, which is embedded in some form of social interaction, and to which actors ascribe meaning. Regarding the knowledge-sharing networks, their boundaries were defined by the actors in the interviews that took place at the beginning of the study and which, will be talked about in this chapter. Also, a fuller description of them along with the results of their analysis will be discussed in Chapter 4.

The purpose of this chapter is to set out the methodological basis upon which this study of knowledge sharing in knowledge sharing networks in KIFs has been carried out. First, there will be a brief discussion of the epistemological and ontological commitments of this research to help the reader locate this study within the overall field of paradigms and perspectives in the social sciences. This sets the scene for a discussion of the selected research strategy and design for this investigation as well as the rationale behind such choices. Then, an explanation of the criteria for the selection of cases (organisations and networks) for this study is provided, followed by a discussion of the procedures commonly used in the chosen research strategy. The methods and processes followed for data collection and analysis in this research will be discussed. Some methodological limitations and challenges presented by the

research strategy are identified. Ethical considerations and dilemmas will be discussed, along with qualitative research criteria to judge this investigation.

3.2 Justification of the paradigm (ontology / epistemology)

An important issue in knowledge management research is to understand why and how actors decide whether or not to share knowledge within an organizational context. There are different ways in which researchers may try to reach this understanding. These approaches are rooted in epistemological commitments that are inevitable, regardless of whether they are overtly recognized or not by the researchers (Johnson & Duberley, 2000). According to these authors (2000, p.8), "in any discipline, profession, occupation or everyday activity where knowledge claims are routinely made, epistemology contributes by clarifying the conditions and limits of what is construed as justified knowledge.

Regarding this matter and in an attempt to further clarify the epistemological and ontological commitments of this research I will begin by saying that this thesis is aligned epistemologically with an interpretive approach to research. An important reason for this choice is that interpretivists take the view that human beings think and reflect, thus scientific methods are inappropriate for the study of society (Schwandt, 1998). This is because, unlike objects in nature, human beings are intentional, which implies for example, that they can change their behaviour if they know they are being observed. Also, in the words of Orlikowski & Baroudi (1991), interpretive researchers attempt to understand phenomena through accessing the meanings that participants assign to them. So, an interpretivist argument would be that if we want to understand social action, we have to dig into the meanings, which that action has for the actors, i.e. people (Fulbrook, 1978).

The main aim of this thesis is precisely to understand the meanings that the social action of sharing knowledge has for people in their knowledge sharing networks in the workplace, as well as understanding how they enact these networks. Also, the interpretivist view of human beings as thinking, reflective and intentional is aligned

with the assumption discussed earlier of the actors as active beings in relation to their environment. This also relates to the view of the nature of the knowledge sharing process in this research: a process that is regarded as social action, which is embedded in social interaction and in a particular context, which shapes it and is shaped by it too. It is assumed in this research that the individuals' understandings of the knowledge sharing process derive greatly from their thinking and reflective processes and are of the utmost importance for the shaping of how knowledge sharing happens. Of the same importance is the actor's intentionality in knowledge sharing interactions. I also assumed for this investigation that the context in which the knowledge sharing process is embedded helps shape the way it happens, the way it is thought of and talked about. Moreover, context not only shapes but, is shaped by the actors through their behaviour in social interactions, where knowledge sharing happens.

In this way, I acknowledge both the importance of the context and the agency and understandings of actors. In fact, this position influenced the research questions of this thesis in that these address the understandings that people have of knowledge sharing and how it happens in the context where it is embedded, first in their knowledge sharing networks, then in their organisations as a whole.

Ontologically speaking, within interpretivist approaches, the human world is never a world in itself; it is always an experienced world where knowledge is constituted through lived experience of reality and reality is constructed through a process of continuous negotiation between people about the very nature of it (Sandberg, 2005). This view, in its extreme version, could lead to relativism, when the researcher also accepts that there are no extra-discursive means of arbitrating knowledge claims (Johnson & Duberley, 2000). However, as Sandberg (2005) claims, at least in management research, most advocates of interpretive approaches want to reject going as far as taking a complete relativistic stance and so did I in this research. In the ontological respect, my position and that of this investigation is more aligned with the Subtle Realism proposed by Hammersley in 1992 (Hammersley, 2002) where it is acknowledged that there are real world objects apart from the knower. Still, we cannot separate ourselves from what we know and so, we can only know reality from

our own perspective of it. This is what prevents us from accessing the truth and in consequence, we could always be wrong, in any knowledge claim we make. The researcher thus, will always “represent” reality from some point of view, which highlights some features of it and not others, and there can be other representations that are non-contradictory and valid about the same phenomenon.

Following this combination of perspectives, I chose to work with two main techniques that suit the interpretivist approach to “knowing reality” and that also fit the commitments underlying this research: non-participant observation and interviewing (in-depth and standardized open-ended). The main method was interviewing. However, non-participant observations were carried out with the frequency and length of time that the organizations agreed and allowed.

In terms of the expected theoretical contribution or what the results and conclusions of this research add to the discussion on knowledge sharing in organizations, it is important to highlight that a basic epistemological assumption of interpretive research is that findings are created as the investigation proceeds (Guba & Lincoln, 1994) which in turn means that the resulting contribution emerges from the data in an inductive process (Andrade, 2009). It is also important to remember that researchers are not neutral spectators in their research; they are themselves human beings, who perceive, experience and understand the world around them from a particular position, which permeates the way in which they interpret the results of their investigations (Sandberg, 2005).

In line with these premises, a contribution to knowledge from interpretive research does not need to be a definitive answer to a question (or questions in this research) but a reasoned, well-supported interpretation or representation of a complex phenomenon (the one under study) that offers a new kind of insight into it. Therefore, what I believe is my contribution to the discussion on knowledge sharing is this type of representation, located in the specific (and under explored) context where this research was carried out. I believe it not only offers new insights into the knowledge sharing process but also has the potential to raise new questions about it and future

research avenues. As stated by (Schwandt, 1998), interpretive accounts are to be judged on the pragmatic grounds of whether they are useful, fitting and generative of further inquiry. Additionally, their credibility and rigour are important elements in this evaluation.

3.3 Justification of the research strategy

To achieve the aim of this research, I decided to use a case study research strategy. Next I discuss the chosen strategy used along with the factors that relate it to the theoretical framework of this study and that contributed to determining the methods in its design.

3.3.1 Case study as the research strategy

This section sets out the strategy adopted in this research. First, the case study approach and the rationale behind this choice are discussed in general along with the particular version adopted here. This is followed by the criteria for case selection of the organisations and departments that participated in this research along with the rationale for these criteria, explained in relation to the methodological stance discussed previously.

Case studies have been defined in several ways by different researchers and for some it might seem that the nature and status of case study (like many other terms in social research) is still unclear (Tight, 2010). The historical background of the idea of the case study has been claimed to go back to the 1920's "case history" of social workers (Platt, 1992). Since then, case studies have been used for different purposes apart from research tools such as: teaching devices or a form of record keeping (Yin, 1994) and they have been approached from different disciplines and paradigms (Hancock & Algozzine, 2006).

More recently, Robert Yin (1981, 1994), one of the key writers in the field, has portrayed them as a research strategy, which produces rich, empirical descriptions of

particular examples of a phenomenon that are based on multiple data sources and whose distinguishing characteristic is that the phenomenon it attempts to examine is contemporary and is in its real-life context.

Being highly concerned with methodology, (Yin, 1994) provided a thorough and systematic outline for designing and carrying out a case study, which included guidelines for the preparation of data collection; collecting data based on specific principles; the analysis of the data and composing the case study report. Perhaps for this reason, some (e.g. Platt, 1992) consider that Yin does not conceive the case study as inductive, and that he doesn't seem especially concerned with accessing personal meanings or emphasizing data in people's own words. However, Yin has recently responded to this view by acknowledging the value of the interpretive perspective in case studies, arguing that they can produce both descriptive richness and analytic insight into events, people and their passions as they happen in real-life contexts (Yin, 2011). It could be said that Yin's aim, along with other case study researchers, is to provide a good exploration of the topic of interest, and allowing the essence of the phenomenon to unfold (Baxter & Jack, 2008).

Both quantitative and qualitative approaches may be supported within a case study, and a range of methods can be utilized that go from surveys to ethnographic ones (Stake, 2005). Cases can be studied in a variety of ways depending on the questions the researcher wants to answer. Thus, a variety of perspectives and aims can match a case study. Yin (1994 pp.14) is also an advocate of this view and even notes that "the case study strategy should not be confused with qualitative research", for case studies can be based on both quantitative and qualitative evidence or a mix of these.

However, some scholars do consider case studies as a form of qualitative research (Hancock & Algozzine, 2006) and case reports have been regarded as a "typical product of alternative paradigm inquiry", i.e. qualitative approaches (Lincoln & Guba, 1990). Case studies seem to be a good fit for the qualitative researcher given their flexibility for coping with complex contexts and the possibility that both the case and its context change over time (Yin, 1999). Another reason why case studies fit well with

qualitative research is that they do not attempt to isolate the phenomena from their context; on the contrary they emphasize it (Eisenhardt & Graebner, 2007). In qualitative research, whether interpretive or not, the researcher investigates social problems in the natural setting that they occur, allowing the construction of rich, complex and holistic descriptions and analysis of the informants' views (Creswell, 1998).

The definition of what a "case" is differs somewhat from author to author but in general, we can highlight a critical factor in defining a case, and that is its boundaries. According to Stake (2005), the case is a system that comprises a complex of interrelated elements and has clearly identifiable boundaries. Cases can be individuals, events, communities, families, organisations, situations (e.g. turning points), programmes, activities, processes and other types of bound units of analysis (Creswell, 1998; Hancock & Algozzine, 2006). As a general guide, Yin (1994) suggests that the unit of analysis, "the case" is defined on the basis of the way the initial research questions have been defined, and that its boundaries (e.g. time, space, people, etc.) are defined too so that the limits of data collection and analysis are set. Embedded cases, like the ones in this research, involve more than one unit of analysis. Within them, the evidence gathered is investigated "at least partly in subunits, which focus on different salient aspects of the case" (Scholz & Tietje, 2002 p.10). In this investigation, the main units of analysis were the two organisations (as whole), and the small (embedded) units were the informal knowledge-sharing networks found within the participating departments. Cases can have different research aims and designs, which leads us to the discussion of the typologies frequently found in the literature, and the specific type chosen for this research.

3.3.2 Types of case studies

Yin (1994) proposes a basic typology of case study designs based on two aspects: how many cases are going to be used to address the research question(s) i.e. single or multiple cases and how many units of analysis will be involved in each case if there are going to be any subunits embedded in the case(s) i.e. holistic versus embedded case

studies. The following diagram represents this more clearly. This research can be located in the lower right quadrant, as an Embedded Multiple-Case design.

SINGLE VS MULTIPLE (X) / HOLISTIC VS EMBEDDED (Y)

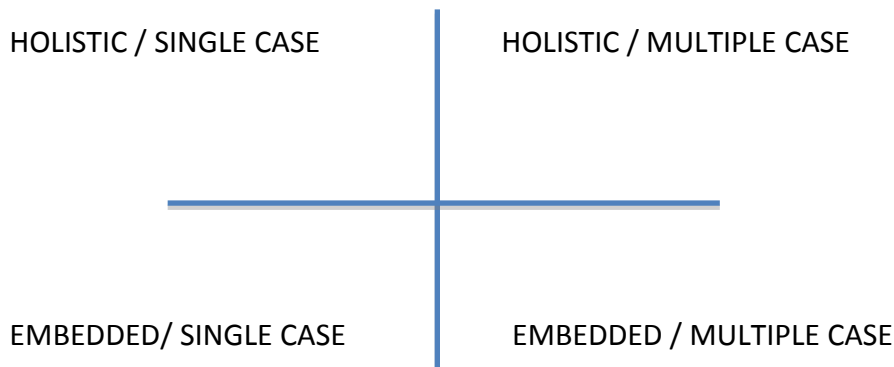


Fig. 1 Types of case studies adapted from Yin (1994)

Yin explains (1994) that each of these designs has different possible rationales and that these should be related to the aim of the research. For example, if one wants to capture the characteristics of a typical case, or of a critical case, then one will probably choose to perform a single-case study. However, when talking about multiple cases, Yin warns the researcher that the rationales for single-case designs usually don't match multiple-case designs and he suggests that when doing multiple cases, a "replication" design is followed.

What Yin means (1994) is that cases are carefully selected with one of two purposes: One, that the researcher predicts similar results (literal replication) between the cases, or, the second, that the researcher predicts contrasting results between the cases, for anticipatable reasons, mostly related to theory (theoretical replication). This research fits the last of these replication designs. Because the KIFs studied, operated in different sectors, I expected to see some differences between the two cases (Organisations). I also expected differences between the networks embedded in each organisation. This

will be made clearer in the next section, when I explain the criteria for the choice of cases.

Additional to this categorisation, Yin also classifies case study strategies in terms of their general purpose: exploratory, descriptive or explanatory (Yin, 1994). To put it briefly, if the research questions focus mainly on “what” (there is), your study might be *exploratory* and even *descriptive* at the same time. On the other hand, if your research questions are about “how” or “why”, your study most likely fits an *explanatory* type, which is the case of this research.

3.3.3 Rationale for the type used

According to Yin (1994, p.5), the rationale for choosing a research strategy should be based on three conditions: (a) the type of research question, (b) the extent of control the investigator has over the behavioural events, and (c) the degree of focus of the research on contemporary events. For example, experiments would be similar to case studies in the type of questions they answer (how, why) and that both strategies focus on contemporary events. However, in a case study, the investigator does not have control over the behavioural events, as he does in an experiment. Other research strategies, such as surveys and history, can have commonalities with case studies, yet there will be at least one of these conditions in which they will be different and which in turn, should be a relevant characteristic when deciding what strategy fits best with the research.

In general, case studies are a chosen strategy when the researcher wants to answer “how” or “why” questions; when he has little control over the behavioural events and when the focus of the research is on a contemporary phenomenon within a real-life context (Yin, 1994). Because this study matches all of these criteria, a case study strategy seemed appropriate to use.

Case study research has been used as a strategy to build theories and different researchers have discussed its strengths and opportunities in this respect (Dyer &

Wilkins, 1991; Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Flyvbjerg, 2006). Additionally, from the variety of case study designs, multiple-case studies have been regarded as a powerful tool to create theory, based on the fact that they allow replication and extension among the individual cases (Eisenhardt, 1989, 1991). As claimed by Eisenhardt (1991, p.620), "different cases often emphasize complementary aspects of a phenomenon" giving the researcher "a more complete theoretical picture" and as Yin (1994) points out, this type of study design as a whole is often regarded as more robust than single-case studies.

The phenomenon under study in this research takes place in the organisational context. Organisations are complex systems that can potentially offer a wide variety of arrangements, cultures and understandings of the same phenomenon. Organizational life is not only about the organization itself but it is about the people in it and the subsystems within and outside its formal structures. All of this potentially enriches the insights derived from research carried out that acknowledges and embraces this diversity. A multiple – case study design of an embedded type allowed me to address this diversity; which takes me to the next decision taken: the choice of units and subunits of analysis for this research.

I turned back to the literature on knowledge sharing, knowledge management and organizational studies, so as to follow Yin's guidelines regarding replication procedures in multiple-case studies. An important step in replication procedures, according to Yin (1994), is the development of a theoretical framework that determines the conditions under which a particular phenomenon is likely to be found (a literal replication) or unlikely to be found (a theoretical replication). Based on this, I built my rationale for the choice of units and subunits of analysis in this research, which I explain in the next section.

3.4 Criteria for case selection (organisations & networks)

Even when knowledge sharing is a phenomenon that could possibly be found in any type of organizational context, there is a specific type of organization – knowledge

intensive / knowledge-based firm, a specific type of worker – knowledge worker and the work they do – knowledge work, that are expected to be involved in the sharing of knowledge as part of their everyday work. I have mentioned this in the Literature Review. Still I will further discuss it here. First I will talk about the type of organization mentioned: the KIF

3.4.1 Selection of the organisations: Knowledge Intensive Firms (KIFs)

A key paper regarding research and definition of KIFs was written by William Starbuck in 1992 (Kärreman, 2010). In it, he explains that the label “KIF” imitates other labels used by economists, such as the capital-intensive firms and the labour-intensive firm. Just like in capital intensive and labour intensive firms, capital and labour are the most important production inputs respectively; in a knowledge-intensive firm, knowledge, as a production input, is more important than any other input. This importance also applies for outputs (capital, labour and knowledge) in the three types of firms mentioned.

In the previous chapter (Literature Review) it has been discussed that KIFs among other types of organisations are expected to be more aware and preoccupied with managing what is considered their most important input and output: knowledge. Within the strong KM presence expected in this type of firms, would be an interest for ensuring effective knowledge sharing practices. On this basis, KIFs appeared as a good choice for carrying out research on knowledge sharing and add to the literature on this subject.

Consultancy firms are one type of KIF frequently mentioned in literature on knowledge management. Based on this fact and for this thesis, they are what I call “a typical example of a KIF”. They have been in the forefront of research and theory about how to manage knowledge because their own success depends heavily on developing, selling, and applying ideas (Apostolou & Mentzas, 1999). Being in the centre of much research on knowledge management, consulting firms can be expected to be more aware of their knowledge-intensive nature and prone to having an overt KM strategy,

which would very likely include knowledge sharing/transfer/exchange within them. For these reasons, I chose to work with a consultancy firm in this investigation.

On the other hand, I also wanted to work with a publishing company because even when they are knowledge-based organisations, they are rarely ever mentioned in knowledge management research. However, I knew from my experience that at least three of the largest publishing groups in the world, write and produce their own books as well as give training and advice (consultancy) to educational institutions in the countries where they operate. Additionally, and at least in the country where the investigation was carried out (Mexico), these companies have people working all over the country, which made them more “comparable” to a big consulting firm, the type of which I approached to invite them to participate in this investigation.

The rationale for choosing two different types of KIFs was based on the principle of theoretical replication explained before. Even when both organisations can be considered knowledge intensive or knowledge based, we could expect some differences in the results in this investigation given their potential awareness of their KIF status: A consultancy firm would be more aware than a publishing firm. This awareness could be observed for example, in the presence or absence of a KM strategy in the organisations. Allegedly, the presence and implementation, or absence of a KM strategy would influence employee’s understandings of the knowledge-sharing phenomenon.

In order to gain access to these organisations, I sent letters to the Country Directors of the three largest educational publishing groups in Mexico and also to partners in the Big 4 consulting firms in Mexico, inviting them to participate in the study. Two organisations responded to the invitation and agreed to participate. One was a consultancy firm and the other was a publishing firm. A more detailed description of these companies will be provided in the next chapter.

Next, I will talk about the criteria for choosing the networks, embedded in the departments that participated in this investigation. These criteria were basically based in the type of work that people in these departments do: knowledge work.

3.4.2 Selection of the departments where the networks were embedded: knowledge work

In the previous chapter (Literature Review) it has been noted that researchers have not yet reached an agreement on a clear definition of knowledge work. However, and as claimed by (Reinhardt, Schmidt, Sloep, & Drachsler, 2011 p.150), “although all types of jobs entail a mix of physical, social, and mental work, it is the perennial processing of non-routine problems that require non-linear and creative thinking that characterizes knowledge work”. In the previous chapter, it also mentioned that the typical, characteristics of knowledge work according to (Pyöriä, 2005) are:

- Knowledge work requires extensive formal education and continuous on-the-job learning.
- It uses transferable skills.
- The nature of work is of a low level of standardization and involves working with abstract knowledge and symbols (e.g. problem solving, design and planning of production processes)
- It is organized in different ways from professional bureaucracies to self-managing teams; there are both job and task circulation and knowledge is the primary production factor.
- The mediums of work are symbols and/or people.

Based on the general characteristics of knowledge work and analysing the work carried out in the participating departments, it was considered that they do knowledge work, and the people working within these departments are knowledge workers. In the case of the consultancy firm, two departments participated: the marketing department and an internal human resources consultancy department. In the publishing organisation three departments participated: the marketing department, the publishing

department and an academic services consultancy department. It is worth clarifying that in the consultancy firm, there was no access to the employees that are usually considered in the literature as knowledge workers in this type of firms, the business consultants. However, and as explained before, the work performed by the employees in the participating departments can also be considered as knowledge work, thus, their employees can be considered as knowledge workers.

In the following section, I will discuss the method and procedures used in this embedded multiple case study.

3.5 Method and procedures

3.5.1 Access to participants

After both organisations agreed to take part in the research, executive summaries of the research proposal were sent to the managers and directors of each of the departments chosen for the study (i.e. Marketing, Human Resources Internal Consultancy, Publishing and Academic Consultancy). After managers in the departments acknowledged receipt of this summary, invitation letters were sent to every employee in those departments. A non-disclosure agreement was signed with the publishing organization before the data collection started. This was a standard procedure that they had implemented with all their employees and external providers some months before the research started. Apparently, this is also a procedure that the consultancy firm follows with both employees and providers, yet there was no agreement signed by the researcher for this study. I came to understand later in the research, that this was an indication of the informality of the access granted in this organization for my study.

Everyone invited agreed to participate in the study (participation was voluntary) and informed consent letters were signed by all of them, previous to the first interview. In all cases, the invitation letters were sent via e-mail, and at least for the first set of interviews, timetables and days were set by the managers in three of the five

departments participating in the study. Even when at first, this action seemed like a way of making it easier for me to handle the logistics of my data collection, it also felt like a way in which these managers and directors were establishing their authority and showing that they had perhaps more information or control over part of the research, sending a power message, implying that they were involved in the research to a greater extent than the rest of the people in the department, even when this was not the case. After all, during the various stages in qualitative research there are shifts in the power relations between researchers and participants (Karnieli-Miller, Strier, & Pessach, 2009) and power games and politics are part of organizational life everywhere, they are a fact of life (Ferris & Kacmar, 1992).

3.5.2 The interviews: the different stages

The case study research strategy involves combining data collections from varied sources such as interviews, documents and observations. Data collection for this study was conducted in several stages. First, standardized open-ended interviews were carried out with every employee in each of the departments participating in the research using an interview schedule designed to elicit information about the knowledge flows and the structure of the knowledge-sharing networks in the participating departments. Standardized open-ended interviews allow for open-ended questioning yet the sequence and wording of the questions is constant with all interviewees. This way, participants can give as much information as they want and the researcher can use probes to follow up if needed (Patton, 2002). This type of interview allowed me to get the specific information that I needed to map the knowledge-sharing networks (i.e. names and order in which these were mentioned), as well as getting additional information on how knowledge sharing was carried out in the departments and establish rapport with the participants through a more relaxed first interaction than a structured (close-ended) interview would have permitted.

During these interviews, I also got a feeling for which participants were more willing to engage in the study and which ones seemed more reluctant or less interested in doing so. Being aware of how each participant made me feel in this first set of interviews was

useful since it allowed me to be reflexive in my actions and assumptions about participants throughout the rest of the data collection analysis.

Based on the analysis of this first set of interviews, a sample of participants in each network was selected for further interviewing. The whole process of the standardized open-ended interviews and the rationale for using them will be described in more detail in the next section.

3.5.2.1 Standardized open-ended interviews: Population samples and the basis for their selection

This study was carried out in the organizational context. Specifically, the participants in the study (N=94) came from branch offices (the head offices in the country) of two multi-national organizations in Mexico City. None of the companies are originally Mexican. In fact both are originally British and then one was sold to a German group. However, most of the participants were Mexican (N=84), and the ones who were foreign (N=10) had been working and living in Mexico City for a considerable amount of time (at least a year) to reduce cultural differences in their accounts compared to those of the Mexican participants.

Participants were both female (N=64) and male (N=30) and there was no specific aim to have even numbers of participants from each gender. The level of analysis of the research was individual, departmental and to some extent organisational (because I only had access to specific departments in the organisations) taking account of the network level when referring to a knowledge-sharing network. The detail of the total number of participants for this research and which network and organisation they came from is presented in the following table:

Organisation X	Number of participants	Organisation Y	Number of participants
HC network	12	AC network	15
MI network	29	KM network	8
Knowledge management team	2	EC network	26
Partner (gatekeeper)	1	Managing Director	1
Total (Organisation X)	44	Total (Organisation Y)	50

Table 1. Total number of participants from both organisations

- N=94 participants in the study, where only 90 participated in the standardized open-ended interviews. The knowledge management team (2), the partner in Organisation X (1) and the Managing Director in Organisation Y (1) did not participate in the SNA interviews because they were not part of the networks studied.
- KEY: HC Network = Human Resources Experts Centre (Organisation X); MI Network = Marketing Department (Organisation X); AC Network =Academic Consultancy Department (Organisation Y); KM Network = Marketing Department (Organisation Y); EC Network = Publishing Department (Organisation Y)

The population sizes of each sample for the in-depth interviews were within a range of 5 to 13 participants from each network. This summed up to a total of 24 participants from the publishing company participating in the second stage of interviews (first in-depth interviews) and 16 from the business consultancy firm. These numbers include the Knowledge Management team and the Partner in Organisation X (3); and the Managing Director in Organisation Y (1). Then, 22 participants from Organisation Y participated in a second batch of in-depth interviews, making a total of 62 in-depth interviews (first and second batches). Regarding the standardized open-ended interviews that were held, these had two purposes: getting information about the knowledge-sharing networks in the organisations to map their knowledge sharing patterns and selecting the participants for the in-depth interviews. The detailed numbers of how many participants were interviewed in each stage from each organisation/ network is presented in the following table:

	Standardized open-ended interviews	In-depth interviews 1	In-depth interviews 2	Organisation
HC network	12	5	0	Organisation X
MI network	29	8	0	
Knowledge Management Team	0	2	0	
Partner (gatekeeper)	0	1	0	
AC network	15	5	4	Organisation Y
KM network	8	5	5	
EC network	26	13	13	
Managing Director	0	1	0	
TOTAL	90	40	22	

Table 2. Participants interviewed in each stage of the research.

KEY: HC Network = Human Resources Experts Centre (Organisation X); MI Network = Marketing Department (Organisation X); AC Network = Academic Consultancy Department (Organisation Y); KM Network = Marketing Department (Organisation Y); EC Network = Publishing Department (Organisation Y)

The primary aim of in-depth interviewing is to generate data, which give an authentic insight into the experiences of the participants (Silverman, 2006). Because of this, it is understood that sample sizes in qualitative research should not be too large that it is difficult to extract thick, rich data (Onwuegbuzie & Leech, 2007). Just as Silverman (2000) says often the best qualitative research aims at “making a lot out of a little.” This of course does not mean that little amount of data will be analysed but given that in this research, data was collected in two settings, aiming at having two in-depth interviews with each selected participant, the sample was sufficient to provide enough thick descriptions and accounts for rich interpretation and discussion about the research phenomenon. Moreover, researchers have claimed before that using a small

number of respondents is the way in which analytic, inductive studies are best done (Crouch & McKenzie, 2006). Some methodologists have provided guidelines for selecting samples in qualitative studies based on the research design, sampling design or data collection procedure (Onwuegbuzie & Collins, 2007). For example, (Guest, Bunce, & Johnson, 2006) propose that data in in-depth interview-based studies, saturation is reached for the most part with no more than twelve interviews.

Additionally, the philosophical basis for the research has also been proposed as key to deciding sample sizes. (Morse, 2000) suggests that if one is doing study where you are interviewing each person various times it is likely that one will have a large amount of data for each participant and therefore needs fewer participants in the study; and suggests a range between six to ten. Clearly, as (Morse, 2000) also states, estimating the actual amount of participants in a study that will be required to reach saturation depends on a number of factors and one should not just use a number proposed by other researchers at face value. As the study progresses the researcher is better able to decide if there is a need for more participants or if he/she has gathered enough useful data. In this research, the size of the population was equal to the size of each participating department because I wanted to include as many members of each knowledge-sharing network as possible.

The delimitation of the population for the studies in this research was done on the basis of purposeful sampling. In this type of sampling strategy, the researcher selects individuals because they can purposefully inform the understanding of the research problem and central phenomenon in the study (Creswell, 2007).

There was a first stage in both sites, where standardized open-ended interviews were held with all members in each participating department (N=94). Interviewees were asked a set of sixteen questions to gather information about their knowledge-sharing network (questionnaire in appendix). This information was further used to map and analyse these networks and justify the selection of participants who took part in the in-depth interviews of this study. An overview of the method used for the selection of such participants and a justification for its use are presented as follows.

3.5.2.2 Standardized open-ended interviews: Social Network Analysis (SNA) to analyse the data with different purposes

“Interpretive researchers attempt to understand the way others construe, conceptualize, and understand events, concepts, and categories, in part because these are assumed to influence individuals’ behaviour” (Kaplan & Duchon, 1998 p.572). In this research one of the aims was to discern the way people understood knowledge sharing in their informal knowledge sharing networks. Since these networks were assumed to be informal, it was expected that the actors were perhaps not aware that they were part of one and could not readily name the actors in their networks or how they interacted to share knowledge. Also, if I wanted to identify them, it did not make sense to define them based on information on the formal structure of the departments where they were embedded, because they were expected to be informal. However, and given the research questions in this investigation, there was a need to identify these networks. Additionally and given the interpretive epistemology the research is aligned with, the identification of the networks had to be based on the actors’ views. The networks were regarded as representations of the patterns of knowledge sharing interactions as perceived by the actors in them. At the same time, they would provide us with information on who were part of which network as well as some features of their participation in it, such as perceived prominence and roles.

Looking at research, which studies social networks, I decided to use Social Network Analysis (SNA) to analyse the data from the standardized open-ended interviews. SNA is a method that has often been used to analyse knowledge networks and that has been regarded as effective in building knowledge maps that help understand the actual knowledge flows within organisations; often found in their informal knowledge networks (Chan & Liebowitz, 2006). The reason for mapping out these networks was based on the fact that I wanted to describe what sharing looked like in these informal patterns before examining them qualitatively in light of the narratives from the interviewees. This represents a methodological contribution of this research, given that it is one of the few studies that are now using social network analysis to inform

qualitative research. Furthermore, using SNA helped in getting a fuller picture of the subunits under study (networks).

Social Network Analysis (SNA) is an approach to the study of relationships among social entities (actors) that is rooted in the notion that the social environment can be expressed as patterns or regularities in these relationships, which constitute the structure of this representation; the structure of the social network (Wasserman & Faust, 1994). Formal SNA is based on the quantitative methods to map networks, and it aims to measure their formal properties, such as the strength, intensity, frequency and direction of network relations (Heath, Fuller, & Johnston, 2009). One of the advantages of these quantitative methods over qualitative methods is that they make it possible to visualize and describe social networks in a way that narrative accounts involving very large numbers of relationships could not easily do (Edwards, 2010).

Social network analysis frequently uses close-ended questions to map out the strength of association between individuals and between groups. The diagrams yielded by such analysis can reveal a group core and a periphery and points of passage between communities or actors (Howard, 2002). Based on the analysis of these patterns of relations between actors in a network, social network analysis also shows the different positions and roles that these actors have in the network (Wasserman & Faust, 1994). According to these authors, there are two key aspects to the positional and role analysis of social networks. First to identify positions as collections of actors that are similar in their ties with other actors in the network, and second, modelling roles as systems of ties between actors or between positions. This descriptive capacity of social network analysis is made evident in the way that it often visualizes network structures through diagrams, which has made it an attractive method of research for a long time (Hogan, Carrasco, & Wellman, 2007) and which made it attractive as a method to be used both in the selection of interviewees for the in depth interviews in this research and in the analysis of knowledge sharing patterns in light of the accounts of participants in the in-depth interviews.

Although social network analysis is traditionally and mainly used in quantitative-oriented research (Heath et al., 2009), there have been calls for the revival of qualitative approaches to social networks, to complement (or be complemented by) quantitative methods (Edwards, 2010). One of such attempts is exemplified by the use of social network analysis in research designs where quantitative SNA is a preliminary stage or a start-point that informs qualitative research (Martínez, Dimitriadis, Rubia, Gómez, & de la Fuente, 2003). Among these types of studies, there are also some that have produced network maps as the first stage of research. Within them, researchers have used the measures of the networks as a guide to select actors for further qualitative research on the basis of their structural position in the network (Biddix & Park, 2008; Howard, 2002; Park & Kluver, 2009). This method has proved its advantages by allowing researchers to re-enter the field more purposefully, suggesting important individuals for analysis (Howard, 2002), minimizing sample bias, and even aiding interviews through the prompting of memories when network data was shared with participants (Biddix & Park, 2008).

In the next section, I will explain how I developed the questionnaire used in the standardized open-ended interviews as well as how these interviews were carried out. I will discuss how I analysed the data for the selection of participants of the in depth interviews. Also, I will discuss briefly how the findings of this analysis were further examined in terms of their consistency with the stories of the participants of the in depth interviews.

3.5.2.3 Standardized open-ended interviews and the instrument description

In the words of Borgatti & Halgin (2011, p.2): “A network consists of a set of actors or nodes along with a set of ties of a specified type (such as friendship) that link them. The pattern of ties in a network yields a particular structure, and nodes occupy positions within this structure”. Ties are the roads that allow flow between the actors (nodes) in a network.

According to these authors, the types of ties that are mostly used in research are states and events. States would include: role-based relations (e.g. kinship, friendship, boss-subordinate), cognitive/perceptual relations (e.g. recognizes/knows the skills of) and affective relations (e.g. like, hate) and these can be measured in terms of their strength, intensity and duration. On the other hand, event-type ties like the ones describing exchanges (e-mail, conversations, transactions) are counted over periods of time to measure their frequency of occurrence (Borgatti & Halgin, 2011).

I chose to think of knowledge sharing ties more like state ties than event ones. There are many different interactions, situations and exchanges that could be considered as knowledge-sharing events and I thought it would be problematic to ask people something as general as: "On a scale from 1 to 5, how often do you share knowledge with these persons?" It would probably be a very limiting question to answer. Furthermore, knowledge sharing events and behaviours (as I later confirmed in this research) are not necessarily something people think about very often and I did not want to limit myself and my interviewees to a close-ended questionnaire based on frequencies that would not reflect the richness of knowledge sharing and did not help them start thinking about it, which was going to be needed for the remaining of the study.

Still, if I wanted to use SNA (Social Network Analysis) in this stage of the research, I had to come up with a set of questions that would give me information on: who was part of the knowledge-sharing network of the respondents, what the network patterns "looked like", who was more/less connected and for what type of knowledge sharing interaction. To address the "who is part of the network" question, instead of creating a roster with the names of the people in the department, thus setting the boundaries of the network myself, I decided to ask interviewees for names of the people that they related to on the basis of a specific knowledge-sharing behaviour. An example question was: "Can you give me the names of the people that you go to, when you want to share something that you've learned or discovered recently and that relates (direct or indirectly) to the work that is done here (yours or somebody else's)?"

This way, I was not limiting the answers of the participants to a given set of names, allowing me to get more information on the real networks. Unfortunately, there is no existing typology of knowledge sharing behaviours that I could base my questions on. Cummings (2004), proposed a categorization based on interviews made to participants in his study, and included five types of knowledge sharing: general overviews, specific requirements, analytical techniques, progress reports and project results. However, these types were based on what his interviewees claimed to share during their projects. It can be seen that these categories basically include work related information targeted at completing a given task. Based on my personal working experience and my reading of the literature on knowledge sharing, I believe people share more than this and that the networks I worked with, would be prone to sharing with different objectives than just completing their present task. I thought about the assumptions on knowledge and knowledge sharing for this research, and came up with 16 questions with this format (see Appendix A) about knowledge collecting and donating behaviours in the workplace that I grouped in 4 types of knowledge sharing behaviours (four questions in each group):

- A) Sharing ideas, insights, opinions or experiences
- B) Asking for advice, help or support
- C) Asking for an opinion or a different perspective
- D) Ask for information

I believe each of these groups of behaviours talked about a different aspect of how knowledge sharing happened in each of the networks and “who was who” in each type of knowledge-sharing interaction. For example, the network based on the knowledge-sharing behaviours where people ask for work-related advice, help or support from someone might show some people highly connected in an “adviser/helper” role that were not highly connected as “informers or information hubs” in the network where the behaviours were basically asking for information.

I also asked people to briefly describe how knowledge sharing happened in their networks and gave them the choice to explain why they approached a specific person

first or last for a given knowledge-sharing behaviour because I wanted to get a clearer picture of the knowledge-sharing dynamics in the networks. This flexibility in the interviewing process also gave me the opportunity to ask for clarification and ask additional questions to specific participants i.e. the ones in a management and middle management position, of which I wanted to get specific information (e.g. about the way knowledge sharing happened in the organization as a whole). Moreover, I knew I was not going to interview many of these people later in the research and I wanted to get as much data as I could from each participant, and give all of them the opportunity to actively contribute to the construction of knowledge in this research by sharing at least part of their views.

I experienced this first set of interviews as an opportunity to establish rapport and present myself to the participants in each of the sites. It was before starting each interview that I obtained informed consent from the participants and clarified any question that they had about the project. During these interviews, and even when participation was voluntary, I got the impression that many participants were enthusiastic and interested in cooperating with the research but some were not very interested. Though this informed my choice of the samples of participants for in-depth interviewing; it was not a criterion itself. Yet if, after analysing the data, the choice was between working with someone that seemed more willing and interested in the first interview, and someone that had shown little interest and willingness I would choose to work with the more willing participant. This was important to me not only because it is easier to work with someone that wants to work with you but also because I believe that people that showed more interest, were going to be willing to share more, which was positive for the investigation. Finally, these interviews also gave me the opportunity to have a glance at how things “worked” in each department and the organisations.

These interviews were carried out in each of the organizations in a closed, designated office every time except for the times when the participant had an office of his own where we could work. The only people present at each interview were the participant and me. All interviews were recorded with the consent of participants and they were

carried out in Spanish, which is the mother tongue of most participants. I offered to switch to English with the few participants that are native speakers of the language but all of them asked that I interviewed them in Spanish.

3.5.2.4 Analysis of the SNA data

The process I carried out to analyse the data from this interviews was the following: I first extracted the names in each answer (in the order that they were mentioned) from each of the interviews. All interviews were recorded, so I was able to double-check that the names and order were correct. Using all of the names extracted, and the ones of the participants, for each department I created four matrices, one for each group of questions (mentioned before), which means that for each department, I had input for four different networks. I entered these data in UCINET[®], a software used for Social Network Analysis (SNA) to obtain the network maps and ranks for inbound and outbound centrality i.e. degree of connectedness (number of links directed to or directed from) for each participant in each network.

Because I was just allowed to interview people within each of the departments participating in the study, the links between them, and people outside of the department (i.e. in the organization or outside it) were just shown partially. However, this did not present a problem when choosing the samples of participants for the in-depth interviews, as none of these people were highly connected to many others in the network (i.e. they were not mentioned very frequently by several people in the network like others were).

For the selection of participants for further interviewing, I looked at the ranks for inbound centrality (i.e. how many times they were mentioned by others in the network; number of links directed to them) of each participant. I first considered all the people that had punctuations above the real mean ($N =$ being the number of people interviewed from the network) and ranked them in terms of these punctuations. I considered this to be an indicative of the roles these people were carrying out in the network (i.e. connectedness) as well as their prominence. This

means: Inbound centrality as indicative of “how others see you” and outbound centrality as indicative of “how you see yourself” in relation to the others (number of links directed from each actor to others in the network). This way of looking at roles in the network was inspired by the Identity Theory by Stryker (Hogg, Terry, & White, 1995; Stryker & Burke, 2000) and the concepts of *salience* and *commitment* to a role in the network.

As explained by Stryker (1980), one component of commitment is the number of “others” to whom one is connected by possessing a particular identity. Thus, commitment is conceived as *ties in social networks*. Connectedness increases the salience of the identity. It follows that persons occupying densely connected positions and holding related roles will have identities associated with those positions and roles that are more salient.

This way, to the degree that one’s relationships to a set of others depend on “being” a particular kind of person and “playing out” particular roles, one is committed to being that kind of person (Stryker, 2008). I was interested in first interviewing the people in the networks that were highly connected to others through a type of knowledge sharing behaviours or interactions because this would mean that they were possibly more committed to a role related to those behaviours and that these behaviours were probably more salient in them. I was limited by the organizations in the number of people that I was allowed to choose for in-depth interviews in each department so I stuck to the agreed ranges, which were also reasonable for the amount of time I was going to have to finish my research project.

When choosing the samples, I also looked at the fact that some of the participants showed high degrees of connectedness in more than one group of behaviours and that some of the participants had high degrees of outbound connectedness but very low degrees of inbound one. This means, that they saw themselves as connected to several people in the network through some group of knowledge-sharing behaviours but the people in the network did not see them as such. I tried to include as many different people in any of the cases described so as to have a variety of views, and I also

included people from different levels in the organizational structure, i.e. not only managers, even when most of the managers were highly connected. The information on the job roles and seniority level (in their organisations) for the participants of the in-depth interviews in both organisations is presented in the tables below.

Organisation X					
HC network (HR Consultants)	Job role	Seniority	MI network (Marketing)	Job role	Seniority
E1	Manager	10+ years	F6	Contributor	3 years
E5	Contributor	2 years	F3	Manager	8 years
E4	Supervisor	4 years	F4	Supervisor	10+ years
E3	Supervisor	4 years	F8	Contributor	2 years
E2	Manager	10+ years	F7	Supervisor	8 years
			F1	Manager	10+ years
			F5	Supervisor	10+ years
			F2	Manager	2 years

Table 3. Job roles and seniority Organisation X (in-depth interviews)

HC Network = Human Resources Experts Centre; MI Network = Marketing Department.

Organisation Y					
AC network	Job role	Seniority	KM network	Job role	Seniority
A2	Supervisor	8+	B1	Director	Less than a year
A1	Manager	5	B3	Supervisor	5
A3	Supervisor	3	B2	Manager	3
A4	Contributor	4	B4	Contributor	6
A5	Administrator	3	B5	Contributor	4
EC network	Job role	Seniority	EC network	Job role	Seniority
C6	Supervisor	7	C9	Supervisor	10+
C12	Contributor	2	C7	Contributor	5
C13	Contributor	1	C8	Contributor	4
C3	Manager	10+	C1	Director	3
C10	Contributor	2	C2	Manager	10+
C5	Supervisor	3	C4	Supervisor	4
C11	Contributor	3			

Table 4. Job roles and seniority Organisation Y (in-depth interviews)

AC Network = Academic Consultancy Department; KM Network = Marketing Department; EC Network = Publishing Department.

In summary, there were three aspects I took into consideration when choosing participants for the in-depth interviews: 1) their degree of connectedness (outbound and inbound) in the networks in terms of their knowledge sharing interactions; 2) the formal organizational level they came from and that there were participants from different areas in each department in the samples; 3) the numbers I had agreed to stick to with the organizations; and finally in a few cases, my impression of their interest and willingness in the research). My final choices are summarized in the tables included in Appendix A.

The data for *inbound degree* and *outbound degree* were also used to analyse centralization in the knowledge sharing patterns shown in these networks. These are discussed in Chapter 4 as a feature of bureaucracy that was reflected in the networks and organisations.

3.5.2.5 Additional features of the networks used in the analysis

Additionally, there were two indicators that I analysed for each network and which will be mentioned in the following chapters. The first one was the *strength* of the links (ties) for each actor. A brief explanation of what was understood by this is the following:

Knowledge-sharing interactions can have different purposes, happen with different frequencies depending on those purposes and involve different types of knowledge than what can be captured in one statement or question and a frequency scale. For example, there are different situations in which people may need to ask for information (of different kinds) in their workplace and they will not necessarily address the same person in every “information-request” situation. At the same time, these situations can arise with varied frequencies and involve different persons in the same network each time. In an attempt to acknowledge this complexity of the phenomenon, in this research, the strength of ties was conceptualized differently than in mainstream network research. In this research, strength was considered a proxy for scope.

As is explained in this chapter, the questions in the first interviews were divided in four groups depending on the type of knowledge-sharing interaction they referred to i.e. asking for work- related information; asking for advice; asking for a different opinion or perspective; and sharing ideas, opinions or experiences. Every group had four questions, which meant that for each group of questions, an actor could be mentioned between 0 and 4 times by another actor. It follows that, if actor A was mentioned 4 out of 4 times in a group of questions by actor B, it meant that he had a (perceived) strong tie with actor B for that specific type of knowledge-sharing interaction/purpose because he had referred to actor B in the four different scenarios that shared the same knowledge-sharing purpose. At the same time, if actor A was mentioned only 1 out of 4 times in a group of questions by actor C, it meant that there was a (perceived) tie for that knowledge-sharing purpose, but this tie was not as strong as the one between actors A and B. Following this logic, I assigned values from 0 to 4 to the ties (in the input data matrices), which transformed the networks, in SNA terms, into *weighted/valued networks*. Still, having information on the strength of the ties in the network was needed, since it gives more material for discussion on the roles the actors play in it and the structure of the network as a whole.

The strength values assigned to ties in the networks were not based on self-reported frequencies of interaction or perceived rank of intensity like is usual in network studies (Marsden, 1990). However, I believe they provided richer information than if for example, I had simply asked people to select a frequency with which they interacted with other actors with a general knowledge-sharing purpose. I also believe this would have been more difficult for participants to do and would have led at least some of them to select answers out of a sensible guess. Instead, having four different situations that referred to the same knowledge-sharing purpose in different situations and not giving people a roster of names to rank or to picture in terms of “frequency of interaction”, allowed respondents to be more natural in their answers (naming people instead of choosing frequencies), think of different, specific knowledge-sharing situations; feel free to give more information on their choices if they wanted to, and recognize the different links they had with different actors in their knowledge-sharing

networks. Further analyses were carried out with the data from these interviews and the results of it will be discussed later on in this thesis.

The second additional indicator I analysed for each participant in the network was *reciprocity* of the ties (links). An explanation of what was understood by this feature is given below:

Questions used to collect data on the relations in a network of actors commonly use nominal or ordinal levels of measurement. Binary answers, Likert-type scales and rankings are frequently found in network studies (Hanneman & Riddle, 2005). In this study, a different approach was taken in the interviews and as can be seen, in the network analysis. At first, when developing the questionnaire to identify the knowledge sharing networks, the existence of a knowledge-sharing link between actors was conceptualized as binary, that is: If the actor mentioned another actor in his answer to a question, then there was a (perceived) link = 1. Accordingly, if the actor did not mention another actor (from the network) in his answer to a question, then there was no (perceived) link = 0

However, these links represented behaviours in interactions that may or may not be reciprocal (in SNA terminology), i.e. Actor A may mention actor B as one he would share his creative ideas with, but Actor B might not mention actor A in return. The link then would be directed from Actor A as the “sender”, to actor B as the “receiver”. If, however, both actors mentioned each other in their answer to the same question, then the link would be directed both ways (reciprocal). In social network analysis terms, this would mean that the graphs representing the networks in this study were directed, and this is shown through lines with arrow heads on one or both ends depending on the direction of the tie (link) in the network maps.

It is important to highlight that reciprocity in this example, and in this study does not mean that actor B acknowledged the link that actor A claimed to have with him/her, but that they both claimed to have the same type of link with each other (both as “senders” or both as “receivers” depending on the question). Similar to other network studies (Reagans & McEvily, 2003) I did not require that participants corroborated a tie

claimed by other actors with them. I believe that often, people are not aware of all the ways in which others see them and how they feel related to them. Thus, asking for corroboration would, in my opinion, talk more about this mutual awareness than of the actual existence of the tie (i.e. the tie can exist without one of the actors being aware of it).

In the example above, if actor A claimed that he approached actor B to share his creative ideas with him, this would be assumed as a tie and be shown as a directed arrow towards actor B on the graph. If, on the other hand, actor B also claimed that he approached actor A to share his ideas with him, then the line (tie) between them would have two arrow-heads, one pointing at actor A, and one pointing at actor B. Both actors could be unaware that the other actor regarded them as a “recipient” of their creative ideas but they may both see each other as such. If this was the case, then for this research, the tie was considered reciprocal.

Reciprocity of the ties is not only observable in the network maps through the direction of the arrows (links) but can also be obtained with SNA methods as a proportion. In Ucinet[®] the programme counts the number of dyads of actors that are connected by a tie (which may or may not be reciprocated) and calculates the proportion of dyads that have reciprocated ties. This is also called the dyad based method. It shows the proportion of connected dyads in the network that are reciprocal.

Given the approach taken to reciprocity in this research, instead of being an indicator of accuracy or reliability in the participants’ claims of the existence of the ties between them (Marsden, 1990), it worked as an indicator of other elements in the links between actors in the network. Based on the work by Linda Molm (2010) on different types of exchange, I think knowledge sharing interactions (at least most of the ones described in this research) share characteristics with the ones called “reciprocal exchanges” in which “actors’ contributions to the exchange are separately performed and non-negotiated” (Molm, 2003 p.3). For example, when one gives a piece of advice to someone, there is usually no bargaining or negotiation in doing so, and you do not

really know if the other person will reciprocate this exchange or how. However, symbolic elements such as trustworthiness and respect for the other can give value to these exchanges (Molm, Schaefer, & Collett, 2007). Thus, the level of reciprocity between dyads in a knowledge-sharing network can be an indicator of the quality of the bonds between the actors and perhaps even tell us something about how they differentiate between different types of knowledge-sharing interactions in their networks. Reciprocity in the knowledge sharing networks will be discussed in Chapter 4. However, a summarized table with figures for it is also available in Appendix B.

Before moving on to discuss the stage of the in depth interviews and collection of qualitative data, it is important to emphasize that the use of social network analysis in this research conforms to its epistemologically interpretive nature. Quoting (Walsham, 2006 p.323) “Quantitative data, from surveys or elsewhere, are perfectly valid inputs for an interpretive study...and they should be considered as part of the possible portfolio of methods for any specific study”. As I mentioned earlier in the chapter, this is not the first study (but is one of the few) that uses SNA as a preliminary state that informs qualitative research. Furthermore, in this investigation SNA was used and its data interpreted in slightly different ways than in traditional SNA research. At all times, the use of SNA was thought of as a way to help in constructing a representation of how knowledge sharing “looked like” in these informal networks, based on the perceptions of the participants of the study. It assumed that the resulting representations were collective constructions based both on the perceptions of the participants and on my interpretation of these perceptions. Additionally, SNA data guided our purposeful sampling strategy when choosing the participants for the in depth interviews, which, as discussed earlier in this chapter, has also been done successfully by other researchers. In carrying out this study using both qualitative and quantitative methods, we follow (Creswell, Shope, Clark, & Green, 2006) and “recognize that it is possible to use an interpretive, critical, theoretical framework within a mixed methods study”.

Going back to the initial use of the SNA data, it is important to mention that during the first stage of data collection, the only analysis carried out with the SNA data was the

one used for the selection of participants. The rest of the analysis was carried out after the in depth interviews were finished.

Once the samples for the in depth interviews were selected, managers and directors were informed (as was requested in both organizations) and participants were contacted to arrange a time and day for the first set of in-depth interviews. The way these interviews were handled and analysed will be discussed as follows.

3.5.3 In-depth interviews

Participants from the sample selected based on the SNA data were contacted and arrangements were made to have in-depth interviews that varied in length from 20 to 75 minutes. A general plan of inquiry was made to ensure that specific themes were covered yet not limiting the interviews to a fixed order or set of questions and giving space for other themes to emerge in the conversation. This type of interview has been called the interview guide approach (Patton, 2002), where topics are planned ahead in potential questions that can be reworded and covered in any sequence needed. It is not as unstructured as an informal conversation but it does have a conversational style and it is flexible. Being a novice researcher, I was worried that I would not cover all the general themes I wanted to with all participants if I chose to use an informal conversation approach in these interviews. I felt more confident knowing that I had thought of potential questions to ask and knew which themes I wanted to cover in all the interviews even when I knew that I wanted to remain flexible enough to adapt to the way the “conversation” flew with each participant.

Therefore, and in preparation for these interviews, I came up with a list of sample questions that related to the issues discussed in my literature review and that I wanted to explore with all of the participants. Theoretically based questions, are designed to give focus to the generation of data and enable the researcher to explore the topic of interest (Yin, 1994). As mentioned before, I chose to use this approach to interviews to ensure I covered all relevant topics but still be free to explore, probe and ask different questions about topics that arouse and which seemed interesting for the research.

The sample questions I prepared were open-ended (see Appendix A). I had them with me, printed in groups on colour cards, during the interviews to help me notice what I had asked and what I had still not covered. I also noticed that many of the interviewees carried notebooks and pens to the previous interviews, expecting to “be given instructions” and were looking at the sheet of paper I had with me with the questions on it. Some of them even asked me if the information they had given me was useful and I thought this meant they were anxious about their “performance” during our interactions and that they would probably be more anxious in the longer interviews. In order to help interviewees feel more relaxed, I turned the cards upside down throughout the interviews even when other (unplanned) questions were being asked to send the message that we had “finished” with the questions in that card so that people felt we were making progress if they needed to. I felt the atmosphere was relaxed in all interviews and many of the participants told me that it was an opportunity for them to “think about something else”. Apparently, after the first interviews, some of them “started thinking” about how they shared knowledge and were happy to talk more about it.

These interviews were also carried out in each of the organizations in a closed, designated office every time except for the times when the participant had an office of his own where we could work. The only people present at each interview were the participant and I. All interviews were recorded with the consent of participants and they were carried out in Spanish.

Along with this first set of in-depth interviews, I carried out an interview with the Knowledge Management team in the business consultancy firm (three people), one also being a senior partner in the organisation, as well as an interview with the country director of the publishing organization. The dynamics for these interviews were the same as above but with a different set of questions prepared for each interviewee, given their different roles in the organisations.

Throughout the time these interviews were being carried out, I took notes on my impressions and listened to the recordings to get an idea of what themes were emerging and how I was carrying out the interviews. This enabled me to reflect on my behaviour during these interactions, and helped me make some changes to improve the quality of the subsequent interviews. I will further discuss this and other practices carried out in the reflexivity section of this chapter.

3.5.4 Unexpected changes during data collection

The original research design involved follow-up interviews that were aimed at further investigating emerging themes in the previous stages of data collection. At first, both organisations agreed to these interviews. However, a couple of important organizational changes in the business consultancy firm limited the access already granted and just a couple of days before the first interviews were carried out, I was informed by my gatekeeper that those final interviews were not going to be allowed by the new partner in charge of the two participating departments in my study (i.e. Marketing and Human Resource Internal Consultancy) and that there was no possibility of negotiating this decision.

This was not the only limitation I faced with this organization once access had been granted. In fact, I had asked to interview another group of workers from the Consultancy Division of the company, who carried out a formal role of knowledge brokers in their project teams. This access had also been granted initially until the “ownership” of the Consultancy Division changed and I was informed by my gatekeeper that under the new management, access to personnel in the Consultancy Division was basically impossible unless I signed a non-disclosure agreement that was so limiting that would make it useless to interview this group of employees. As Hammersley and Atkinson (1995) note, high-level gatekeepers can direct researchers only to some (safe) networks in the organization and prevent that they contact sensitive ones.

I then asked if there was any possibility of negotiating this agreement with the new management of the division, to which my gatekeeper said that there was none and that it was better that I carried out my investigation “keeping a low profile” with the two departments that I already had access to. I decided to do so and later found out about a new restriction to interview participants only twice and not three times as was agreed in the beginning. Gatekeepers can help or hinder research depending on their thoughts about the research and their approach to the interest of the people under their charge (Reeves, 2010). However, in this research I understood that the scope of the access I was being granted in this organization was based on the influence and power of my gatekeeper, and that any change to his position in the firm would imply a change to my research. Nevertheless, I decided to work with the access I was being offered and took field notes of the events, as they happened to reflect on them later on as part of the data collected for this case.

On the other hand, access granted in the publishing company was not only firm, but it even grew after I carried out the first interviews with two departments (i.e. marketing, academic consultancy). At first, a country director granted me access to two departments in the organization. However, this gatekeeper was promoted and moved to another country a few months before the data collection started. I then met with the newly appointed country director and the possibility of getting access to a third department (i.e. publishing) was made explicit in this meeting. I only had to wait until the new director of the department “settled” to begin data collection with them. I decided to take this opportunity and included the publishing department in my research. It is worth mentioning, that both, the former and the new country directors expressed great interest in including the sales department in my study, which I had to turn down given the fact that employees in this department are scattered all over the country, which would have made research unfeasible in my situation: lone researcher, budget-limited, time- constrained. Additionally, I was not convinced that work in the sales department could be categorized as knowledge work. However, as I interviewed participants in the remaining three departments, I got a clearer idea of the basis for this interest in including the sales department in an investigation about knowledge

sharing. I also took notes of this to reflect later on as part of the insights aroused from this case.

Because access in the publishing company was not limited, I carried out the final interviews with the sampled participants to further analyze themes from the previous interviews, as well as new themes that had emerged in them. These interviews also followed the “interview guide approach” (Patton, 2002) and varied in length from 15 to 70 minutes. The sample questions that guided these interviews are available in Appendix A. Additionally, I carried out non-participant observations of formal meetings in three of the five departments participating in the study, and observed everyday activities taking field notes in both sites from the beginning of the data collection.

After I finished the first batch of in depth interviews, I left some time for transcription and carrying out an initial analysis of the data that would inform further interviews that I carried out in the organization where access was maintained as agreed initially (the publishing company). It was during the data collection, and particularly during “pauses” between interviews that the emergent flexibility and messiness of qualitative research was more evident to me. As Margrit Schreier (2012, p.24) puts it: “You continue to adapt and change all aspects of your research as you are collecting and beginning to analyse your data”. I was very disappointed not to be able to go back to the field and further interview the people at the business consultancy firm, after my initial analysis, I found that there were more things to look at and more questions to ask. However, I still had the participants from the publishing company, so I worked out some sample questions on the emerging themes and issues I spotted during my initial analysis; I went out in the field again and did a second set of in-depth interviews with them. This time, I did not use cards but I did have my sample questions (see Appendix A4) on a sheet of paper. Again, these interviews were flexible enough for me to re-word questions, probe, explore and ask different questions if needed.

3.5.5 Non-participant observations

Throughout the time for data collection, I also carried out non-participant observations of formal meetings in three of the four departments participating in the study, and observed everyday activities between interviews taking field notes in both sites from the beginning of the data collection.

The meetings observed were carried out in one of the networks in Organisation X (the consultancy firm) and in two of the networks in Organisation Y. Interestingly the larger networks in both organisations were the ones, which presented more obstacles to be observed in meetings. Given that both organised work in several clusters, each with their own schedule, it was easier for managers and supervisors of each cluster to either ignore my requests for information on a time and date to observe a meeting or to respond to my requests “too late” (e.g. sending me an email just before the meeting started and while I was not in the site). I raised this issue with the director of one of the departments where the network was embedded and with the gatekeeper of the other organisation. Both claimed that people were very busy and managers/supervisors often set up meetings on the go. This was confirmed in the in depth interviews for a few of the clusters but not for the majority. Also, the gatekeeper in Organisation X had warned me that there was an “issue” with power and suspicion in the MI network, which could at some point, make my data collection harder.

Still, from the few observations I carried out and the field notes I took I extracted some data, which helped me get a better idea of the dynamics of each network. Also, the formats and dynamics of the meetings I observed reinforced some findings of my analysis in terms of hierarchy, distribution of information and power in the networks studied.

Once the data collection was completed, I moved on to continue my analysis, which now included all the qualitative data collected for this research. I will discuss this stage next.

3.5.6 Analysis of qualitative data: techniques and procedures

After all interviews were verbatim transcribed, a concept-driven code was created, based on the questions used in the interviews to apply to the transcripts and carry out cross-cases and in-between cases analyses. This coding was aimed at reducing my data and helped me get a descriptive analysis of what “was there”. According to Schreier (2012), there are two different types of coding in qualitative research: coding for data reduction and coding as a conceptual device. Coding for data reduction is purely descriptive and it works by filing pieces of the data under labels, reducing large amounts of material to a few general terms. “It can help the researcher get a first impression of what is there in the material and this way, it can be a useful first step and help the researcher prepare for more in-depth conceptual analysis. (p. 38)”

On the other hand, and following the same author, “coding as a conceptual device questions your data, opening up new meanings in it (p.39)”. This type of coding is a way of relating your data to concepts and it aims at generating theory. Because it is an inductive, iterative method, you have to go through your material many times and continue to revise your codes, and your coding as new ways of looking at your material emerge until you arrive at your final code (Schreier, 2012).

Being inductive, this second stage of my coding was data-driven and it allowed me to detect broader themes that emerged from the data, which were not clear at first sight, during my previous coding. These are the themes that will be discussed in the findings chapters of this research. During both stages of my coding, I used the notes from my field observations and my reflexive journal to analyze my categories, narrow my themes and confirm them. I also used the analysis of the SNA data to see if findings were consistent with the stories from the qualitative data and how these data complemented each other e.g. how the patterns of knowledge sharing observed in the SNA analysis were explained by the findings of the qualitative data.

In the following sections, limitations of the research methodology, ethical considerations, reflexivity and my role as a researcher in this investigation will be discussed.

3.6 Limitations of the methodology and how they were handled

This research is based on individuals' accounts of their lived experiences of the knowledge-sharing phenomenon. Being so, it fits the general description of a phenomenological study (Creswell, 2007). One of the strengths of interpretive research is that it provides a deep understanding of a phenomenon, as experienced by several individuals (Creswell, 2007). However, like any other qualitative approach to research, it presents some limitations. I will discuss some of these in the following section.

3.6.1 Ethical considerations

Given the nature and characteristics of qualitative research the ethical problems and potential dilemmas that arise within it are different to those in quantitative research. Ethical considerations may arise regarding issues such as deception, the propriety of intervention, possible harm to participants, contract obligations, informed consent and social rights and wrongs (Soltis, 1989).

Some ethical issues also mentioned by Creswell (2007) and that I consider relevant to this research are: informed consent procedures; deception or covert activities; confidentiality toward participants and anonymity of participants. To address these issues, I provided all participants with information about the research in the invitation letters as well as in the informed consent letters (both letters are included in Appendix A). Additionally, questions about the research were addressed before starting the first interviews. Written consent was obtained from all participants in the study. Furthermore, no covert activities took place; confidentiality was guaranteed to both participants through the informed consent letters and to organisations as well.

3.6.2 Reflexivity

The previous are all considerations related to what Guillemin & Gillam (2004) classify as procedural ethics. However, according to these authors, there is another dimension of ethical dilemmas that is related to practice itself, that refers to day-to-day ethical issues in research, which often cannot be anticipated and for which reflexivity is a key concept. These authors propose reflexivity as a tool to aid ethics in practice in addition to leading to more rigorous research. By being reflexive, the researcher can become aware of how his research might affect the research participants and think about how to be prepared to respond in unforeseen situations where his ethics are of key importance during the process of the investigation (Guillemin & Gillam, 2004). As Pillow (2003) says it: “reflexivity becomes important to demonstrate one’s awareness of the research problematics and is often used to potentially validate and legitimize the research precisely by raising questions about the research process” (p. 179)

Regarding the use of reflexivity both as a tool to address ethical dilemmas and to ensure rigor, I kept a reflexive journal throughout the research. Reflexive journals are often used in qualitative research as a mean to make reflexive notes to one self about what is going on in it. Keeping and using reflective journals enables the researcher to make his experiences, opinions, thoughts, and feelings visible during the research process (Ortlipp, 2008). Furthermore, the use of reflective writing (e.g. through reflexive journals) within the research process contributes not only to the trustworthiness of the study, but it facilitates creativity, critical thinking, analysis and innovative discovery (Jasper, 2005).

The first aspect that I reflected on while carrying out this research was my interest in the topic: *How has my personal history led to my interest in this topic?* I started this research with the idea of investigating communities of practice (CoPs). Much of this interest was encouraged because in my professional life, I once belonged to such a group. I later decided that CoPs would not be the organisational group I would do research on but I maintained my interest in the topic of knowledge sharing, focused on informal knowledge sharing networks. Aside from my experience, there are certain

beliefs and values that I considered important to reflect on: *What are my personal value systems and what areas do I know I am subjective about?* Based on my experience as a member of a CoP, I was completely aligned (and still am) with the view of these communities as spontaneous, informal, voluntary and above all, self-managed groups that one can read in Etienne Wenger's (1998) book "Communities of Practice: Learning, meaning and identity". One of my strongest beliefs about CoPs is that the best thing managers can do to manage them is precisely "nothing". I knew that this belief would influence my approach to the management of knowledge in the organisation in general, and it did. Given that I wanted to carry out my research in Mexico, my home country, and that organisational research in Mexico is not common, I assumed that access to organisations would present more challenges since the management would want to "control" what it was that I wanted to investigate, how and who exactly was going to be involved. These assumptions talk about my preconceptions of the type of culture I was going to find in organisations operating in Mexico. In a way, I was anticipating that if access was granted, gatekeepers would want to take as much control of the investigation as they could. However, I was still disappointed when suddenly the terms of my access in the consultancy firm changed. I mentioned this in the following extract of an entry of my reflexive journal:

The case of Organisation X is getting complicated... the Marketing director told me that they have a feud system where each partner maintains and defends his power sphere. Access and data collection have been complicated... I've found out that they want my study to be handled with "the most discretion" and trying not to generate suspicion that I am a "spy" of my gatekeeper... It's been a month and a half now and they've suddenly asked me to cancel the third stage of interviews (because it takes too long from the employees' time). I'm gutted. I don't think this was about time, I think it was about power... (Reflexive journal entry, August 15, 2012)

I still wanted to see if within formal structures (e.g. departments), people would manage to maintain informal knowledge sharing networks and if they did it defying the formal structure of their organisations.

During data collection, and like other students doing qualitative research for the first time, I was overwhelmed by the amounts of data being generated. Additionally, I was a lone researcher and had to analyse these data on my own. I received constant support from my supervisors, which was reassuring. Still, being on my own in the field sharpened my awareness of the importance of the data collection phase. In fact I had hints of some of the findings of this research during data collection and I later confirmed these in the iterative analysis. For example, the prominence of managers and the centralisation of information in both organisations were suggested during the interviews and later confirmed in the network maps. The following quote of my reflexive journal talks about this:

“A remark by one of the managers in HC network is that because they have a high turnover rate, they must delegate responsibilities and give full access to information to all employees. They must ensure that they don’t depend on one person that holds it all. However, she seemed to be that person in her team. Something similar happens in Organisation Y, with the manager in AC network. She’s a central person in her network and so is the supervisor in KM network. It would be interesting to see how aware they are of this role and how much this reflects the reality lived in their teams” (Reflexive journal entry, August 25th, 2012)

Talking about reflexivity highlights the need for me to look at myself and discuss what I regarded as my role in this research and the basis for my thinking.

3.6.3 Role of the researcher: positionality

I agree with the Kantinian view that any observer, implicitly or explicitly, influences what is observed (Johnson & Duberley, 2000). In line with the philosophical approach taken in this research, I also recognize that my own background shaped my interpretations, keeping me in an hermeneutic circle (Denzin, 1989) and that I needed to “position” myself in this research to acknowledge how my interpretation flew from my own experiences (Creswell, 2007). Also, because my research was mainly interview-based with some non-participant observation, I acknowledge the fact that I

was the “key instrument” of data collection and the main organizer and interpreter of the data (Creswell, 2007). I am hopeful that my efforts in maintaining a reflexive orientation throughout the research activities and aiming at total transparency in the reporting of this investigation will help the reader believe its results and my conclusions are trustworthy.

In order to further discuss my role as a researcher in this study, I will begin talking about positionality, The concept of positionality includes the researcher's given attributes such as race, nationality, and gender and it is also shaped by factors such as the researcher's personal life history and experiences (Chiseri-Strater, 1996). I believe my personal characteristics and background were relevant throughout this research and from the very moment of its design.

Discussing positionality I aim to answer the following question: How does my gender/ social class / ethnicity / culture influence my positioning in relation to this topic and my informants? In qualitative research, “the more one is like the participants in terms of culture, gender, race, socio-economic class and so on, the more it is assumed that access will be granted, meanings shared, and validity of findings assured” (Merriam et al., 2001 p.406). I too assumed this to be true for myself, and this is one of the reasons why I decided to carry out this research in my country and mother tongue.

Importantly, the access granted meant that I was going to interact with some people that I had known outside the research and a couple that I had worked with intermittently in the past in one of the organizations. I found this last condition mostly beneficial in terms of establishing rapport, trust and openness both in the interviews and observations. However, it did make me feel at times that some interviewees expected responses and reactions from me that were based on the fact that “they thought I knew” and I did not want this to affect the quality and depth of explanations and narratives I was being given. Thus, I often had to play with this assumption depending on how interviews were developing. If I considered explanations to be detailed and full, I thought this assumption was not very problematic. However, I

sometimes felt that I had to highlight the fact that “I did not know” in order to get fuller explanations and more detailed narratives from some participants.

In general, I believe that my position was fairly consistent in the business consultancy firm, where I had not worked and did not know anyone but my gatekeeper, whom I knew once access was granted, some months before the actual data collection started. However, the fact that positionality is not static and that positions of the researcher can shift throughout the research (Merriam et al., 2001) was evident in the publishing company, where I noticed differences between the three networks and even among participants that I believe were influenced by how “familiar” I was to them and how much of an insider I was for them. It is important to clarify that I never considered myself as a “full insider” when collecting data at the publishing company. In fact, even when I had worked for the company in the past, I was never a full-time employee and only had contact with some people at the office on specific occasions like training sessions, or special meetings where external collaborators (i.e. my case) were invited. Furthermore, I was living in England and only spent time in both organizations offices in Mexico while I was collecting data and with the purpose of collecting data. Thus, most of what happened “inside those walls” was in fact unknown to me and I was “a stranger” for most of the participants in the research at least at the beginning of it.

Another aspect of my role as a researcher that I would like to discuss briefly is that of power and the dynamics of it in my relationship with participants in the research. The question to be asked is: Where is the power held in relation to my research project? For example, some power emanated from my position as a researcher “authorized” by someone in the higher levels of the organizational hierarchy (i.e. the country director in one company and a senior partner in the other). Nevertheless, participants somehow negotiated this “authorized” power when they determined where and when the interviews were held and of course how much they shared. This power negotiation was more evident with some middle managers I interviewed in both organisations. There were other stages in the research in which participants and I negotiated power. Power relations change throughout the different stages in the research process (Karnieli-Miller et al., 2009) and even when the researcher is in control of elements

such as how much information to give participants about the research or how to analyse and report the data that was collected; participants are also in control of what and how much they share with the researcher, for example in interviews (Bravo Moreno, 2003).

Acknowledging the potential ethical dilemmas and reflecting on my role as a researcher are only part of the discussion on the quality of this research. Next, I will discuss issues related to rigor, or like Lincoln (1995) and Guba (1981) name it, trustworthiness in this investigation.

3.7 Evaluating rigour

As Sandberg (2005) claims, one of the most significant methodological and epistemological confusions in management and social sciences research in the past three decades is how, and to what extent, knowledge produced within interpretive approaches can be justified. According to this author, one of the main problems for judging interpretive research is the use of positivist criteria, which are evidently not in accordance with the underlying ontology and epistemology of interpretive approaches. Basically, he argues that it is inconsistent to try to justify knowledge produced within the interpretive tradition, based on an objectivist ontology and epistemology. This is because advocates of interpretive approaches believe that it is not possible to produce a fully objective description of reality since our descriptions of it, are always shaped by our specific historical, cultural, ideological, gender-based, and linguistic understanding of reality (Johnson & Duberley, 2000).

However, some researchers have tried to develop criteria for ensuring the quality of qualitative research and within this, of interpretive research, sometimes by adapting the understanding of the terms generally used in judging positivist research (Sandberg, 2005). According to Lincoln (1995, p.278), nearly all of these criteria are relational, which means that, "they recognize and validate relationships between the inquirer and those who participate in the inquiry", which is a basic difference with more positivist research, where the researcher is "a detached observer" of the phenomenon and

participants in the research. Particularly, Guba (1981) proposed a set of criteria to judge the quality of the process of qualitative research, namely: trustworthiness.

The aspects addressed with the trustworthiness criteria can be compared to the traditional ones from the positivist paradigm, yet more useful and aligned with the epistemological basis of naturalistic inquiry (Guba, 1981; Shenton, 2004). I will discuss these aspects / criteria and the strategies I used to address them in this investigation as follows:

3.7.1 Truth value /Credibility

Corresponding to internal validity in the positivist paradigm, meeting this criterion refers to the need for demonstrating that the picture of the phenomenon under study that is being presented is congruent with reality.

According to Silverman (2000), validity (in positivist terms) is another word for “truth”; which resonates with Creswell and Miller (2000) and Schwandt's (1998) view of validity as how accurately the account represents participants' realities of the social phenomena and is *credible* to them. In agreement with this conceptualization, and the credibility criterion of Guba's set, for this thesis, I used some procedures based on the framework proposed by Creswell and Miller (2000), which presents a range of validation strategies that are aligned with the different lens used by the researchers and the main paradigms that guide qualitative research. The following table summarizes the elements of Creswell and Miller's framework that I chose to use and apply to my research. It does not include all of the strategies covered by that framework but only the ones relevant to this research.

Lens	Strategy	Paradigm	Description of the strategy	When did I do this
Of the researcher	Disconfirming evidence	Constructivist	The investigator first establishes the preliminary themes or categories in a study and then searches through the data for evidence that is consistent with or disconfirms these themes.	During the content analysis of the data.
	Researcher's reflexivity	Critical	The researcher reports on personal beliefs, values, and biases that may shape her inquiry to allow readers to understand her position, and then to bracket or suspend those researcher biases as the study proceeds.	During data collection keeping a reflexive journal and throughout the investigation by remaining reflexive.
Of the participants	Thick descriptions	Constructivist	The researcher describes the setting, the participants, and the themes of the study in rich detail.	In the writing up and in my observation notes.
	Peer debriefing	Critical	This is the review of the data and research process by someone who is familiar with the research or the phenomenon being explored. In my case, my supervisors.	During the analysis with my supervisors.

Table 5. Elements of Creswell and Miller's (2000) framework used in this research

3.7.2 Applicability /Transferability

This aspect can be compared to external validity or generalisability in positivist research, and refers to “the degree to which the findings of the research are applicable in other contexts or with other participants” (Guba, 1981).

As stated by Silverman (2000), generalizability is a standard aim in quantitative, positivist research and is normally achieved by the use of statistical sampling procedures that give the researcher confidence about the representativeness of his sample, therefore allowing the making of broader inferences about the total population represented. However, this is not a way in which qualitative researchers (if) interested in making some form of generalization can address this issue. Moreover, qualitative researchers often study only a small number of individuals or sites, using theoretical or purposeful sampling, and rarely make explicit claims about the generalizability of their accounts (Maxwell, 1998). Qualitative research is conducted when we want to provide a rich, contextualized understanding of some aspect of human experience through the intensive study of particular cases; thus the intent in qualitative research is not necessarily to generalize the information but to elucidate the particular (Creswell, 2007). This aim is by no means less useful since the fact that “the knowledge cannot be formally generalized does not mean that it cannot enter into the collective process of knowledge accumulation in a given field or in a society... and help cut a path toward scientific innovation” (Flyvbjerg, 2006).

In turn, and in order to meet the applicability criterion, what I have tried to do is provide extensive detail of the context of the research in the writing of this thesis, so that readers can decide whether such environment is similar to another one with which they are familiar and if the findings can sensibly be applied to that other context. This is aligned with one of the strategies suggested by Guba (1981) that address issues of transferability and which, was carried out in this research, namely, collecting thick descriptive data (and developing thick description).

Another strategy suggested by the same author is the use of theoretical / purposive sampling. Silverman (2000) also proposes purposive sampling as an alternative strategy to address this aspect. In purposive sampling, the researcher selects individuals for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study (Creswell, 2007). As outlined earlier in the description of the study, the basic criteria for all the participants to be included in this research was:

- That they were Mexican or had worked and lived in Mexico for at least one year to reduce cultural differences between them and the rest of the population in the investigation.
- That they were full-time employees at one of the organizations participating in this research.
- That they were members of one of the departments participating in the study and carried out knowledge work. This last criterion was not used for the gatekeepers, who did not work in the participating departments.

Additionally, the sample for in-depth interviews in studies 2 & 3 was selected via social network analysis on the basis of their positions in the knowledge-sharing network. The selection criteria will be further discussed in the next section of this chapter.

3.7.3 Consistency /Dependability

The dependability criterion, which corresponds to the reliability criterion in traditional research, refers to the possibility that the findings are consistently repeated if the study was replicated with the same or similar participants in the same or similar context by another investigator (Guba, 1981). So long as variance is trackable in replications, this criterion is suitable to naturalistic inquiry.

In interpretive research, although the main question of validity relates to the truthfulness of interpretations, the principal question of reliability concerns the procedure for achieving truthful interpretations (Sandberg, 2005). According to

Sanberg (2005), researchers must demonstrate how they have controlled and checked their interpretations throughout the research process from formulating the research question, selecting individuals to be studied, obtaining data from those individuals, analysing the data obtained, and reporting the results.

Consistency / dependability in qualitative research can be enhanced by the use of detailed field notes, good quality recording of interviews and accurate transcriptions of the recordings (Creswell, 2007). I used all of these techniques in this investigation. Recordings and transcripts are available and I have included a couple of translated transcripts in the appendix for reference. Sandberg (2005) also suggests that one appropriate criterion of reliability in researching lived experience is the researcher's interpretive awareness, which is exercised by acknowledging and explicitly dealing with his subjectivity throughout the research process. This can be done through the exercise of reflexivity. Which, like I mentioned earlier, also did by keeping a reflexive journal.

3.7.4 Neutrality / Confirmability

This is comparable to the objectivity criterion in positivist research, and refers to the degree to which the findings of the research are not a result of the inquirer's biases, motivations, interests, perspectives and so on (Guba, 1981). Case studies in particular, have been mistakenly claimed to maintain a bias toward verification, being prone to confirming the researcher's preconceived notions because, like other qualitative research, it allows more room for the researcher's subjective and arbitrary judgement than methods based on the traditional paradigm (Flyvbjerg, 2006).

To meet the criterion of neutrality, the aim of the naturalistic researcher is to demonstrate that the findings in the study in fact emerge from the data. Some of the steps to do so as suggested by Guba (1981) are: doing triangulation (e.g. through different data collection methods) and practising reflexivity. Given that most of my data came from interviewing, I mainly practiced reflexivity to ensure neutrality.

However, I did some triangulation with the data from my non-participant observations yet my main data collection method was interviewing.

I am confident that having engaged in different strategies to ensure trustworthiness throughout this research project, its results will be judged to a high degree as plausible (credibility), context-relevant (transferability), stable (dependability) and investigator-free (confirmability).

3.8 Conclusion

In this chapter the researcher's ontological and epistemological views have been presented. The choice of the methodological stance and research strategy in relation to those views and the topic of interest have been presented and discussed. I have also tried to give a detailed account of the procedures followed during the research and to justify my choices for the methods used. In the next chapters the empirical data will be analysed and the findings will be discussed.

CHAPTER 4: BUREAUCRACY IN KIFS AND KNOWLEDGE SHARING

4.1 Introduction

This investigation aimed to answer two research questions, which target knowledge sharing in knowledge sharing networks in KIFs: the first one, *how do individuals in knowledge intensive firms (KIFs), understand and enact knowledge sharing networks within their departments?, What enablers and barriers do they encounter to share knowledge in these networks?* And the second one, *how does the context of these organisations contribute to these understandings?* The central theme of this chapter deals mainly with the second question: how the context of the participating organisations shapes and is shaped by knowledge sharing and the understanding of the knowledge sharing networks studied within them.

In particular, this chapter presents data to explain how some elements of the context, i.e. characteristics of the structure and organization of the participating companies in which these organizations are embedded (Mexico), influence the patterns of knowledge sharing represented by the knowledge-sharing networks enacted by employees in the participating KIFs. In order to do so, it uses data from both, the standardized open-ended interviews, analysed using social network analysis, and the in-depth interviews, where this influence is reflected in the participants' narratives about knowledge sharing in their organisations.

Organizational structure has been frequently looked at in organizational research. Jacobides (2007 p.457) claimed that, "organizational structure provides the frames through which individuals see their world"; also, "it determines which individuals participate in particular decision-making processes, and thus to what extent their views shape the organization's actions". Researchers have also been interested in exploring the impact that organisational structures have on processes like learning at work, by examining such processes from the experiences of employees (Ashton, 2004). This is concordant with the importance given to organisational structure in this

research. However, the position of this investigation is not deterministic but one in which both structure and agency interact to shape social actions and interactions, always regarding the human being as a reflexive agent, able to choose and make a difference but within particular contextual constraints.

Additionally, the relevance of the wider context in organizational research has been acknowledged before, since “...the common demands (of research) for clean (read: simple) models do not always fit with the messy reality of contemporary work and organizational life”(Rousseau & Fried, 2001).

In what follows, this chapter aims to show how in the two discussed cases, organizational structure guides employees in the way knowledge and information are distributed, how and who they should share knowledge and information with, thus influencing the way they understand and enact knowledge sharing in their knowledge sharing networks. At the same time, this enactment of knowledge sharing serves to reproduce the organisational structure in a recursive relationship through the same patterns of knowledge sharing that are influenced by it.

In the first section of the chapter, I will discuss the post-bureaucratic structure, some common assumptions about KIFs having post-bureaucratic structures and why these do not apply to the KIFs studied. After that, I will discuss the prevalence of bureaucratic organisations. I will talk about the wider context of these companies which might be expected to encourage and maintain bureaucratic structures and ways of organizing, which in turn are reflected in how knowledge sharing happens and is understood in both organisations studied.

In particular and because of the structural characteristics shown in the data by both participating organisations, the chapter continues discussing the ways in which work is organized in the departments studied, along with the results of the SNA interviews that shed light on bureaucratic attributes (centralisation and low integration) on the patterns of knowledge sharing represented in each network.

In the second part, I will discuss the bureaucracy type, its elements and a type of attenuated bureaucracy that both organizations to fit in. I will exemplify how specific elements of the bureaucratic type and the attenuated bureaucracy emerged in the accounts of the participants of this research. Last, some conclusions are drawn before moving on to the next chapter.

4.2 Post-bureaucracy and the participating KIFs

Modern organizational types have been of the interest of researchers for the last 30 years or so and *post-bureaucratic* has been one of the most frequently used labels to refer to them (McSweeney , 2006). “The most widely-cited definition of the post-bureaucratic organization was provided by Heckscher in 1994” (Hodgson, 2004 p.83) and it is basically a definition of what a bureaucratic type is not. Based on Heckscher’s ideal type, some important shifts from the bureaucratic organisation, that are particularly relevant to this research, (because our data did not show them as relevant in the organisations studied) are: post-bureaucratic organisations base their decisions on dialogue and consensus rather than authority, which would mean that the power distribution is decentralized; they are organized as a network of functional relationships instead of a hierarchy with friendship groupings; they have open and permeable boundaries instead of fixed impermeable ones; they share the strategic information throughout the organization instead of monopolizing it at the top of the hierarchy; and also, people are influential based on their personal qualities and not on their formal position in the organisation (Hodgson, 2004).

Researchers have debated the origins of post-bureaucracy. On the one hand, authors like Alvesson and Willmott (2002 p.621) agree that post-bureaucracy emerged because ‘established bureaucratic controls have been found insufficiently responsive and adaptable to intensifying competitive pressures’. On the other hand, authors like Grey and Garsten (2001), see the emergence of post-bureaucracy as a discourse promoted by management gurus and academics; an anti-bureaucratic movement which claims that the world is changing at a speed which was unseen before due to globalization, increased competition and the use of technology and that organisations must adapt to

these changes if they want to survive. As Grey and Garsten claim (2001 p.237) this discourse is simultaneously anxiety provoking for organisations and a comforting utopia for employees. As Hales (2002) argues, this story has served ideological purposes that encourage drastic cost-driven restructuring and corporate downsizing. One might think that Grey and Garsten's argument is too sceptical but the fact is that the claim that bureaucracy has been completely replaced in modern organisations is highly contested nowadays (Höpfl , 2006; McSweeney , 2006; Courpasson & Clegg, 2006; Du Gay, 2005) and on the contrary, the persistence of bureaucratic practices and ways of organising in modern organisations has been proposed through the identification of hybrid organisational forms (D. Courpasson, 2000; Hales, 2002; Robertson & Swan, 2004; Vaast, 2007).

Regarding KIFs, Kärreman, Sveningsson and Alvesson (2002) claim that it is often assumed that Knowledge Intensive Firms (KIFs) are exemplars of post-bureaucratic structures, at least in that they move away from bureaucratic characteristics and have become flatter, more networking, and more flexible organizations. Additionally, Alvesson,(2004, p.23) also claims that, "many knowledge intensive organizations deviate more or less sharply from bureaucratic principles". However, researchers have also questioned the assumption that KIFs and the way they organize work are completely non-bureaucratic (David Courpasson & Dany, 2003; Hodgson, 2004; Kärreman et al., 2002; Robertson & Swan, 2004) and some others, like McSweeney (2006, p.24) even claim that: "there are few if any identifications of post-bureaucratic organizations in the literature". Following this claim, and given the data in this research, I will discuss the prevalence of bureaucracy, particularly in the organisations studied in the following sections

4.3 The prevalence of bureaucratic organisations

The relevance of discussing the prevalence of bureaucracy in the participating organisations and the way they organise work is given by the fact that KIFs are one type of organisation that has been depicted as exemplar of post-bureaucratic work. For some time now, researchers have even claimed that KIFs represent a form of

“operating adhocracy” (Winch & Schneider, 1993, p.935). Adhocracies are in many ways opposite to bureaucracies. They are open systems, which are flexible and adapt to their environment (Miller, 1990). However, this research is aligned with researchers like Courpasson and Clegg (2006), who question this assumption. Courpasson and Clegg (2006) even claimed that: “...if the core political and moral principles of bureaucracy have not been fundamentally changed, we can witness a significant softening of its administrative principles and systems... ” (p. 320) in what these authors called “soft bureaucracy”.

Moreover, the transformation of a bureaucratic organisation into a post-bureaucratic one can hardly be simple or straightforward. Even if the organisation is knowledge based which would allegedly demand that its organizational form (structure) changes (Wang & Ahmed, 2003), this does not necessarily mean, that it will, or that it is by definition organised as post-bureaucratic. Additionally, and as mentioned before, an assumption of this research is that organisational structure, together with agency, shapes the actions and interactions of people in the organisation. Because knowledge sharing is a social action embedded in social interactions, it is thus an arena where organisational structure is both reflected and reproduced. Thus, discussing structure is key, to understand knowledge sharing in the organisational context.

Aside from the organisational structure, this research acknowledges the relevance of organisational culture and the wider context (e.g. national context) in the promotion of specific ways of organising, such as the bureaucratic one, influencing knowledge sharing in the organisations. The proposition this chapter led me to is that: being an organisation which is embedded in a context that could be encouraging bureaucratic structures, facilitates the maintenance of bureaucratic practices, which in turn has an impact on how knowledge sharing networks are enacted and understood by the employees. This happens regardless of the fact that the organisation is knowledge-based or that its knowledge intensiveness demands changes in the way it organises work. In theory, this can give rise to tensions given that this type of organisations might sooner or later need to change to a more flexible form and a less hierarchical structure. The nature of the work they perform and the need for better knowledge

sharing, creation, innovation, as well as the difficulty to retain their knowledge workers could push for important changes in the way these companies are organised and how they work. However, the organisations where this research was carried out did not seem to be implementing any initiative or strategy that was geared at changing their organisational structure. It was perhaps just more comfortable to do things the way their context encouraged them to.

In this research, the prevalence of a bureaucratic structure was reflected in the patterns of knowledge sharing mapped out in the knowledge-sharing networks of the participating departments. In the following section, I will discuss data from the standardized open-ended interviews to exemplify this. The data was analysed using SNA (Social Network Analysis) methods, a process which I explained in the Methodology chapter. Also, the ways in which work is organized in the departments studied will be discussed.

4.4 Bureaucratic structure and the patterns of knowledge sharing in the knowledge-sharing networks

Researchers have often categorized organizational structure into three elements (Chen & Huang, 2007): *Formalization*, which refers to the degree to which jobs in the organization are standardized and the level to which the employees behaviour is guided by rules and procedures; *centralization*, the degree to which decision making lies in the higher levels of the hierarchy and *integration*, the degree to which different areas of the organization work inter-relatedly. The first two, following (Rapert & Wren, 1998), are very common in structural frameworks that investigate organizational structures. However, these authors also acknowledge *communication* as an important structural facet that has been looked at by different researchers.

In the two cases studied, information on these different elements of the structure emerged when employees discussed the way knowledge interactions happened in their departments. For example, the degree of *centralization*, in this case, of knowledge and information can be seen in the relevance that specific members of each department have in the knowledge sharing interactions participants talked about.

These were often the people at higher hierarchical levels in the departments: managers and supervisors. These are also the people with more access to information and decision power, due to their position in the organizations.

The concept of *centralization* will be the first one discussed in the analysis of the data that will be presented below, to consider the nature of the knowledge sharing patterns in the knowledge sharing networks studied.

4.4.1 Analysis of SNA data

To begin with the presentation of the SNA results, I will focus on the concept of *centralization* (of information and knowledge) as an element of bureaucratic ways of organizing. The indicator used to discuss the degree of centralization of the information in this research is degree of centrality in Social Network Analysis. I have explained the methodology used to calculate the degree of centrality (inbound and outbound) in the previous chapter (Methodology) as well as the different knowledge sharing purposes (situations) included in the questionnaire used in the SNA interviews: Asking for work-related information; Asking for advice on work-related matters; Share one's ideas, insights, experiences or opinions; and Asking for an opinion or a different perspective.

All the summarized tables with the results for the types of degree of centrality measures I computed for each network and knowledge sharing purpose can be found in Appendix B. In this section I will mainly be referring to results from the specific actors of the sample selected for further interviewing which are needed for discussion and consideration in relation to the views expressed by participants in the in-depth interviews. Those results present only the figures for degree centrality that were above the mean in each network; where the results from the sample of selected participants can be found, along with additional selected figures that will be relevant in the discussion.

For each network four different tables of degree centrality were produced (one for each knowledge-sharing purpose). However, results were very similar in terms of who led the rankings (i.e. appeared as more relevant), which, in the cases studied, were the managers and supervisors in the different networks. This strengthened the idea that bureaucratic elements, such as the *centralization* of information were reflected in the role that hierarchical positions had in the patterns of knowledge sharing in the networks studied. For the sake of clarity, I am using illustrative examples from each organisation and referring to the tables presenting their results for one knowledge sharing purpose to exemplify the centralization of knowledge and information in these networks and their organisations. These tables, along with the rest of the tables for centrality degree are available in Appendix B.

Along with discussing *centralization* of information and knowledge, I will also give contextual information for the analysis of the SNA data.

4.4.1.1 Organising work and centralization of information and knowledge

A) Organisation X

Experts Centre (HC network)

The experts' centre was part of a restructuring of the HR department, started by the HR Director about two years before this research took place. The experts centre itself had been formed one year and a half before data collection started. The managers leading it had been the same all the time and so had the supervisors, yet the managers reported a high turnover rate in the time the department had existed.

Work in the experts centre is project based. Projects are a post-bureaucratic, knowledge-intensive form of work that implies highly customized tasks, time limits, uncertainty and are opposite to "ordinary work" (Lindgren & Packendorff, 2006). The participating expert centres are led by middle managers, who had been business consultants for a long time, thus knew how to manage projects and the methodologies used by the company in this type of work. These managers assign work in the experts

centre to specific clusters of specialists. In turn, these managers report, along with the managers from HR departments to the HR Director, who reports to a partner in charge of this and other areas of the organization.

This department has then an allegedly post-bureaucratic way of organizing (project-based). However, the results from the SNA analysis, which will be discussed below, show that knowledge and information are basically centralized in the people with the higher hierarchy in the department (i.e. the middle managers) and more evidently around one of these managers, who is the closest to the HR director. This aligns more to a bureaucratic system than to a post-bureaucratic one. Moreover, project-based work, one of the work arrangements that has frequently been related to post-bureaucracy (Höpfl , 2006), has been regarded by some authors as “an essentially bureaucratic system of control, based on the principles of visibility, predictability and accountability, and operationalised through the adherence to formalized procedure and constant written reporting mechanisms.” (Hodgson, 2004 p.88)

Furthermore and according to the SNA data the centralization of information and knowledge in HC network can be seen in Table 2 (below) where E1, E10 and E2, are the highest in the rank of inbound degree centrality (right side of the table), both for connectedness (how many people claim to approach them to ask for information) and for scope (how many times people claim to approach them – out of four types of request situations).

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
E8	13	E1	8	E1	23	E10	8
E1	8	E3/E8	4	E10	13	E1	7
E3/E7	7	E7/E11/ E5	3	E2	10	E2	6
E9	6			E3	5	E6	4
E2	0	E2	0	E5/E11	0	E5/E11	0
E10	1	E10	1				
MEAN	5.2		2.7	MEAN	5.2		2.7
MINIMUM	0		0	MINIMUM	0		0
MAXIMUM	13		8	MAXIMUM	23		8

Table 6. Degree centrality **HC network** – Ask for information

* Actors who participated in the in-depth interviews: E1 to E5

E1, E10 and E2 are the three middle managers leading this network. According to the results above (Table 2), it can be inferred that this hierarchical position places them as the ones holding (or perceived as holding) the largest amount of information in the network since they are the ones most people claim to approach to (right side of the table), when asking for work-related information. Similar results were obtained for the rest of the knowledge sharing purposes investigated in HC network.

E1 seems to be pretty aware of this role as the following extract shows:

“...Well I possibly have a central node position, I mean I kind of have a central node position because my knowledge base is very wide, I mean I have information on almost any topic that you need information from or I did project on the subject or I know who to approach or who to ask...I mean, I think that it is an asset for the team...” (E1 first in depth interview)

E2, on the other hand, sounded more dubious about having a central position as information hub in the network as a whole, but is certain of its relevance in the internal area E2 manages:

“... I think I am not a key element, except for some projects...for example X project, then it is important for E1 and if E1 needs anything it will be through me. For the people in my area or the Shared Services Centre it is also through me. So in X project my role is very important but for many other projects that they have (the other internal area), I suppose that it isn't...we don't even interact...” (E2 first in depth interview)

The fact that the managers are perceived as the hubs of information in the network is evidence of the *centralization* of information based on the hierarchical position of these actors. Furthermore, the same reflection can be made knowing which other actors obtained levels above the mean in the inbound degree rankings, and who were in the bottom levels: Above the mean, in Table 2 (right side of the table), we find E3 for scope (in) and E6 for connectedness (in). These two actors hold supervisory positions in the network (i.e. they have direct reports), which is the level below that of the middle managers. On the other hand, the actors with no inbound connections in the network (E5 and E11) are both at a contributor's level, the bottom of the hierarchy, and are part of the smallest internal area in the department (4 actors including their manager). It could be thought then, that the information in this network is allocated on the basis of the hierarchical level of the actors in it.

In accordance with the allocation of information on the basis of hierarchy, two of the three managers in the network, E10 and E2, present dramatically low levels of outbound degree centrality (left side of the table) both in scope and connectedness. This means that they almost do not seek information in the network. They are perceived as hubs of information, yet their claim is that they do not approach others (in the network) for information, except perhaps E1, who is the other manager in the department. Similar results were found for MI network, in the same organisation.

B) Marketing Department (MI network)

Just like with the Experts Centre, the SNA results for the Marketing department in Organisation X show the five managers in the network as central in most of the knowledge sharing interactions (purposes) explored, being them the ones with the highest hierarchical level among the interviewees in this department as well as the decision-makers for their clusters. Table 8 (Appendix B), shows that the first five positions in both rankings for inbound degree centrality of the “ask for information” network (right side of the table), are occupied by the six middle managers in the network (F1, F2, F3, F13, F19 and F26), which again, can be talking about how information is distributed based on hierarchy in this network and the impact this has on the information seeking patterns of the actors in it. Results regarding centrality were very similar in the rest of the knowledge sharing purposes explored for MI network

F19 made this clear in when saying:

“ ...Very often, I think people would like to know more and would like to understand but you often say – well there’s information that is not in their position or in their reach - what is important is that you have the most concrete facts, which will help you do your work and not necessarily know the whole story, right? ... About something that may be out of your reach and position to live, manage and many other things for something to happen...right? (F19, SNA interview)

Regarding the outbound degree, which talks about how many people the actors connect to when looking for information, the rankings are much more heterogeneous in terms of the hierarchical level of the actors that are positioned above the mean (Table 3). Five of the managers of the department are scattered between the two rankings (scope and connectedness), and only one is positioned in the first place in one of them. The rest can be seen in one or two of the rankings, in different positions. It is interesting to note that F1, a manager who leads both rankings for inbound degree

measures, appears only in one of the outbound degree rankings and as low as the sixth position; only seeking for information from six other people in a 29-node network, perhaps many of them, managers too.

The case of the networks in Organisation Y presented similarities in terms of the centralization of information and knowledge. The results of the networks in this Organisation are discussed as follows.

C) Organisation Y

Academic Consultancy (AC Network)

This department was formed a little more than four years before the research was carried out and they were a small team (between 3 and 6 people) for the first two years until the company decided to invest on their growth. At the time of the research, there were fifteen people in the department, separated into clusters devoted to the different services that the department offered to external clients of the company. The department had a sales area, two academic clusters and one administrative. Each cluster had a coordinator and these coordinators would report to the department's manager, who in turn would report to the country director of the company. At the time of the SNA interviews, there was an Academic Manager that the two academic coordinators would also report to. Still, this manager had to report to the department's manager in the end. This manager resigned shortly after the SNA interviews finished and was not replaced during the rest of the data collection. People in this department talked about projects but there was no indication that they were using a project-based methodology in the way they organized work.

Just like in the previous departments, SNA results showed the managers and the coordinators of the clusters as central in most of the knowledge sharing interactions explored. There are two managers in this network. But Table 4 (below) shows that the one that is perceived as a hub of information according to the inbound degree levels in the rankings is A1, the general manager of the department.

HOW THE ACTOR PERCEIVES HIMSELF				HOW THE NETWORK PERCEIVES THE ACTOR			
ACTOR	OUTBOUND DEGREE	ACTOR	OUTBOUND UN-WEIGHTED	ACTOR	INBOUND DEGREE	ACTOR	INBOUND UN-WEIGHTED
	SCOPE (OUT)		CONNECTED NESS (OUT)		SCOPE (IN)		CONNECTED NESS (IN)
A6/A2	12	A2	11	A1	30	A2/A1	12
A8/A7/A13	10	A6	9	A2	17	A3	8
A12	9	A8/A12/A13/A1	7	A3	11	A5/A4/A10	7
A3	8	A7	6	A5/A4	8		
A15	2	A15	2	A11/A13	0	A11/A13	0
MEAN	7.7		5.5	MEAN	7.7		5.5
MINIMUM	2		2	MINIMUM	0		0
MAXIMUM	12		11	MAXIMUM	30		12

Table 7. Degree centrality **AC network** – Ask for information

*Actors who participated in the in-depth interview: A1 – A5

The two actors following A1 in the rank for inbound degrees, (i. e. right side of the table) hold supervisory positions in the network, which is consistent with the results of the rest of the networks. Three other contributors also presented inbound degree levels higher than the mean. What is interesting about these results is that A2, a supervisor, apparently regarded as an information hub, acknowledged having trouble to share information and knowledge with the rest of the network. This brings out the reflection that even when an actor’s knowledge base and access to information is wide, and the other actors acknowledge it and seek information with him/her, this does not mean that the actor himself is a “proactive sharer” in the network. Evidence of this, are the claims made by A2:

“...What happens is that if someone has some knowledge that perhaps he or she is not sharing completely, that would be me...and to be honest I think we have not had the initiative to find the spaces to share it, right?” (A2 first in depth interview)

Perhaps not as strongly as in the previous networks, but one can also see how information is allocated in AC so that actors in the leading organizational positions are the ones perceived as hubs of information. The two actors that have no connections as information providers are at a contributor's level, just like in the previous networks.

Talking about the outbound degree centrality ranks (Table 4, left side of the table), two of the leading actors in this network are A2, a supervisor who was also positioned in the first places of the inbound degree rankings; and A6, the other middle manager who did not appear as an information hub like the rest of the managers have so far, but is apparently strongly and densely connected to others in the network when seeking for information. The other leading actor holds a contributor's position and is equally positioned in both rankings to A7, the third supervisor who did not appear as an information hub in the inbound degree rankings. It is important to mention, that these two actors belong to the same area and that when the SNA data was collected, they were the "newest" recruits in the department.

A13, a contributor who showed no connections as an information hub is ranked second and fourth in the outbound degree rankings. A1 on the other hand, is ranked third in connectedness for information seeking, which shows that both managers in this department have connections above the mean when seeking for information in the network, a difference with the managers in Organisation X. The case of A3, a supervisor who was highly ranked as an information hub is different. He appears as densely connected, but not with more people than the average. Thus, when seeking information, this actor might be approaching only people in his internal area or perhaps other supervisors and / or managers in the network.

Similarly, the results from the EC network show the managers and supervisors as the most relevant in the knowledge sharing network.

D) Publishing department (EC network)

In terms of the centrality of managers, coordinators and the director, results were very similar to the other departments in all knowledge sharing purposes, probably because the only one “new” in the structure was the director.

Looking at Table 5 in appendix B, the figures for this network are similar to those of the previous networks, where the rankings of inbound degree centrality (information hubs) are led by the actors in the highest hierarchical positions in the department (C1, C2 and C3), followed or sometimes together with actors from the next level of authority, three of the supervisors (C5, C6, C4). Two other contributors and another supervisor obtained levels above the mean. The two contributors are not at a supervisory level in the hierarchy, but their job is a type of administrative management of the different projects in the department, which requires them to be in touch with people in the different internal areas and have information on different projects. From the four actors that showed no inbound connections, no one was at a supervisory or management level.

Apparently, the distribution of information in this network is not always something actors agree with but cannot avoid. C6, one of the supervisors in this network and who scored high as an information hub, seems to also be “pushed” by the situation to enact a brokering role as well and talked about this:

“...Well I must have an important role because I manage a lot of people, isn't it? I don't know if I am doing it right or wrong but I know that I do have a lot of information...and sometimes I feel like if I am literally just doing that...solving and solving doubts that sometimes would be as easy as people asking the person next to them but sometimes I get information so that I talk to the person next to another person and I ask her, you know? Something is not working there...they should be able to stand up and ask each other but this hierarchy thing is so imprinted... sometimes I find myself in situations where I have to

solve things that seem to be conflicts caused by people not being able to ask each other things...you know? “ (C6 first in depth interview)

The outbound degree centrality, on the other hand, is led by a majority of contributors. However, two supervisors (C9 and C4), one middle manager (C2) and the director of the department (C1) appeared in the ranking with levels above the mean and in fact the two supervisors and the director are positioned in the first three places of the ranking, at least for connectedness (out).

Last, the KM network, which was the smallest of them all, showed results that were consistent with the ones found in the rest of the networks. The higher the hierarchical position, the more relevant the actor was in the knowledge-sharing network.

E) Marketing department (KM network)

The department was divided in two clusters: Communications & Events and Marketing Intelligence; one (the largest) led by a coordinator and the other led by a middle manager, who used to be the manager of the department.

The Marketing department had not been working under the two-cluster structure for long when the study started. In fact, their Director had been in the company for only four months when the data collection started. Before that, there used to be a manager for the whole department, and a coordinator for Communications & Events who led the area and they reported to the Sales Director. When the new Marketing Director was hired, the structure of the department changed. Specifically, they stopped reporting to Sales; one of the members of the Communications department became part of the Marketing Intelligence cluster, led now by the former Marketing Manager and the Communications coordinator was left with the managing responsibilities of the communications & events department. This is important to mention because it was this coordinator who apparently led the Marketing team since the beginning, and even recruited most of its personnel a little more than two years before this research was carried out.

The relevance of the “story” of this team and the coordinator’s role as a leader were made evident in the SNA results, when she appeared as more central than the middle manager and sometimes than the director of the department. Given the little time that this department had worked under this structure, it is possible that after some time, the level of centrality (in the knowledge sharing interactions) of both the manager and the director would even up to that of the coordinator. Still, they appeared as relevant in the knowledge sharing interactions explored.

Similar to the first network from Organization X, Table 10 in appendix B shows that the only actors that show levels above the mean for inbound degree centrality rankings (information hubs) in this network are those that lead the department: the director, the manager and the supervisor (B1, B2, B3). Perhaps in the case of the supervisor this is not only explained by the hierarchical distribution of the information but also the history of this network and B3’s influence in it that was discussed earlier.

In fact, B3 self-perception is that of an actor with multiple roles in the knowledge sharing network and not only that of an information hub:

“...I don’t think that my role in the network is that clear cut, I mean because depending on the person the project and things, I can be liaison, I can be the person who has the information needed, I can be the person to bounce off ideas with, I can be the person with the idea...depending on the day, and the time, I change a lot...” (B3 first interview, lines 340 – 343)

B7, the actor that showed no inbound connections is at a contributor’s level in the hierarchy.

Regarding the outbound degree centrality, two of the actors presented the lowest scores in the network (B1 and B3). Interestingly, they led the inbound degree centrality rankings. Only B2 is positioned highly in the outbound degree centrality rankings and the rest of the actors with levels above the mean are at a contributor’s level; including

B7, who obtained no inbound connections but is ranked quite high when seeking for information.

4.4.1.2 Summary of the findings for the five networks in both organisations

There are a couple of things that one can discuss about the way information seems to be distributed in the networks studied in both organizations. The first is that in all of the networks, the hierarchical level of the actors in the departments seemed to be related to the degree of centrality (scope and connectedness) that nodes will present. This is, the higher the level, the more likely it is that these actors are perceived as information hubs and not necessarily see themselves as seeking for information with many others in the network.

The same way, contributors seemed to be regarding themselves more often as seeking information than their bosses (i.e. managers, supervisors and directors), which resonates with the centralization of information in bureaucratic structures. It is reasonable to think that these managers, directors and supervisors seek some of the information that they require outside the boundaries of the networks studied. However, there are some cases (e.g. KM and HC networks), where the only information hubs seem to be people in leading roles and the same people claim not to seek information in their networks at all (or do it only with one or two people, mostly in other leading positions). This supports the previous claims in this chapter about the relevance of the organizational structure and the formal distribution of information and knowledge (as is shown in the rest of the knowledge sharing interactions studied) in both companies and with slight differences, in each of the networks.

Often, managers and supervisors might have been perceived as central given a combination of their hierarchical level and their experience in their fields. People might prefer to ask for information or seek advice from someone experienced and in a higher position than they are. This is concordant with bureaucratic practices. The centrality of actors in the higher positions of the different departments can also be

related to personal motivations to share one's ideas and insights with the "boss", where sharing is part of what will "make you grow" and "be seen" in the company.

Also, it is interesting that when seeking for an opinion or a different perspective, people also perceived their managers and supervisors as their preferred option to approach. Regardless that some of them might in fact have a different perspective on things and that some people might trust them to give a sound opinion, this result raises questions on the trust levels among the rest of the actors in the network and even if they think that opinions of other actors at their hierarchical level are valuable or not.

However, there were also few contributors who obtained levels above the mean in some of the knowledge sharing purposes and who perhaps owe their centrality to additional factors such as, their personal relationships with other actors in the network. An example of this possibility is exemplified in the following extract:

"I suppose I have people around me (in the network) that I don't have a work relationship with...they are not my team but I talk to them a lot, daily...I suppose that because I have been here more time than my friends, perhaps people in other teams have mentioned me in (this) case – who do you go to when you want to talk about a problem that is notyou know? ... because we have lunch together every day and we share things..." (C11, first in depth interview)

So far, I have only discussed one of the elements of organisational structure often discussed in research: *Centralization*. In the next section, I will discuss how low levels of *integration*, were reflected in the graphs of the networks derived from the SNA analysis.

The level of *integration*, as explained before, refers to the degree to which different areas of the organization work inter-relatedly. In this investigation, it is shown not only in the direct claims made by participants about the relationship with other

departments, but also in the number of “connections” outside of the department that the knowledge sharing networks display in the maps of knowledge sharing interactions of each department. Another element of organisational structure, *communication* is represented by the patterns of knowledge sharing interactions found since they point out who shares what, with whom. It is important to remember that for this research, knowledge sharing is regarded as social action embedded in social interaction, which makes communication a key element of the sharing actions. Also it was noted that in both of the cases studied, face-to-face interaction, which entails verbal communication was very relevant for participants when sharing knowledge.

4.4.1.3 Integration

In the Methodology chapter, I have discussed the advantages of using SNA graphs (socio-grams) to visualize characteristics of the networks studied. In this chapter, I will explain my rationale for the boundary setting of the networks studied.

A) Networks’ boundaries setting

In an ideal network research situation, one would have access to all the potential members of a network. In organizational research however, one is constrained to the terms of the negotiation with the organization and the access to external parties. I have discussed in previous chapters, that the conditions of my access to participants were limited to specific departments in each of the organizations. As a result, the “boundaries” of the networks were somehow set from the beginning i.e. I was not going to be able to interview people outside those departments even if they were part of the network. However, I still wanted to know who was part of which informal network in these organizations and what the real boundaries of the networks were, so I told participants they could name (in their answers) people in their departments, outside of their departments and even outside of their organizations. This technique is known in social network studies as *name generator* (Marsden, 1990). I knew I was just going to be able to collect data from the people in the departments, which I called *the core*, but I wanted to know who else was involved and at least where they were from

(employees of the companies or people outside the companies), which, for practical terms, I called *the periphery*.

For many of the interviewees, once they started naming people outside of their departments, some specific names did not come to their minds but they mentioned them as groups e.g. my family, the human resource managers, the girls in human resources, etc. Even when asked about their names, they found it difficult to remember some of them, which raised reflections on how open these *cores* were to their environments, or how integrated they were with them.

In order to have at least partial information on the full networks for each department, I included all of these actors (as individuals or as groups) and the links to them in the network data. They are shown in the corresponding network maps (Full network maps of all networks in the appendix) that include both the “core” and the “periphery” (i.e. real full network). These people are shown as squares and triangles around the core (circles) of each network in these specific network maps and the links connecting them are always just directed (i.e. direction of the arrow) to them because I did not get information from their perceived links

Thus, for the sake of clarity when looking at the following graphs, it is important to remember that I told participants they could name (in their answers) people in their departments, outside of their departments and even outside of their organizations. I called the people in the departments, my interviewees: *the core* of the networks. For practical purposes, I called *the periphery* of the network to the rest of the people who were named and will be represented as nodes in the graphs but were not interviewed for this research. Some of these represent groups of people that interviewees named as such e.g. my family, my friends, the girls in human resources, etc. For the following discussion about the level of integration of the networks in their organizations, I will only use one map (socio-gram) for each network as an example and will give the choice to the reader to look at the rest of the maps in Appendix B if necessary.

HC network

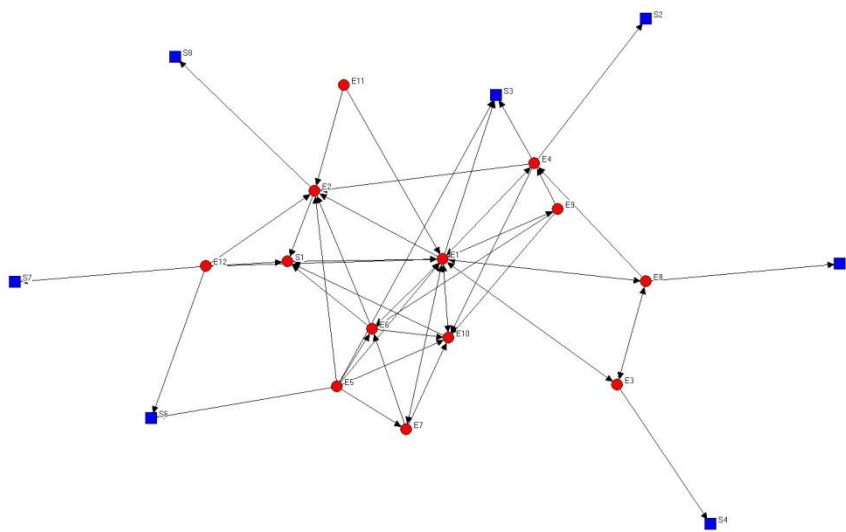


Fig. 2 Organisation X - HC Network: Ask for an opinion or a different perspective

MI network

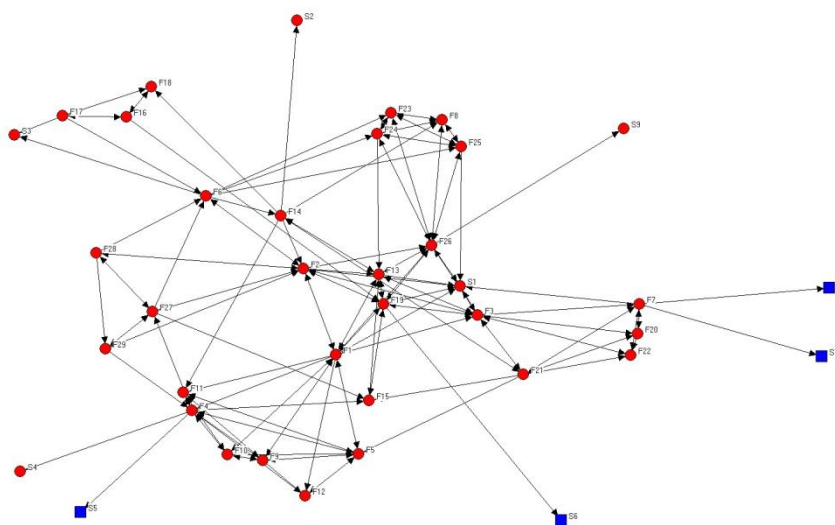


Fig. 3 Organisation X - MI Network: Share ideas, insights, opinions and experiences

Looking at the maps of the different networks in Organisation X that include the “core” and the “periphery”, one thing that is salient is that there are specific knowledge-sharing networks (i.e. ask for a different opinion or perspective and share ideas, opinions, insights and experiences), where both networks have very little connection with people outside the core, which can be people from other departments. This could be an indication of a low level of integration between departments, an attribute of a

bureaucratic structure. They show themselves as closed systems like other networks probably do with them. E2, a middle manager in HC, talked about this attitude from people in other departments

“...part of my job to be able to give a good quality service is to know every process and every time I can I dig in, and sometimes they (people from other departments) look at me with suspicion like – why do you want to know this? Therefore, it’s neither common, nor well received if there is no “rationale” of why I want to know about it...” (E2 SNA interview)

AC network

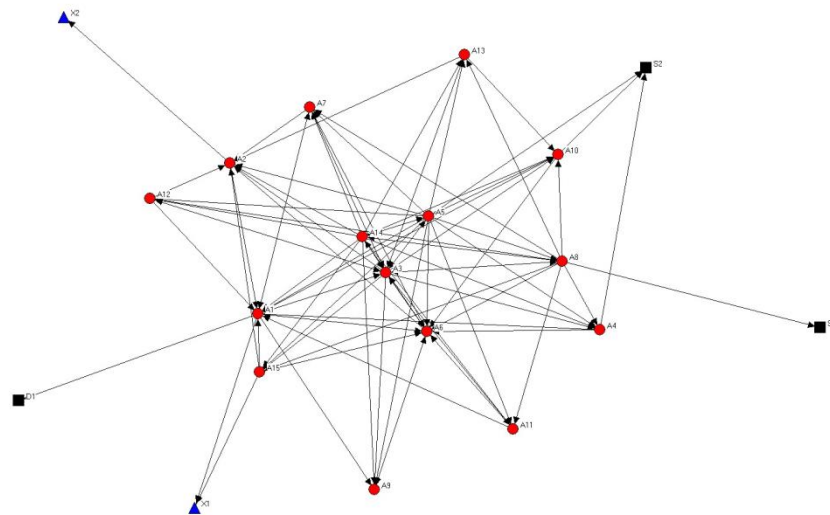


Fig. 4 Organisation Y - AC Network: Ask for an opinion or a different perspective

KM network

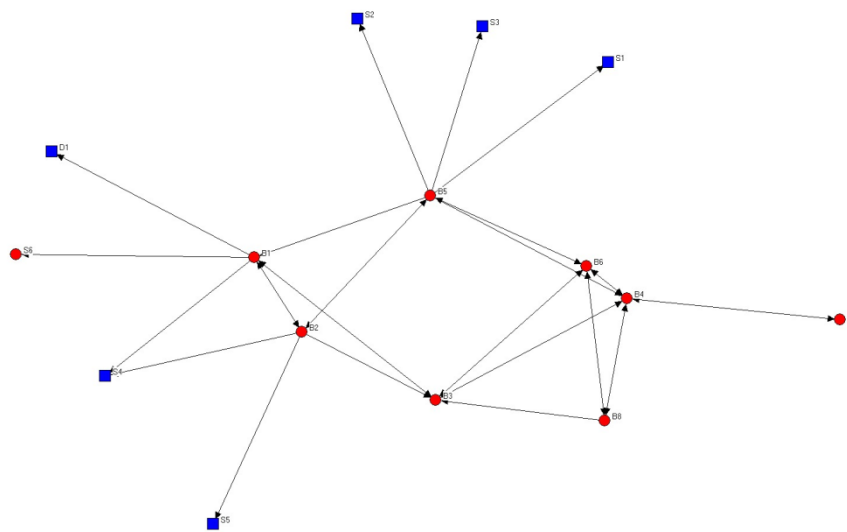


Fig. 5 Organisation Y - KM Network: Share ideas, insights, opinions and experiences

EC network

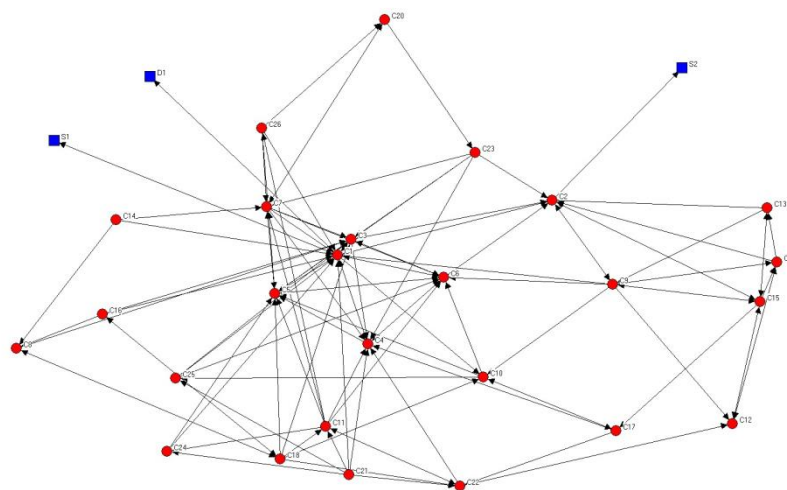


Fig. 6 Organisation Y - EC NETWORK: Ask for an opinion or a different perspective

Similar to the networks in Organisation X, in some of the maps where the networks in Organisation Y show both their “core” and “periphery” (e.g., asking for an opinion or a different perspective; sharing ideas, insights, opinions and experiences), they are presented as closed systems.

The AC network appears as not densely related to other people in the organization, thus showing a low level of integration. The KM network is also not highly connected

with people in other departments when sharing ideas, insights, opinions or experiences. However, they look as a more open system in the rest of the networks. This is perhaps due to the fact that they provide services for the organization as a whole and that might imply having contact with more people outside their department.

Lastly, the case of EC is similar to the previous two networks in the integration level. EC also appeared as a closed system in the maps where both the “core” and “periphery” are included. Particularly when sharing ideas, insights, opinions and experiences. However, and taking account of the size of this network (29 actors) they seem to be much more closed than the other networks. This is something that participants of the in-depth interviews showed awareness of as can be read from the following sample extract from C1’s interview:

“...In general, I think this department has a very sui generis way of doing things...and of not interacting much with other departments...” (C1, second in depth interview)

In general, maps of the networks in both organisations present them as closed systems in relation to the rest of the organisation. This can be considered as evidence of bureaucratic practices since a low level of integration between units or functions is an attribute of bureaucracy.

Together with the evidence of *centralization* of information and knowledge in the networks studied, the low level of *integration* is an element of bureaucratic ways of organizing, which shows the prevalence of bureaucracy in the KIFs studied. Given that these elements were observable in the perceived patterns of knowledge sharing in the networks studied, it can be inferred that the organisational structure shapes the way people understand and enact knowledge sharing networks in their organizations.

Despite the low level of integration evident in the network maps, it should be mentioned that there were some actors in the networks that did have contact with

other departments. In these cases, the allocation of responsibilities and the fixed processes of the departments can be an important element in understanding who in the network, is supposed to be connected with others outside the department.

Related to this F8, a contributor in MI in Organisation X said:

“... so it’s really important that each one of us gives his best possible contribution because at the end of the day, it is one or two people that present the proposals or plans and who come forward with the clients (i.e. other departments), they stand behind the work of everybody else. Not everyone working here in the different areas (internal areas) has the opportunity of being in touch with the clients. We do (their internal area) and we have to stand up for the rest of the team...” (F8 first in depth interview)

In the cases where there is at least one person whose job demands that he/she is a link between departments in the organisation, we might be witnessing a type of knowledge brokering. In this case, external brokering i.e. when the actor is brokering knowledge between groups or into a group he does not belong to (Currie & White, 2012). Brokering by definition means to mediate, to act as an agent for someone else. Knowledge brokerage is defined “as a relation in which, one actor mediates the flow of resources or information between two other actors who are not directly linked” (Fernandez & Gould, 1994 p.1457). Other researchers view knowledge brokering as “getting the right knowledge into the right hands at the right time” (Burgess & Currie, 2013). According to some scholars, knowledge brokering can take various forms (Fernandez & Gould, 1994; Wenger, 2000).

In the networks studied and in terms of how they share knowledge with the rest of the organization, we might be talking about specific types of brokers like: a *representative* (a broker who is appointed to negotiate exchanges with the outside of the group) or a *gatekeeper* (similar to the representative but this one gathers resources from the outside and distributes them to actors in the group) (Fernandez & Gould, 1994). The existence of these knowledge brokers in the networks studied can be interpreted as evidence of the hybrid forms their structures take. On one hand, these are

organisations where knowledge brokers have emerged and play an important role in the mobilization of knowledge in both organisations. Knowledge brokering has been considered a key characteristic of post-modern professionals, which are basically knowledge workers in knowledge intensive firms (Kakihara & Sørensen, 2002). At the same time, knowledge brokering is thought to happen in spaces where the brokering of knowledge across boundaries is a main concern (Meyer, 2010). Allegedly, this would happen in post-bureaucratic organisations where there is a strong need for knowledge to be distributed throughout the organisation, like in KIFs.

On the other hand, the knowledge brokers in these organisations are in most cases, managers or supervisors which, highlights the centralization of knowledge and information in these companies, thus the prevalence of bureaucratic practices within them. This hybrid structure will be discussed in the following sections.

Even when I was not allowed or able to get information from the “peripheral actors” of the networks studied, I am certain that I obtained rich and valuable information from the *core* of the networks. Nonetheless, there were a few cases where a director or a partner, were mentioned by various actors as one of these “external” nodes in their networks; also, there were a couple of former members of a department that were mentioned by more than one actor in their different networks. Not being able to interview them did mean some loss of data. However, I think that looking at how many actors from both inside and outside the companies are part of these “peripheries” in the networks, who and when they are connected to in the networks, adds to the reflection on how the organisational structure in both cases plays a key role in the way knowledge sharing happens within them.

The analysis of the results of the SNA interviews, which were the first stage of data collection in this research, demanded consideration of the structure of the organisations studied; how this structure was reflected in the patterns of knowledge sharing that the SNA analysis showed; if these patterns were consistent with the narratives of people about knowledge sharing in their departments; if these patterns highlighted any particular tensions or conditions and ultimately, what these findings helped illuminate in terms of how context shaped and was shaped by knowledge

sharing in the networks studied. Particularly, these networks being informal had the potential of being very different to the formal ones in the firms. However, they reflected how the structure of the organization influences the way that employees enact their informal knowledge sharing networks.

At this point, I consider it important to remind the reader that based on the epistemological and ontological assumptions of this research the maps and representations of the networks presented in this analysis, are co-constructed images that at least both the participants and I contributed to. From where I can see it, and perhaps oversimplifying it, to the construction of these interpretations; they contributed with their answers to my questions, sharing their perceptions and narratives to the extent that they were able and willing to do so; and I contributed with the construction of the questions, the leading of the interviews and of course, the way in which I decided to look at the data and interpret it. The maps for example, had the contribution of all the people in the core of the networks (according to the boundary setting explained previously). The interviews however, represent the views of some of these people only, but I firmly believe that they can give the reader a more fine-tuned image of how the phenomenon under study is understood in these networks than if I had chosen to investigate it from a different perspective. In particular, the data from the in-depth interviews has complemented the one from the SNA interviews, to give the reader a better picture of how structure influences patterns of knowledge sharing and how people understand and enact knowledge sharing networks in their departments.

In the next sections I will discuss the characteristics of bureaucratic organisations, as well as the attenuated (hybrid) type of bureaucracy I believe the participating organisations fit in. I will do so by exemplifying how elements of the bureaucratic type emerged in the accounts of participants but also what elements talk about a move away from bureaucratic practices, in the shape of an attenuated bureaucracy that these organisations align better with. The first element that exemplifies this distance from bureaucracy has already been discussed i.e. the emergence of knowledge brokers.

4.5 Attenuated bureaucracy in the participating organisations

4.5.1 Elements of bureaucracy in the participating KIFs

“... despite the scorn regularly heaped upon it, bureaucracy, both as an organizational ideal and as a diversely formatted organizational device, has proven remarkably resilient. Reports of its death have turned out to be somewhat premature”(Du Gay, 2005 p.1)

Max Weber is probably the most frequently named theorist when it comes to studying bureaucracy, and so it is when studying the concept of “post-bureaucracy”. Höpfl (2006, p.9) argues that “any idea of post-bureaucracy self-evidently presupposes bureaucracy...By common consent, the *fons et origo* and the point of reference here is Max Weber”. Given its relevance, I am using Weber’s claims for the discussion on the elements of bureaucracy that the cases in this research aligned with, and will discuss a “newer” version of bureaucracy as the type that fits both organisations best.

According to Weber, “the major characteristics of bureaucracy include a fixed division of labour, a hierarchy of positions and authority, administration based on written documents and adhering to general rules, thorough and expert training of personnel, and full-time commitment to official activities” (Weber 1946, in Walton, 2005 p.570). During the data collection of this research, some of these elements of bureaucracy emerged as relevant in the analysis of the accounts of participants about knowledge sharing in their departments. In the following section, I will discuss how these elements were evident in those narratives in both organizations, thus giving reason to think that organizational structure and as discussed previously, the wider context (Mexican culture) influence knowledge sharing practices, playing a key role in the employees’ understanding of knowledge sharing in their departments.

4.5.1.1. Bureaucracy elements in employees' narratives in both organisations

In the interviews, the prevalence of bureaucratic practices and elements of a bureaucratic structure emerged when participants discussed how work was organised in their departments and also how knowledge sharing happened within them in their networks. For example, participants from both organizations frequently referred to “their jobs” and “their information” as talking about delimited jurisdictions where the others were not allowed in, except for their bosses. This conveyed the existence of a strict delimitation of job boundaries in terms of the people’s roles, activities and knowledge territories and which is assigned to them by the people in higher levels of the hierarchy. In organization X, it was more common to hear participants talking about “their” projects and “their” information, emphasizing a sense of ownership over these. However, people from both organisations seemed very aware of their place in the structure and the boundaries of their jobs. These also emerged as relevant in their understandings of how knowledge is shared in their network. The following extracts are examples of how this theme of strict job boundaries emerged in the interviews:

Organisation X

An extract where F6 describes how people’s jobs are strictly bounded:

“...it’s like everyone has very specific activities, for example my colleague creates web pages and I have nothing to do with that, I do social networks and no one else does that...” (F6, first in depth interview)

Organisation Y

Two extracts where B5 claims that people do not “trespass” boundaries between their jobs and even between areas in a department:

“...we tend not to mess with stuff that is not from our area, at least between us... generally things are like – this is web, this is hers, this is blah, blah, blah – and we all know what is ours because we are like very bounded by that...” (B5, first in depth interview)

“...for example, if you asked me what my peers in design are doing, I have no idea and I am 100% sure that they don’t know what I am doing because there is this division, right?” ...it’s a stupid division in the department, right? You are events, we are intelligence and don’t do anything that they ask you and vice versa, right? It’s really stupid...”(B5, second interview)

One of the first elements that researchers recall when discussing attributes of bureaucratic organisations is hierarchy. Hierarchy is often understood in simple terms, based on the number of levels, the amount of people in each level in the structure and the distribution of resources based on that structure. However, Höpfl (2006) in his explanation of Weber’s accounts of the attributes of the bureaucracy type claims that the hierarchy in bureaucracy also refers to a strict division of labour: “jurisdictions (Kompetenzen)”. Thus, it does not only refer to the power and resources distribution but also to the job boundaries for each position in the structure. In this sense, the previous extracts would be examples of how hierarchy, a key element of a bureaucratic structure, influences the way knowledge sharing happens and is understood by employees through the strict job boundaries they perceived. Additionally, the theme of hierarchy referred to power and information distribution also emerged in the interviews with participants from both organisations. For example:

Organisation X

An extract that exemplifies a traditional way of distributing information, in which bottom levels are not allowed to know much, is described by F5:

“...we have faced these type of (negative) responses and you say...well top to bottom it’s ok but bottom to top is not? And they think that doing it...besides you realize what they think...it’s just to have the people there...because they think that this way they keep people held back ...there are many areas that have very old fashioned ways and that is when you realize – well, aren’t

we...(innovative, modern, democratic)? – and you realize it’s just empty words, right?...” (F5, first in depth interview)

Organisation Y

An extract where C7 talks about the distribution of information that excludes people from lower levels in the organisation:

“...I think that Organisation Y does not share information between departments, I mean they (directors) have their meetings and things are kept there...”(C7, second in depth interview)

In Organisation X, a second theme that emerged in the interviews and which is evidence of the prevalence of bureaucratic practices and elements of a bureaucratic structure was the importance given to professional qualifications and expert knowledge in employees. This was particularly true for Organisation X, in which the expertise and expert’s knowledge were portrayed as key in the career development opportunities available for employees. An example of how professional qualifications and knowledge, as part of “being an expert” were expressed as very relevant in Organisation X is the following:

“In X area, our employees have to take a specific number of technical training each year to be able to ascend to the hierarchical levels above them...” (D2, first in depth interview)

The relevance of expertise in the understanding of knowledge sharing in Organisation X will be further discussed in the next chapter. However, it is important to highlight that the great importance given to expertise, qualifications and training are considered also as attributes of bureaucracy. As explained by Höpfl (2006, p.10): *“Professional qualifications and knowledge (Fachwissen) are of the essence of bureaucracy...status and authority depend upon the official’s professional expertise”*

A third theme that emerged in the interviews of employees in both organisations was the importance given to “evidence” (keeping records) of the sharing actions. However, the theme was present much more frequently in the accounts of people in Organisation Y, which related to a defensive practice and an issue of accountability where people conditioned their sharing of knowledge, information and everyday communication to having evidence (e.g. written means) of it. The purpose of it was to be able to hold someone accountable for a given action or omission derived from that sharing, basically covering their backs. A couple of examples of how the “written evidence” was considered relevant in both organisations are the following:

Organisation X

E1 talks about the consequences of doing something bad or not doing it (i.e. it gets documented and shared):

“...the level of importance that the consequence of doing something or not doing it has, will determine how that information is shared... if it implies taking a decision or someone’s action and can affect us negatively it will be documented...” (E1, first in depth interview)

Organisation Y

C6 talks about the amount of documented communication that gets shared to people who are not even involved in it:

“...like if I have to deliver something to the designers... we have a meeting, and we have a minute from that meeting and that minute is sent to everyone in the department...as a coordinator, I sometimes have 60 e-mails in a day that are none of my business but that document communication between people, you know?... (C6, first in depth interview)

The use of written evidence as an instrument of power, not only for rulers and employers but, for anyone in Organisation Y and its relevance in the participants' understanding of knowledge sharing will be discussed later in Chapter 6. However, it is worth noting that keeping written evidence or records has also been considered an attribute of bureaucracy. Höpfl (2006 p.10) explains: *"The keeping of records (Akten, files) is decisive; for Weber this was not, however, emblematic of blind addiction of routine, the colloquial connotation of "bureaucracy" (or "red tape"), but as critical to the "rationality" and "efficiency" of bureaucracy as an instrument of power (Machtmittel) for rulers and employers"*

As can be seen from the above, some elements of a bureaucratic structure were reflected in the narratives of the participants in this research. This gives reason to think that the participating KIFs, do not have a post-bureaucratic structure and that the wider context (Mexican culture) aids the prevalence of bureaucratic elements in organisations even if they are "modern" knowledge-intensive. At the same time, some elements of an attenuated type of bureaucracy emerged in the interviews which, gives rise to the argument that these organisations, while not being post-bureaucratic, are not completely bureaucratic either. The proposition is that they fit better with attenuated types of bureaucracy, perhaps being more bureaucratic than not, in terms of their structure. This proposition is more concordant with "Weber and others that, view bureaucracy as a continuum, not as a condition that is entirely present or absent"(McSweeney , 2006)

Additionally, researchers have found that bureaucratic forms of control and organization are prevalent in modern organizations, KIFs among them, and have discussed a new organizational form that departs from the ideal bureaucracy but is not post-bureaucratic either. There are different names researchers have used to call this recent type of organizational form, some of them are: "soft bureaucracy" (Courpasson, 2000; Robertson & Swan, 2004), "selective bureaucracy" (Kärreman et al., 2002) "bureaucracy-lite" (Hales, 2002), and "hybrids" (Courpasson & Dany, 2003). These all describe attenuated forms of bureaucracy and one of the arguments of this thesis is that both organizations studied in this research fit this organizational form. In a

nutshell, these *attenuated bureaucracies*, even when they present some characteristics of post-bureaucratic form, retain key elements of bureaucracy whether it is to provide a shared meaning; operate as an ambiguity-coping strategy; make the organization more manageable (Kärreman et al., 2002) or more efficient (Hales, 2002). Both organizations in this research fit better as attenuated bureaucracies than as ideal post-bureaucratic or bureaucratic types. This was reflected in the accounts of their participating employees. In the following section, the elements of these attenuated bureaucratic forms that emerged in these accounts will be discussed.

4.5.1.2 The participating KIFs as attenuated bureaucracies

Just as there were elements in the narratives of participants in this research, that conveyed bureaucratic practices and a bureaucratic structure, there were also some elements, which emerged in the interviews and deviated from bureaucratic principles and which will be exemplified in this section. The first element, which was discussed earlier in this chapter, was the emergence of knowledge brokers in both organisations studied. The second, and which will be discussed first in this section, came from the fact that in both organisations, at least in one of their networks, organizational members interact in temporary teams that organize work as projects. Both characteristics could be expected to encourage a low level of standardization of work, which is far from being a bureaucratic characteristic. Contrastingly, this did not seem to affect the strict, hierarchical job boundaries discussed before. Employees in these teams did not know what their next project was going to be or when they would start it. Yet, hierarchical levels still defined the boundaries of their jobs in important ways e.g. what they would be accountable for, the information they had access to. The next are examples of participants describing how job is organised in these projects in their departments:

Organisation X

E3, describing how work in HC is organized in projects and emphasizes divisions in the network, minimizing the frequency of knowledge sharing interactions between people:

“...I would say that (we have knowledge sharing interactions) very rarely because we are segmented into projects, and my project’s team is often left aside...” (E3, first in depth interview)

Organisation Y

C7, describing how work in EC is organised in temporary projects and that they do not know what the next project (or team) will be.

“We have our project and we have a calendar that organises our lives. So it’s like in my calendar I have information that I will be working in my project, and I have activities assigned until mid-April...after that, I don’t know what I will be doing...” (C7, first in depth interview)

The rest of the networks studied in both organisations organise work in teams or clusters too. Yet these are more permanent. Still, it has been explained before that people in all of these departments carry out a knowledge work, which is not standard or routine. This also entails a move away from bureaucratic standardization, which, along with hierarchy, formalization and division of labour is one of the modes of operation of bureaucracy (Kärreman et al., 2002)

Another element that emerged in the interviews of participants in this research and which shows a distance from bureaucratic forms is related to the way in which workers are controlled by the organisation. In bureaucratic structures “control is achieved by designing and applying appropriate structures, procedures, measures and targets”(Alvesson & Robertson, 2006 p.195). In hybrid forms or soft bureaucracies, as Deetz puts it: “the modern business of management is often managing the “insides” – the hopes, fears, and aspirations – of workers, rather than their behaviours directly”(1995, p.87 quoted in Willmott & Alvesson, 2002, p.620).

This type of control is often not explicit in rules or processes but instead it works through expectations, discourses, values, etc that employees are expected to buy into and act in consequence. In both of the organisations studied, this type of control was found, though it had different forms in each organisation. It was specifically relevant for knowledge sharing, as will be discussed in the following chapters and was also evident in the narratives of actors of the networks studied.

In Organisation X, an organisational discourse of expertise was a normative form of control, which had effects on employees' expectations and behaviour without giving specific rules or explicit guidelines to be followed and which, played with the aspirations of employees to be regarded as experts in the organisation, with negative effects on knowledge sharing. In Organisation Y, a focus on errors and accountability between employees was a form of control too, which, without being explicit or formalized also managed employees' fears and expectations in a negative way, encouraging defensive practices that affected not only knowledge sharing but also the behaviour and beliefs of employees.

These findings are somewhat contrasting with previous findings on normative control in KIFs and its effects on knowledge sharing that were discussed in the literature review (Robertson & Swan, 2003). In very simple terms, the findings in this research show that normative forms of control are not always favourable for knowledge sharing and collaboration in KIFs. The next two chapters will provide an analysis of both examples of control recently discussed, which, despite being different to the bureaucratic types of control, conveyed bureaucratic practices and ways of organizing that influenced knowledge sharing, the way it happened and the way it was understood in the networks studied.

4.6 Conclusions

Even when the two elements discussed before: the low standardization of work and the non-bureaucratic form of control, along with the emergence of knowledge brokers exemplify how these organisations are not completely bureaucratic, it has also been

shown in this chapter, based on the analysis of our data, that they are not post-bureaucratic either. If a categorization needs to be made, then I would say that both organisations are in different places in the continuum of bureaucracy, being attenuated versions of the ideal type or hybrid forms, which have still not transformed into post-bureaucratic organisations.

The data analysed in this chapter aimed to explain how some characteristics of the structure and organization of the participating companies as well as the wider context in which these organizations are embedded (Mexico), influence the patterns of knowledge sharing represented by the knowledge-sharing networks enacted by employees in the participating KIFs. It also presented data to show that these organisations, regardless of their knowledge intensive nature, cannot be categorised as post-bureaucratic and at the same time, are not completely bureaucratic either, even when bureaucratic practices and structural elements are prevalent in them.

Regardless that the results presented in this chapter cannot be generalised to KIFs operating in Mexico, these two examples cannot be depicted as exceptions or as peripheral. It is important to remind the reader that the two organisations are large and are among the top leading firms within their respective fields worldwide. Therefore, they represent an important part of the KIF sector in Mexico, where given the contextual constraints for post-bureaucratic forms, hybrid forms or attenuated bureaucracies may become more common in the future, if they are not by now. Thus the patterns of knowledge sharing in other large KIFs in Mexico might present some similarities with the ones in the KIFs in this research.

In the next two chapters, I will present and analyse more data from the in-depth interviews in the two organisations. These also relate to bureaucratic attributes in the organizational structure of the cases studied and show how relevant these elements are for the people in both organisations when it comes to understanding knowledge sharing in their departments and ultimately, their organisations.

CHAPTER 5: “BEING THE EXPERT” – THE CASE OF ORGANISATION X

5.1 Introduction

In the previous chapter, the prevalence of bureaucratic practices and ways of organising in the KIFs studied was discussed. Data was presented and analysed to discern how the organisational structure of the participating organisations, shaped and was shaped by the understandings that employees had of knowledge sharing and how they enacted the knowledge-sharing networks in their departments. I also mentioned that the following two chapters would be devoted to the discussion and analysis of forms of control of the KIFs studied over their employees, where the influence of bureaucracy is present. In the case of Organisation X, this form of control is evident in an organisational discourse (Fairclough, 2005) that highlights the need to become experts to be noticed and progress in the organisation. This discourse had effects on employees' expectations, perceptions and behaviour without giving specific rules or explicit guidelines to be followed. It provoked different responses from employees in the networks studied, partly because rewards for compliance by becoming experts were not equally accessible for all employees in the organisation. Still, the expert status was part of the corporate identity that the firm “sold” as part of its image to its clients and consequently, it benefited from the attempts of its employees to become experts in their fields. The discourse was particularly relevant in the understanding and enactment that employees had of knowledge sharing in Organisation X and there lies its importance for this thesis.

In the present chapter, the case of Organisation X, where this particular discourse was found, will be discussed. Evidence of this discourse as a way in which the organisational structure and practices influence the perceptions and enactments of knowledge sharing will be addressed as well. First, the chapter gives a description of Organisation X and the way it officially “manages” knowledge. Then, the first of the two networks studied, the HC network is described and the analysis of the ways in which people in this network reproduce this discourse are presented. After that, the

second network studied in Organisation X, the MI network is presented and the ways in which its actors negotiate and reproduce this discourse are discussed. Finally, some conclusions from this within case analysis are presented before moving on to Chapter 6.

5.2 Organisation X: A typical example of a KIF

Organisation X is one of the named “Big Four” professional service firms in the world. It provides audit and risk management services, consulting, financial advisory, and tax services. It employs more than 190,000 collaborators in more than 150 countries worldwide in almost 50 member firms.

Organisation X invests in training their staff both with external providers and through their own training centres. They have a big facility in the US, which was recently opened and where staff from all over the world, meet to develop their “soft skills”. In 2012, their hiring of administrative staff (which is the one that participated in this research) accounted for 13% of their total new hires globally, which is an indicator of both the level where their demand for new personnel and the higher turnover rates are and where most of the money invested in personnel is directed. Even when this information is based on global data, this was also expressed in interviews with key people in the organisation. For example, our gatekeeper, who is a senior partner and also a member of the global knowledge management committee, when talking about the mentioned training facility, said that the courses offered there were

“...where we have tried to codify mostly the practice or share that intuitive knowledge...of how to deliver our professional services” and it is directed “Only to the areas that provide services to our clients” (D2 in depth interview)

Organisation X is structured as a network of member firms where partners in each country or region are generally the sole owners of their firms. Firms are independent but come together under a common brand and share methodologies, standards and guidelines globally. This is relevant in terms of the knowledge management strategy

because, even when there is a global structure and global strategies for managing knowledge, member firms are not obliged to use them all and even if they do, most of the knowledge management initiatives that Mexico is aligned to are designed for professional areas and not for administrative ones. In the words of the manager of the local Knowledge Management team:

“...it is not a policy that was designed for administrative areas, it is for professional areas and the pioneer was the (business) consultancy area, it still is” (D4, in depth interview)

Interestingly, and because of the organizational structure of the firm, the local knowledge management team does not report to the Region’s Knowledge Management Officer, who is responsible for the implementation of programmes and activities that are developed in the global KM office; e.g. communication plans, change management plans or new technological tools to manage knowledge; and who was my gatekeeper. In fact, as the knowledge management manager said:

“D2 has never been our boss officially...however, we like working together...but I can tell you that we have helped him in some issues of the firm and it has not been official...what we have done for the knowledge management of the firm has been out of good will and hoping that it will spread to all areas...but D2 is basically alone in this at the firm level...it’s because the firm has not learned that this is an area in which they have to invest...they see it as a –nice to have– but not as a –must have...” (D4, in depth interview)

Thus, in Mexico, the KM team reported only to the consultancy area, and for the rest of the organisation there was only a Knowledge Management Officer in charge of the KM. Organisation X has invested both globally and locally in knowledge management tools and the member firm in Mexico pays for the right to use global tools as well, some of which are available for all staff (professional and administrative) and which are mainly electronic. At the moment of the research, they had platforms to exchange information and knowledge both locally and globally in each professional area, a global

micro blogging system, instant messaging, online expert networks, as well as databases where reference and self- access learning material is kept and is available to all staff. Still, these tools are not necessarily directed to staff in the administrative areas, like the local KM manager said:

“...no one limits their use (of the tools)...but our focus is clearly not on them...because it’s on giving value to the firm’s clients, bring in new businesses...we don’t de-motivate them (the administrative staff), they can come to us with doubts...but if they know how to do their work and if their bosses have taught them and they know the procedures...I think there is not much need in that sense...it’s not the focus...” (D4, in depth interview)

In this sense, the strategy for KM is there, with resources to help in its implementation. However, it is not directed to every employee in the firm. It is almost as if there were two companies under the same brand: the administrative (support) staff and the consultancy areas, the latter being the ones towards which KM initiatives and resources are directed.

In Mexico, X employs over 5,400 professionals and has offices in 22 cities (out of 32) throughout the country. It is owned and directed by 275 partners of different rank and seniority. This firm has operated in Mexico for more than 100 years now. This can also be an indicator of how complex it is and the type of power dynamics that could be in place in an organization of such complexity. In this respect, partners play a key role. According to my gatekeeper,

“...internally, in order to progress here you need to be like the partner (in charge of your area). The partner turns into a role model. Such a culture leads you to replicate behaviours that you see in the partner; partners are the paradigm of the culture in this type of firms” (D2, in depth interview)

The responsibility of leading and transmitting the culture of the organisation is then left to the partners. Partners in consultancy firms are not only owners but serve as

managers, producers, and are the ones who bring in new clients to the firm. They desire to have control over their client relationships and this produces a dispersion of power that allows for individual partners to exercise some degree of control over the strategic initiatives to be undertaken in their areas (Anand, Gardner, & Morris, 2007). The relevance of this is that allowing partners to “own” areas, to despise strategic initiatives at their discretion and encouraging competition among them to bring in new clients to the firm makes it difficult for knowledge sharing to emerge between areas. On the contrary, it strengthens territoriality and power-based behaviours, which possibly, employees also learn that are part of the way up in Organisation X.

This dispersion of power and the strong territoriality was made evident in this research through the extent of the access granted. Given that my gatekeeper is also a partner in the firm, the access to participants and departments was limited to the full-time staff working in the departments where my gatekeeper had power and influence and was not open to the organization as a whole, like has been mentioned in previous chapters. Next, I will describe the departments where the participants of the study worked and where their knowledge-sharing networks were located.

5.2.1 Organisation X participant networks

Two departments from the administrative areas of the company participated in this research. The first was the Human Resources Experts Centre. In this company work carried out by Human Resources is divided into centres: The first type is a group of Shared Service Centres subdivided into areas in charge of: work related directly to the daily operation of the company, training, development, evaluation of performance; events and additional benefits and labour relations, plus a call centre to deal with employee queries on HR matters. The second type is the one of the Expert Centres. These ones deal with improvement initiatives and projects, not with the day-to day operation of the organization. Thus, they are expected to be specialist centres. There are four experts centres (clusters) in the organization; one for talent attraction, learning and personnel development; another one for benefits, another one for change management and culture, and the last one, in charge of integrating all projects

that are being done by these expert centres. These are the people that participated in the research. Because of the nature of their work, they resemble a group of consultants, providing solutions for the different needs that the organization has in terms of how to improve the way they manage their human resources. The expert centres were formed about 3 years before the research was carried out and the current managing team had been leading it for over 1½ year.

The second department which participated in this research was Marketing, which is divided into 5 areas: Branding, Digital Communication, Planning, Business development, PR & Internal Communication and Marketing Intelligence; each led by a middle manager. The department employs 29 people in their staff and at least three of the areas had one or two interns working for a couple of hours a day, who did not participate in the study because their stay in the company is never longer than six months unless they are hired as permanent staff. Thus, they had not been in the company for long enough and some of them were finishing their projects at the moment of data collection. This department works both with organization-wide initiatives aligned to the annual marketing plan, and with specific projects or requests that come from the different partners for specific purposes of their functional areas (audit, tax, consulting, etc.). This means that for some initiatives, everyone in the department is and should be aligned and working on their piece of the project. However, there are some projects that each area is working on, that the others are not necessarily involved in. Additionally, there is a group of representatives of HR in each of the functional areas of the organization. These representatives did not participate in the study. They were considered part of the functional areas, and access to them was not granted for this research. Some of them were mentioned in the network analysis but they are represented as people outside the networks, because in fact, they are. They mainly work with the functional areas, not with the administrative ones.

From the details given about the context, it has been explained that the strategy for knowledge management in Organization X only addresses the “functions” i.e. the areas that give direct service to clients, such as consultancy and auditing. The ones considered administrative and support areas, where the networks studied were

located, have access to the tools and resources that the “functions” use for sharing but, as D4 from the KM management team said:

“...there is no content for them...for them there are local policies and procedures...nobody denies access to them but our focus is clearly not on them and it is because it is addressed to giving added value to our clients and bringing in new businesses, not to the internal...” (D4 interview, in depth interview)

It could be thought then, that if the organization were not directing its efforts on knowledge management to people in these areas, then the organization’s KM strategy would not be relevant in the individuals’ understanding of how knowledge is and should be shared in their networks. This assumption could also be one of the reasons for researchers and previous literature to focus on consultants, one of the most widely known types of knowledge workers and not on other knowledge workers in KIFs, like is mentioned in the introduction of this thesis. However, Organization X has a strong discourse on the relevance of knowledge in search of being eminent; of being an expert, which is framed by the existing beliefs in the firm that some actors described to me. This discourse was made evident in the narratives of actors in the networks, particularly in HC network and seemed to be playing an important role in their understanding of the knowledge-sharing phenomenon in their networks, which respond in varied ways to it.

From the findings discussed above, there are some important aspects to consider: Organisation X does have a KM strategy in place, as well as a KM structure and money invested on it. However, this strategy is not inclusive but divisive. It is only addressed to the employees that give direct service to the company’s clients and not to the rest of the staff. Still, administrative / support employees have access to many of the KM tools in the company. Additionally, a strong discourse on expertise in the organisation seemed to be influencing the understanding of knowledge sharing of interviewees in this research, who were part of the administrative/support staff in the organisation. This chapter aims to show not only the relevance of the organizational discourse of

being eminent (expertise) in the understandings of knowledge sharing in its employees but also the different ways in which the networks studied reacted to it. While some people in the networks seemed to be aligned with this discourse, and to some extent, controlled by it, others seemed to ignore or resist it, appearing less influenced by it. For some, it encouraged sharing actions with the purpose of showing off their expertise. For others, it strengthened hoarding behaviours that emphasized the boundaries between “knowledge territories” in the networks. All of the employees in Organisation X face the issue of how to progress in the company. In consequence, they all have an interest in participating in the expertise discourse, given that becoming experts is what appears to help them grow in the organisation. However, the discourse of expertise is tied up closely with knowledge and the knowledge management strategy is exclusionary for the administrative staff. Additionally, the rewards for participating in the discourse of expertise are also exclusionary for some of this staff. Thus, this discourse has different responses from employees depending on where they are positioned in relation to it.

The following section provides an analysis of this company discourse (of expertise), mainly based on extracts of the interview with D2, who is a senior partner in Organization X and the Country’s Knowledge Representative in the company’s Global Knowledge Management team. Later in the chapter, the different responses to this discourse by people in the networks studied will be looked at.

5.3 The discourse of expertise

Quoting Alvesson and Kärreman (2000 p.1130), “No language use is totally devoid of meaning”, and as Fairclough claims (2005 p.916), “social phenomena are socially constructed in discourse”. In this research it is assumed that the accounts of interviewees provided hints as to the understanding of the local construction of what sharing knowledge meant for people in the networks and organizations studied. This assumption implies that this study is aligned with the view that portrays discourses as systems of meaning (Mumby & Stohl, 1991) that shape social reality to an important extent and do not simply reflect it. I believe that they do so by encouraging particular

attitudes, behaviours, the formation of ideas and the suppression of others, thus helping the individuals construct a particular interpretation of reality (Alvesson & Kärreman, 2000). I also agree that discourses are not deterministic (Conrad, 2004) but are shaped by relations of power (Mumby & Stohl, 1991) and I think that people can resist or contest a given discourse even when it is the “dominant” one in the organization or when it is aimed to be a form of control (Heizmann, 2011; Van Dijk, 2003). Discourses can be negotiated and co-opted for the interests of particular groups or people. Following Alvesson and Kärreman (2011 p.1130) “Discourse in this sense does not only shape our particular ways of talking about a subject matter, it also shapes and constitutes our understanding of the real on the experiential level: it informs us as to what is normal, natural, and true”.

Having said that, there was a particular element in the discourse of employees in Organization X, that seemed to be talking about an “ideal” that shaped the knowledge sharing actions of employees, particularly in network HC. This ideal was constructed around the desire to be regarded as an expert in the Organization. This discourse though, did not seem to be an element exclusively of the knowledge management strategy of the firm but it seemed to be more of a key aspect of their general discourse about who they are as a company, thus who they want their employees to be. The emphasis on expertise has been observed before in research with professional service firms (like Organization X) where for a consultant demonstrating his professional expertise is “one of the very few ways of being noticed”(Robertson, Scarbrough, & Swan, 2003 p.841). Additionally, image, impressions and reputation management have also been claimed as key in knowledge intensive organizations both at a corporate and at an individual level (Alvesson, 2001). According to this author, this is because there is an “absence of tangible qualities available for inspection” in the products of this type of organizations and their workers. It becomes then very important for them to build an image and reputation around their expertise both for marketing and recruiting purposes, during and after the production process because “A well-known brand name substitutes for difficulties in establishing quality” (pp. 870)

In Organization X, one of the structure's elements where this search for an expert status is implicit is the existence of "partners". Quoting D2:

"...to grow in this firm you have to be like the partner (of your area). The partner becomes a role model...they are the paradigm of the culture in this type of firms... (lines 203 – 206)...the personality of the partner as someone who is key in his industry, who is acknowledged in his field for his capacity to influence, change, advice and transcend ...and what knowledge he brings from his field...(lines 232 – 235)...that he is listened to by people in high level spheres and what supports that, is your role model... (D2 in depth interview)

Thus, partners are regarded as experts who are influential, highly regarded and powerful referents in their fields. Because they are portrayed as the role models for the rest of the employees, becoming an expert and being perceived as one might be understood as offering a way of keeping your job as well as being considered for a promotion in Organisation X too. This would talk about a hierarchical system prevailing in this organisation, which bases its rewards on the expertise levels of its employees.

The arguments for the company's KM efforts not addressing the support areas, according to D2 are expressed in the following:

"People in support areas do not have this mystique" (D2 in depth interview) "

Mystique" in this context refers to the way in which partners are looked up to and used as a role model by consultants, as if they were their apprentices. This means that the management of this organisation do not expect people in support areas to look up to and try to be like the partners of their areas. In a way, it can be said that they are not expected to become experts. However, the findings of this research show that this discourse of "being an expert" actually has an impact on employees from such areas.

Even when "the functions" (client service areas) and the support areas are organized differently and the KM efforts of Organisation X are basically addressed to the former,

support areas are also directed by specific partners and through their presence, they have access to a key aspect of the “being an expert” discourse of Organisation X. Yet, they do not seem to have full access to the rewards and incentives of the system that are given in turn for the nurturing of expertise. This creates a dilemma for support areas as they get input from the expertise discourse, telling them that it is the way to grow in the company and that it is part of the company’s identity. Yet, they are not being rewarded for becoming experts with growth opportunities in the organisation like employees of other areas are.

The claim just made that the discourse of “being experts” is also part of the organizational identity can be better understood in the following context: In 2003 a few years before this research was carried out, the organisation went through an important restructuring phase when it fully merged with a major consultancy firm that had been the leader in their field and after a series of shameful events, went bankrupt worldwide. In Mexico, Organisation X has a history of mergers and company acquisitions, which has allowed them to this day to grow on a continuous basis. However, this specific merger could have reaffirmed their organisational identity as experts, particularly because of their dominating position over the firm they “absorbed”, which we will call “Organization Z”. About this, D2 explained:

... Organisation Z culture used to brainwash you that you were the very best and that no one deserved you and this (their sudden bankruptcy) was a major dose of humility... They had to merge and let me say it colloquially, Organisation X saw us like the rednecks and now they had to ask the rednecks for permission to work with them...But they came in and realised that the “rednecks” were just a mental image they had because they found a group of extraordinarily knowledgeable people with a huge value that they didn’t have... (655 – 662)... it turned out that the rednecks in our organisation were at least two times more expert in their fields than people from Organisation Z... and all the people from Organisation Z accepted and assimilated and “bought” our name... (D2 in depth interview)

Additionally and in order to help their employees, particularly the ones in the “functions” (client service areas) become experts in their fields, Organisation X places great emphasis on their development of professional knowledge through compulsory formal training that is also expected by their clients as part of the image that Organisation X sells about their employees. In the case of the auditors for example, completing a series of formal training courses and obtaining a final certification from them is a requirement of the organization. It is also a way in which these employees are socialised into the organisational discourse of becoming experts if they want to grow in X. As D2 explained:

“The auditors for example, belong to a highly regulated practice and they have to take a specific number of hours of formal training to be considered for a promotion to the higher hierarchical levels... (401 – 403)...and it is compulsory because it is part of what our clients expect from us...” (D2 in depth interview)

Hence, becoming an expert seems to be an explicit expectation from employees of Organization X, strengthened by its clients’ demands and it also seems to be an important part of their identity and their performance management systems; that also has an impact on the way people understand knowledge in their organisation. This would not be strange given that, as was mentioned in the Literature Review, research in KIFs has shown before that human resource practices are relevant in the management of knowledge in these organisations, (Carter & Scarbrough, 2001; Currie & Kerrin, 2004; Swart & Kinnie, 2003) whether these are aware of it or not. In fact, the company’s website highlights “unparalleled expertise” as one of the defining characteristics of the firm. This discourse might be so widely spread in the organization that regardless of who is targeted in the KM strategy, the discourse of “being experts” impacts the knowledge activities of its employees, like their knowledge sharing at all levels and areas. In particular, the “being an expert” discourse would be relevant for knowledge sharing because it is closely linked to knowledge and to demonstrating who is more knowledgeable in the organisation: who is the expert. This discourse, if people buy into it, could encourage competition and individualism, affecting sharing behaviours and intentions. This impact was made visible when the words “expert”,

“expertise” and “eminence”, were frequently found in the narratives of interviewees in Organisation X when talking about knowledge sharing in their networks. In the following sections, the different ways in which this discourse was made evident or responded to in the understandings of knowledge sharing of participants in each network in Organisation X will be discussed.

5.3.1 Wanting to be an expert in the “Experts Centre” – the HC Network

There were two main responses to the “being an expert” discourse found in the narratives of people from the HC network. In general, they seemed aligned with the idea of becoming experts and/ or being regarded as such. However, in terms of the behaviours adopted, one response seemed to be the desire to be perceived as experts but an unwillingness to share more than what was required with one’s peers. The other was the willingness to share with the purpose of showing off what one knows and not for the common good or learning. Evidence of both responses to the experts discourse will be discussed below.

5.3.1.1. Experts that do not want to share

The advantages of recognizing the expertise of individuals in work groups have been addressed in the literature (Bunderson, 2003). Within them, it seems logical to think that if members of a work group have information of who knows what within the group, they will be better able to address the correct people and access the needed expertise easily when engaged in solving problems or completing a task. This is a conclusion that can be derived from research on the role of perceptions of expertise of co-workers in work relationships (Hollingshead, 2000). Based on this reflection, one can infer that the recognition of expertise of individuals in one’s work group should be beneficial for knowledge sharing. In fact research on knowledge sharing talks about internal knowledge brokering, as the existence of individuals who, through brokering actions ensure that the right knowledge is in the right hands, at the right time (Currie & White, 2012), facilitating knowledge sharing. For these brokers to be able to do that, they need to know who knows what and/or where knowledge is available in the

organization, network or work group and have a link to that source so they can aid the flows of knowledge they need to broker.

However, recognizing the expertise of others and/or knowing who knows what does not imply that those others will be willing to share it when requested or even proactively share their knowledge. For instance, participants from network HC seemed to share the perception that even when information and knowledge were shared when the task demanded it, they saw little if any altruistic motivations in the knowledge sharing behaviours of their colleagues. This is because knowledge then becomes a resource, tied to power and self-interest given that it is the means for progression in the organisation. For example, E3, described how people in the network withhold information when asked to share knowledge or information that is within their “territory”:

“...sometimes they give you the information like – you asked me for points a and b, or a and m – and they cut point m and send it to you, you know?...sometimes you ask for information and they send it to you but when you tell them – hey can we look at this? I have some doubts – Oh I’m sorry I don’t have time for that – and it’s like “I don’t have time, I don’t have time” and well, I respect that right? But then you realize it’s not time, it’s like... I don’t know... I think it is widely known that information is power. I have noticed some of that here... (E3 first in depth interview)

E1, one of the managers in HC network, talked about this as a type of hoarding and defines it as “intellectual selfishness”. However, E1 claims that under their leadership (E1 and E10’s) this selfishness has been eradicated in HC network:

“...there was this issue with intellectual selfishness very strong, I mean things like – I won’t explain it and I won’t share my files because they are mine, right? Like – I did it so well in the show that I don’t want to show you so you won’t do yours as good as mine... - The truth is that I believe we have eradicated it

(intellectual selfishness) very well... it is clear for them now...”(E1, first in depth interview)

For E1, this was done through explaining to people in HC network the benefits of sharing and basically “selling” the idea of sharing as a needed condition to be able to take on more responsibilities:

“...either you learn to share or you’re going to be doing the same thing for the rest of your life. I can’t give you any more projects because your workload is at 140%. How can I give you another project?” (E1, first in depth interview)

Contrastingly, this did not seem to be the story for E3, who also described how these behaviours have not been eradicated, at least in their area:

“ ...well in a project that is exclusive of one person it is sometimes difficult that they share information or a little piece of what they did in their project, that will help me in mine – hey can you share this with me? – I’m sorry it’s not updated – It doesn’t matter, send it like it is – erm, well, let me look for it and I’ll send it to you - ... a week goes by and nothing, right and – hey, do you have the file? – I’m sorry, I deleted it, I didn’t find it- I don’t know...and then one has to look for other means to get what you need, right?” (E3, first in depth interview)

E5, talked about a possible root for this kind of behaviour in HC that is related to the way performance is evaluated in the area. This refers to a system where competitiveness is incentivised, undermining the willingness for sharing with others. Such a system seems to be incongruent when allegedly, the organisation forms teams because they want the people in these teams to collaborate and work towards shared goals, which would involve sharing knowledge between them. Additionally, the focus on expertise thus knowledge as a means to progress in the organisation is a typical element of bureaucratic forms where “status and authority depend upon the official’s professional expertise” (Höpfl , 2006 p.11). E5’s extract is shown below:

“...the experts’ centre is more competitive than the shared services centre, and they evaluate you based on results so if you have certain information you can overtake in some things” (E5, first in depth interview)

Furthermore, for E2, sharing is done in HC network if required, but not out of altruistic intentions. This is probably because wanting to share is difficult when individual competition is encouraged by the organisation:

“ I honestly don’t see that any of the people in my team is like altruistic like – oh, I’ll teach you this because... - no...so it’s not like they say - Who wants me to teach you this and that, when do you want a course?” ... (E2, first in depth interview)

More specifically, some of the accounts of people in this network illustrated the perception of a motivation in their co-workers behaviour to create a good professional reputation and stand out as experts. This motivation to stand out and be an expert was also seen as a justification for hoarding knowledge and information particularly knowledge and information that are within the individual’s job boundaries, which can also work as a tactic to acquire power over information or knowledge in their jurisdiction (set by their job description), to then be perceived by the others as the “unique” experts and owners of knowledge in that area.

5.3.1.2 Experts that share to gain expert power

Expert power has been studied before and for a long time it has been considered one of the bases of social power (Hinkin & Schriesheim, 1989; Raven, 2008). Since French and Raven’s first definition in 1959, expert power is thought to be grounded in the perception and faith that others have of one’s expertise, superior insights or knowledge about something (Raven, 2008). Thus, to be able to influence the others’ perceptions about their expertise, people in HC network may be sharing mostly when they want to stand out as experts in their areas. On the other hand, the hoarding of knowledge aimed at “securing” expertise can also be working towards the aim of being

an expert because as Reed (1996) explains, experts must be able to control and monopolize an area of knowledge that is relevant for problem-solving so that it is not easily stolen or imitated by others.

Also, the fact that people in HC network perceived others as engaging in behaviours to stand out, and share knowledge to be recognised as experts, was evidence of the organisational discourse on the need to “be an expert”, and “be like the partners”; to be able to grow and be seen in the company, also competing against their peers for this attention. For instance, E4 and E5, even when belonging to separate internal areas in HC network, described tactics that seem aimed at acquiring power through reputation and image building:

“ I think that our profile is very individualistic. Each of us wants to get the gold medal, so there are people that are like – only my projects, my information – and it’s like – I want to be the shining star and I don’t care about your little boats...”(E4, first in depth interview)

“... it’s recognition...of your colleagues in general...we don’t expect only the ones on the top to see it, so you are prone to “going up” but that they all know that you know something and that you can be of help...” (E5 first in depth interview)

Moreover, for the internal area managed by E1, this desire to show off seems to be part of the profile of the people in HC:

“...it has to be related to profiles. I mean, if you have people that like challenges, that like to learn, that like to brag, it’s like part of learning and bragging is – I “am” sharing knowledge... (470 – 473)...sometimes it comes from them sometimes it is a formal request from me because I know what they know. I mean, often you don’t have enough time to go around bragging so that everyone knows what you do, right?” (E1, first in depth interview)

People in HC network then were engaging with this aspect of the organizational discourse in X even if not for altruistic motives. Wanting to become and be seen as an expert as a way of proving one's superiority or gaining power rather than aiming at collaborative work and altruistic sharing could be justifying knowledge and information hoarding behaviours and self-service motives for sharing. This in turn was having perverse effects to the extent that it promoted individualism and a competitive culture where people try to shine on their own and see knowledge and information as a source of personal power that they should protect. Additionally, the fact that the KM efforts and strategy are not addressed to people in areas like the one HC network is from, leaves more space for this individual competition to be "the expert", to dictate the way people understand knowledge sharing in Organisation X.

Also, participants from HC said that people share between them to help each other do their jobs better a couple of times. The rationale behind that though, was often explained based on the need that good products come out of the department so that they (the actors in HC) all maintained a positive reputation in the organization. This could be interpreted as a way of acquiring expert power indirectly through the results of the team. Being part of the "experts' team" that obtained such good results was a good thing to add to their individual "expert" reputation. Like E5 said,

"...we wouldn't like to be perceived as a weak area and that they said – just ignore them, it doesn't matter- " (E5 first in depth interview).

The very name of the department had the word "expert" in it. When asked what the word referred to, E1 and E10, two managers in HC network claimed that such expertise referred to the ability of doing projects:

"...why experts centre? Experts in what? I'm not an expert in learning, I'm not an expert in benefits, I'm not an expert in HR management, no... we're experts in doing projects... and that is what we work for as a centre..." (E1, SNA interview).

E1 also claimed that this was the basis of the value that employees of this department had for the company:

“... your value is given for your capacity to learn, to innovate, to respond and deliver a project. It is not based on your knowledge of a subject in particular”
(E1 first in depth interview)

However, this did not seem to be the understanding of the employees at a lower level in HC network. Often in their accounts, they referred to themselves as experts in a specific area. Examples of these are the following extracts from E5 and E4’s interviews:

“...for example, we gave a course a few months ago, they identified me as one of the ones who knows how to work with X programme, one of the experts, so... (I was asked to give the course)...” (E5 first in depth interview)

“The team is subdivided like into experts, I mean, we all have the same basis but our projects are different” (E4, first in depth interview)

Even their transferences from the other HR departments to the Experts Centre were probably seen by other employees as a kind of promotion and their former peers in the other HR departments seemed to have the idea that this new department was a “better” place to work in, which might strengthen the belief that becoming an expert is what will make you grow in Organisation X. E1 talked about this:

“...so there is a certain resentment from the other areas to the team here – (people say) Oh they are the ones that are evaluated more positively, they are the ones who get the projects, you can see that they probably are having a great time – but it’s just a perception...” (E1, first in depth interview)

In fact, this belief might have some strong basis since people outside the Experts Centre might be taking account of the high turnover rate of the HC network (reported by its three managers as high). These people might be aware that the reason for this turnover is mainly that employees from the Experts Centre have quickly been transferred to the “functions” (which is an unusual promotion for people from the

support areas) or had left the company with a better job offer elsewhere (probably more often than people in other areas). These thoughts might reinforce the belief that being perceived as an expert (e.g. from the Experts Centre) is the way up the ladder in this organization, a perception that is probably known and shared by the people in the Experts Centre too.

Another area in which elements of the “being an expert” discourse were evident in the accounts of participants, which related to their understandings of knowledge sharing, was that of the ways of organizing knowledge sharing in Organization X. For example, there is an established procedure that people in the network follow to solve a doubt. Within it, the “experts” in the organization (who are formally appointed as experts in specific areas) must be the first choice to approach for help. This appears as a formalised guideline to manage knowledge. E4 described the procedure in HC network in the following extract:

“...there are two major lines we follow. The first one is approaching the experts. Because not all of them are at hand, we have a platform where we upload learnt lessons, the best projects, information that could be helpful to other colleagues’ projects...so that’s our starting point in case we don’t know and we don’t have an expert at hand. The other one is asking people in the area, preferably based on their experience...for example E2...or E1...”(E4 first in depth interview)

This extract highlights two aspects of the way the firm organizes work and knowledge sharing, namely, the electronic resources available for employees to access information, and the guidelines to follow when asking for help directly from people in the organization. In the latter, both possible choices are based on how “expert” the person is. The first option are those employees that are formally appointed as experts in the subject matter and the second choice are colleagues in the department, chosen based on their expertise and/or experience. This is associated with a hierarchy based on knowledge and which legitimizes power based on expertise, again, elements of bureaucratic structures. It is important to mention, that the “experts” E4 referred to,

that should be consulted from outside of the area, are mostly managers and partners, thus representing the high levels of the hierarchy. Accordingly, the two experts mentioned by E4 from the area (E1 and E2) are both managers, and the three managers in HC network had worked in the “functions” as consultants for Organisation X for several years, which might also enhance the transmission of the “being an expert” discourse that is part of what the “functions” in this organization sell to their clients every day.

Additionally, the hoarding of knowledge and information or the unwillingness to share in the experts centre can be further legitimated by the job boundaries in the network, which are established by the distribution of work and access to information. These are based on bureaucratic practices like a hierarchical structure and a strict delimitation of jurisdictions, as was shown and discussed in the previous chapter. These job boundaries were part of the basis for people’s perception of ownership rights over knowledge and information in their jurisdiction. This was claimed in the language people in HC network used when referring to themselves as owners of their projects, processes and information. Adding to the expertise discourse that encourages individual competition, people are given “territories” of knowledge and information through their strict job boundaries, which make them feel owners of the knowledge and information within those boundaries and complement the justification for hoarding that the “being the expert” discourse already gives them, thus hindering knowledge sharing within a department or a network across the different job roles in it.

As an example, E4 talked about how this claimed ownership rights in the network, influence their knowledge sharing in the next extract:

“...each one of us is like the owner of his processes, owner of his information and his projects. Thus E3, is an expert in something, and is the only one with that information and might never do a project like mine so is not interested in the information that I have...” (E4, first in depth interview)

Based on the previous claims, the picture described by actors in HC, other than E1, is one of a highly competitive group of individuals, who use their job boundaries to set the limits of their territories. These territories become their areas of expertise and boundaries are reinforced by the way work is organized in their network, i.e. projects are assigned by expertise. Also, the language used to describe how employees regard their work such as: “their” projects; “owners” of their projects, “owners” of the information, conveys ownership, which emphasizes the delimitation of their knowledge and expertise territories. These were distinctive elements in the discourse of actors in HC that appeared as cues people used to understand how things are supposed to be in their area, which also contributes to the way they understand knowledge sharing. People referring to others as being “owners” of a project, “owners” of certain information and “owners” of a process, was a distinguishing feature in this network as was also the word “expert”. Being part of the “experts centre”, being “the expert” in “your” projects, approaching “the experts” for advice, wanting to be known “as an expert” are verbalized expressions of the way things make sense in HC and they seem to be congruent with the accounts that describe power-oriented behaviours aimed at making the individual “the one with straight As”. Given that Organisation X is a knowledge intensive firm and that work in these networks is knowledge based too, it becomes significant that knowledge is being hoarded by people in these networks thus strengthening competition instead of collaboration between team members. Even more important is the fact that the organisational discourse highlights elements of a bureaucratic structure, confirming the findings discussed in the previous chapter.

The second part of this chapter, discusses the ways in which the marketing network in Organisation X, responded to the organizational discourse of being an expert.

5.3.2 The marketing department: the MI Network

The second network in Organisation X that participated in this research was a larger one and its managers did not have a background as consultants or in the “functions” of the firm. Still, we have discussed before that all workers participating in this research can be considered knowledge workers. Also, and perhaps more in line with the firms’ career plans for people in the “support” areas, actors in this network had slower and fewer vertical development opportunities in the organization. This might be influencing the way that the “being an expert” discourse is reacted to and the relevance it has for the individuals’ understanding of knowledge sharing in this network, because they have different interests and are positioned differently in relation to the organisation and the “being an expert” discourse. The next section discusses their case.

5.3.2.1 “Becoming an expert not only to grow in the company”

Gaining knowledge and expertise were themes present in the narratives about the experiences of knowledge sharing of actors in network MI too, though in different ways to those of the HC network. As has been mentioned previously, both networks belong to departments in Organisation X that are seen as “support areas”, in which people are expected to be knowledgeable enough, so that they are able to meet the performance standards of the company. People in both networks have the dilemma of showing their expertise and doing it through knowledge. Yet according to our gatekeeper, employees in support areas are also known for not committing much to the organization, as D2 claimed:

“...the commitment level that you find in the functions is different to that of the support areas. In the support areas what’s typical is –well, I come, do my job professionally, I get paid and I leave – ...” (D2 in depth interview)

Adding to this, we have mentioned before that people in HC network, even when belonging to a support area, seem to be having opportunities for vertical growth inside

the company by being promoted to the “functions”. However, this is not the case for the rest of the support areas. It then becomes relevant to reflect on the contradictory practices in Organisation X, where on the one hand, people in support areas like the one MI network belongs to, are expected to develop expertise such that the internal service they deliver is at the level of the services that the organization sells to its clients, yet they are not rewarded for acquiring this expertise with opportunities for vertical growth in the company as people in other areas, like the functions, are. This practice is expressed by D2 in the following extract:

“...well we expect that they (the support areas) deliver the functions with the same quality that an external client would demand from us...but they don’t have the same career development as the functions” (164 – 169)... There (in the support areas), we manage it like a traditional hierarchical organisation and there are no such growth opportunities...and it is a big challenge there...we lose a lot of people that don’t find opportunities for growth...” (D2, in depth interview)

The idea of a lack of vertical growth in support areas and how that translates into the management of employees’ development was also expressed by F3, a middle manager in MI in the following extract:

“...all along I have tried that they (the team members) become experts (only in what they do), right? Here, in a firm like this, in the administrative areas it is difficult to have a vertical growth, right? It’s not that you get in, and you are an analyst, then a supervisor, then a coordinator and then a manager...it’s not like in the functional areas... there, growth is based on the need for more professionals giving service to clients, right? Here, to put it some way, the structure is fixed...” (F3, first in depth interview)

Such a discrepancy between what is expected from employees in support areas i.e. to be the experts in their fields, and the lack of growth opportunities that the organisation offers them in return could be influencing the way in which people in

these networks react to the organizational discourse of “being experts” and the need to become an expert in Organisation X, thus having an impact on the way in which they view knowledge sharing ultimately. It seems that for most people in these areas, careers tend to be more static if they stay in the firm, regardless of how knowledgeable they are. For them, career progression in the organisation is probably not an incentive to develop expertise, gain knowledge, or at least not in order to secure this knowledge or expertise or even brag about them in the organization. This does not mean that they do not use these tactics, but perhaps their rationale for using them is different and the organizational discourse of “being an expert” might also be differently interpreted and drawn on by employees in these areas when trying to make sense of how knowledge sharing happens in their networks. As Watson (1995, p.817) highlights, discourses “function as menus of discursive resources which various social actors draw on in different ways at different times to achieve their particular purposes...like that of making sense of what is happening in the organization”

Moreover, the relevance of this discourse for the actors’ understanding of knowledge sharing seemed to be different for people in MI network compared to people in HC network, particularly in the rationale for gaining expertise and share it, as will be discussed below.

5.3.2.2 “Others want to be recognised, but I like to help ”

The perception of a need for recognition by colleagues was present in the narratives of some people in MI network, particularly when talking about others’ motives to share knowledge. People also talked about themselves as experts but instead, claimed that their sharing actions were a means of obtaining personal satisfaction derived from the positive feeling that helping others gave them. Still, neither of these claims portrayed sharing as a way of gaining an expert reputation that would help individuals advance their careers in the organization.

Examples of how participants from the MI network appeared perceptive of desires for recognition in their colleagues’ knowledge sharing actions can be found in their

interpretations of their knowledge sharing behaviours. Even when people focused their explanations on behaviours performed mainly by actors in their internal areas, tactics to gain recognition were present in their accounts, regardless of the area they belonged to. Based on these accounts, it appears that one way in which the “being an expert” discourse works in support areas like the one MI network belongs to is encouraging knowledge sharing as a means to gain recognition. This recognition is nevertheless not formal and it does not result in growth opportunities in the organisation, since these are not available for most employees in these areas. Hence, for people in MI network, sharing knowledge is a way of gaining recognition of their peers, not the organisation. Following are examples of these interpretations. F5 thought people shared mainly to stand out, a way of gaining recognition through self-promotion, which has also been considered as an impression management tactic (Bolino & Turnley, 1999):

“...(their purpose when sharing)... is to show that I (they) did it, to stand out, to be seen standing out, to show off is perhaps the concept...(F5, first in depth interview)

Some of these interpretations also talked about tactics that involved a form of selective sharing i.e. only sharing with specific people, perhaps not only wanting to make an impression on them or to generate recognition from colleagues, but also to encourage identification processes and alliances with similar others in the network, which can be working as a tactic to gain some form of referent power, a base of social power according to French and Raven’s typology (Hinkin & Schriesheim, 1989).

Examples of this tactic can be found in the claims by F4, who is part of an internal area where everyone, except for the manager, shares the same profession:

“...look, I’ve noticed that for example my peers, I mean they share in different ways...for example one of them is studying something, and maybe he shares it only with the person that he thinks will understand (the subject) better, right?” (F4, first in depth interview)

“... sometimes you realize that perhaps you didn’t have that knowledge... they didn’t share it with you, so, especially when it’s ego...you (they) share it or you (they) say it to whom you (they) want to impress more...” (F4, first in depth interview)

These examples convey power-oriented motivations that people interpret from their colleagues’ sharing behaviours in network MI. However, these did not seem to be evidencing the need to become or be seen as experts in order to grow in the company the same way the claims of actors in HC network did. As explained before, they could be trying to encourage identification processes and horizontal alliances with similar others in the network, not necessarily with people in higher levels in the hierarchy. This can be working as a tactic to gain some form of referent power at the level of their network. These people might be then negotiating the meaning of what “being an expert” means in Organisation X, i.e. why it is useful or desirable.

Additionally, when talking about themselves, some actors in MI network, particularly non-managers, claimed to have altruistic motivations to share knowledge with others and obtained personal satisfaction in helping them. However, only one of them affirmed carrying out a specific proactive knowledge sharing practice regularly and also considered having gained his current expertise from other sources and independent activities, rather than those in Organisation X:

“The way I share knowledge with my interns, for them to obtain an added value from working in Organisation X is giving them courses based on my areas of expertise...it is out of free will...it’s a practice that only I carry out... (15 – 33) ...I have gained my expertise because I have dug in my area, like using the help button in “y” software, not because I have learnt it here... I rarely ask others here because sometimes I do very specific things that are not really done elsewhere in the organization.” (F7, first in depth interview)

This could exemplify how the discourse of becoming an expert is not being interpreted as a way of growing in the company or even as a formal path established in a training programme offered to employees in support areas like the one MI belongs to. People

might still be embracing the need to become an expert as a way of being in Organisation X, yet how that shapes the way they understand knowledge sharing in their networks might be different in each area, perhaps depending on the congruence between what is expected from employees and what the organization offers them in return for meeting those expectations. For example, in MI network, the need to become an expert might be understood as an alternative means of recognition for employees who are peripheral to formal systems of it.

The rest of the actors who claimed to have altruistic motives to share their expertise and knowledge, depicted themselves as willing to share when it was required and claimed to feel good about being asked for help but did not talk about any type of organizational reward they were getting from it. Thus, their interpretation of the “being an expert” discourse seems to be related to a form of peer recognition but not to the possibility of growing in the company. Examples of these claims are found in the following extract:

“...it’s like I’ve been here and there (in the organisation) and knowing a bit of everything allows you to be open to give information when somebody needs it, right?... (414 – 416)...I think it is satisfactory, right? That someone comes and asks for your help or support and that you are able to give it, well it’s satisfactory at a personal level...” (F6, first in depth interview)

So far, we have only discussed the interpretations of donating behaviours (own or others’) made by actors in network MI. However, an unwillingness to share from some actors in the network was also present in the narratives of other actors. Slightly different to HC network, people in MI network did not use the phrases “I am the owner, she/he is the owner” when talking about processes or projects they or others were in charge of. Nevertheless, they did seem to perceive a strong sense of territoriality from some of their colleagues, probably justified by job boundaries; an aspect of the firm’s way of organizing that seems to have an impact on their understandings of knowledge sharing and how it happens in their networks. An example of how job boundaries encourage unwillingness to share is given by F6 in the following extract:

“...I have been in different teams (in X) and I have always perceived the same thing. It’s like – this is my job, don’t mess with it – so, for example, if there is a new design on the webpage and no one asked for your opinion on it, you can’t just say – oh I think this design could be better if this and that... - because it looks bad...” (F6, first in depth interview)

Job boundaries were a frequent element mentioned in the interviews in all networks. As was discussed in the previous chapter on bureaucracy, they give people justification for confining knowledge and information they use in their jobs, and for setting rigid frontiers between each other that help them limit the extent to which other actors are “allowed in their territory” and how much information is “allowed out”. Employees in MI network, engage in efforts to reinforce the discussed boundaries and control their knowledge domains. This source of control over knowledge and information might be working as either an enhancer of people’s powerbase, perhaps in their way of becoming the experts in their area or as a way of avoiding threats to the actor’s image. The latter aligns with research on organizational learning that argues that individuals will tend to avoid engaging in learning behaviours – several of which entail sharing knowledge and information – that they believe could place them and their image at risk (Edmondson, 1999).

Job boundaries are set by the allocation of work and distribution of tasks, which are part of the managerial responsibilities. This is probably why for some managers in MI job boundaries did not seem like a threat for collaborative work (in which knowledge sharing is needed). For example, for F2, job boundaries do not seem to affect how closely people collaborate in the area, even when in fact they do affect how they share:

“...they understand their role, they understand the expectations of their jobs, they understand how their role contributes to the objectives and how it connects with their peers to reach their objectives...so in that respect, the knowledge that my (their) role entails perhaps is not needed by anyone

else...thus silos are formed but that doesn't mean they work isolated from each other..." (F2, first in depth interview)

On the contrary, for F6, an employee in F2's team, these boundaries encourage isolation and a lack of interest in what others could share:

"... sometimes you don't even know what the person next to you is doing because it is not related to your activities...(68 – 69)...everyone deals with a different subject so the guy in charge of design and multimedia is only interested in those topics.." (F6, first in depth interview)

5.4 Conclusions

It seems that the discourse of "being an expert" is embraced by employees in MI network in a different way than it is in HC network, which in turn makes it differently relevant for the actors' understanding of knowledge sharing in each of these networks. As a form of control, this discourse brings benefits to the organisation in the sense that it encourages employees to make efforts to become experts in their fields. Regardless of the effects of this demand in collaborative activities like knowledge sharing, the fact that employees in Organisation X strive for becoming experts is concordant with the corporate image that the organisation sells to the public and to its clients.

Overall, the discourse of "being an expert" serves as a form of control over employees via the idea of hierarchy and moving up the ladder in the organisation. Furthermore, this type of control (normative) embraces the idea that "managers can effectively regulate workers by attending not only to their behaviour but to their thoughts and emotions" (Barley & Kunda, 1992). In this type of control "managers more or less consciously and systematically, try to make the employees adhere to the values and ideals which they believe in—or at least the values and ideals which they believe that the company would benefit most from the employees believing in" (Alvesson & Kärreman, 2004 p.426). Normative control has been associated with post-bureaucracy (Johnson, Wood, Brewster, & Brookes, 2009), and has been considered particularly

useful in KIFs (Robertson & Swan, 2003), given that knowledge workers are difficult to manage (Scarborough, 1999).

It seems that Organisation X uses the discourse of “being an expert” as a way of normative control of its employees. However, this does not mean that it does this without problems or negative effects. In fact, the accounts discussed in this chapter show the competing logics within the organisation, as well as the unintended effects of them. On the one hand Organisation X wants their people to share knowledge, and even has a formal structure to support KM activities and Systems. On the other hand, their KM efforts are not inclusive and their organisational discourse emphasizes expertise as a resource to move up the ladder, which is one of the characteristics of bureaucratic organisations. They also engage in bureaucratic practices in the way information and power are distributed, (as was discussed in the previous chapter), in their strict division of labour and in their performance management system (focused on knowledge and expertise). They thus encourage a highly competitive atmosphere among the employees in support areas. All of which, undermines the possibility for knowledge sharing and collaboration among their employees.

It is possible that the difference in career development plans and growth opportunities offered by the organization to people in both networks has an influence on how the organizational discourse of expertise, even when it is not meant to be for the support areas is being interpreted, enacted and aligned to or ignored by employees in such areas. There seem to be different benefits and interests derived from this, associated for different employees positioned differently in the organisation. It is important to highlight though, that power-based motivations for sharing or for not sharing were found in the narratives of people in both networks, and that these seemed to also be shaped by how relevant the “being an expert” discourse was in people’s understanding of knowledge sharing in their networks. This means that knowledge sharing is a political issue and a source of power in Organisation X. Yet, it plays out differently among different groups.

In the next chapter, the case of Organisation Y will be discussed, along with the effects of bureaucratic practices and ways of organizing, which strengthen a focus on accountability as a different manifestation of normative control (managing fears and expectations) and which encourages defensive practices which deter knowledge sharing.

CHAPTER 6: THE FOCUS ON ACCOUNTABILITY AND THE DEFENSIVE PRACTICES IN ORGANISATION Y

6.1 Introduction

The previous chapter presented the case of Organisation X, which for this research is thought to be a typical KIF: a type of KIF that is often mentioned in research on knowledge management (e.g. Haas & Hansen, 2005; Sturdy, Clark, Fincham, & Handley, 2009; Werr & Stjernberg, 2003) a consultancy firm. Given their knowledge intensiveness and the relevance that knowledge sharing has for KIFs, I discussed in previous chapters that KIFs are assumed to be prone to enable and facilitate knowledge sharing. However, in this research knowledge sharing was not found to be strongly encouraged in either of the participating networks in Organisation X or Organisation Y. In the previous chapter, I discussed that both the organisational discourse and the way work is organised in Organisation X, promote individualistic, power-based behaviours that deter knowledge sharing, emphasizing its political nature (Hayes & Walsham, 2001; Heizmann, 2011), particularly as a collaborative action within actors in these networks. I have also discussed how elements of a bureaucratic structure in both organisations influence the patterns of knowledge sharing in the knowledge sharing networks examined and how these elements are reflected in the accounts and understandings of employees about how knowledge sharing happens in their networks and organisations.

This chapter is about the second case in this research. For this research a non-typical KIF i.e. not commonly found in research on knowledge management: Organisation Y, which is a publishing house. The aim of the chapter is to present and analyse data which emerged in the narratives of participants in Organisation Y, and which expands our understanding of the processes through which bureaucratic practices and forms influence and are influenced by the perceptions of people about knowledge sharing and their knowledge sharing practices in this organisation. In the case of Organisation Y, there was not an organisational discourse per se that was identified as an influence

of knowledge sharing. However, there was a defensive frame of mind and a set of defensive practices that were present in the accounts of actors in the networks studied, and many of them appear to respond to an accountability issue present in the organisation. These highlight the political problems that inhibit knowledge sharing, and make people hoard knowledge in favour of their self-interests (Currie et al., 2007). According to the data in this research, in both organisations, knowledge sharing is often shaped by the pursuance of self-interests within particular contexts.

This chapter and the previous one also expand our findings of the influence of context, though a bureaucratic organisational structure and the wider (national) context in the patterns of knowledge sharing discussed in Chapter 4. The data from the in depth interviews helped us understand the processes through which the organisational structure and ways of organizing influenced the way employees understood and enacted knowledge sharing in their knowledge-sharing networks in both KIFs studied.

The chapter is organised as follows: First, it gives a brief description of Organisation Y and explains why it does not formally manage knowledge. Then, relevant contextual details of each of the three networks studied are described and analysed. After that, the particular context of the organisation at the time of this research is outlined. Then, the main defensive practices present in the accounts of actors in each of the three networks studied are discussed. These practices are explicit in the prevalence of a fear of being exposed, which is a response to an issue with accountability, also present in the experiences of actors in the three networks studied (AC, KM and EC). Finally, some conclusions are presented.

6.2 Organisation Y: a non-typical example of a KIF

Organisation Y is one of the largest and best-known international publishing groups in the world and it is owned, along with over 40 other companies, by one of the world's leading print and electronic media organisations. The publishing company itself employs over 7000 staff (full-time) and operates in more than 120 countries around the world.

According to the publishing group's profile, which is freely available online, they prefer to give their companies a high degree of autonomy and avoid large centralized structures. In fact, one of the core values of this group is claimed to be individuality:

"Our intellectually and culturally diverse company is driven by independent thought and actions. We think in terms of the individual and collaborative networks, not in terms of hierarchy" (Publishing group web page, retrieved on April, 2nd, 2015).

However, this value does not seem to be permeated to all the organisations belonging to that publishing group. In particular, a centralized structure seemed to be the way of organizing in Organisation Y's branch in Mexico, which has one country director and the rest of the structure reporting to him in a traditional hierarchical manner. Hierarchical arrangements are representative of bureaucratic forms and structures. Actually, this way of organizing also appears to be evident in the way power and control over the information have been exercised for the whole time that the company has operated in Mexico. This was mentioned by some of the participants who have worked in the company for several years. For example, one middle manager talking about the power and control of the information in the previous management said:

"...it was very closed before and there was complete control of two people...literally two people..." (A1, SNA interview).

Another middle manager talking about how key information is controlled and kept in the top management to date said:

"...so, a simple example can show you that the information is not transmitted from the top and that they withhold too much..." (C2, second in depth interview)

This prevalence of a bureaucratic structure, regardless of the claimed values of the larger group owning this organisation can be a result of the influence of the national context in which the branch of Organisation Y operates: Mexico.

In comparison with the business consultancy firm in this research, this is a corporation, which is family-owned. Even in the past, when the company was not part of the media group that owns them now, they were a family-owned organization. This information is relevant because, as researchers have pointed out, family firms worldwide have several mechanisms to keep control in the hands of the family (Peng & Jiang, 2010; Schulze & Gedajlovic, 2010). One of them is to have a pyramidal structure, a traditional hierarchy system that seems to have prevailed, at least in the company where this research was carried out. In Mexico, this company employs around 600 professionals (full-time) and have operated throughout Mexico for over 25 years.

6.3 Lack of knowledge management in Organisation Y

Within this company and the group, there is no division or area in charge of the management of knowledge. There are no specific guidelines, practices or methodologies aimed at the management of knowledge either. This was a difference with Organisation X, which was accounted for in the sampling of cases. However, according to the country's director, my gatekeeper, they were about to start using a micro-blogging system that would work globally and on which high expectations were placed as expressed by our gatekeeper:

"...and this will be a major advance because right now, communication happens if you attend specific meetings, then you learn about things, also if someone sends you an e-mail... you have the tools every company has, right? Videoconferences, memos, but a tool aimed at collaborating based on a social network would be important to have, wouldn't it?" (D1 in depth interview)

This initiative was not local but was aligned to a centralized project from the headquarters of the company. As my gatekeeper said:

“...they are normally projects that come from our headquarters. In some cases, you will adapt some things but the truth is that the tools we use are the same you will see in our headquarters and in other countries in the world. It is standardized (and compulsory), which makes it much easier...”(D1 in depth interview)

Still, according to my gatekeeper, they could also adopt local practices that can be shared with the representatives of other countries in executive meetings twice a year.

One of such practices is an annual sales meeting that is held at a national level once a year. This is an exclusive event for the staff in the sales, marketing and academic consultancy departments. However, the year data was collected the publishing department was also invited to the meeting. All the other departments and employees do not participate in this event given that:

“...a person that works in logistics doesn't need to know these things. A person that works in administration has other problems...this is basically focused on these areas (sales, marketing, academic consultancy) and publishing...” (D1 in depth interview)

What this tells us so far is that Organisation Y did not really have a knowledge management strategy in place at the time of the research. However, this did not seem to worry the Country Director much, and on the contrary, appeared to be regarded as a common practice in similar organisations. As claimed by the new Country Director, they were *“pretty standardised”* and had the *“same tools for communication that you can find in any multinational organisation”*. This was in turn, confirmed by people in the participating networks, who said that there was no methodology to share knowledge in the organisation.

What organisation Y did have, were formalised procedures and guidelines on how to handle information in the departments that were tied to the allocation of work, and

other procedures in each department, like their reporting system. Also, employees at Y had signed confidentiality agreements that had recently been adopted to restrict employees from disseminating company owned confidential information. Additionally, I have explained that as part of a global strategy for sharing knowledge they were about to launch a micro blogging system that was aimed at encouraging sharing among employees both locally and globally. However, at the time of data collection, this system had not been implemented and people seemed unaware of it. No other practice was formally organized for the company as a whole, that was aimed at encouraging knowledge sharing but each department was free to implement one if they wanted to. This in turn, placed a strong emphasis on the managing style of the heads of each department, and their managing teams. Also, as will be seen in the quotes of D1, it placed the responsibility of successful sharing on these managers. This prominence of the managers their individual responsibility and their vertical accountability for their departments is a feature of bureaucratic organisations (Hales, 2002). Once more, this is evidence of the prevalence of bureaucratic practices in a KIF, this time, in Organisation Y, as are many of its other features, outlined previously.

I will now provide contextual information of the departments where the participants of the study worked and where their knowledge-sharing networks were located. I will do this because aspects of these stories were evident in the patterns of knowledge sharing discussed in chapter 4, and because in the three networks, data highlighted the relevance of key actors, who, despite having the possibility of aiding knowledge sharing in their networks, were highly influential in deterring knowledge sharing in them.

6.4 Organisation Y participant networks

Three departments participated in this study: marketing, publishing and academic consultancy services. Each department presented contextual characteristics that are worth mentioning because they inform the findings of the SNA data that were discussed previously, and enhance our understandings of the qualitative data emerged in the in depth interviews and discussed in this chapter.

6.4.1 The marketing department (KM network)

The marketing department was quite small when the research started. They were eight people including their Director. There were also two interns that had been there for two months and were only staying for four more months so they were not invited to participate in the study. As was explained in Chapter 4, the department was divided in two clusters: Because this group had worked together for two years approximately, I decided to work only with them when the department grew after the first month that data collection started.

In Chapter 4, part of the story of this network was discussed. Particularly, I have discussed the relevance of B3, the coordinator of one of the clusters in the network as a whole. This is important to mention because it was this coordinator who apparently led the Marketing team in its beginnings, a little more than two years before this research was carried out.

The relevance of the “story” of this team and the coordinator’s key role in it was made evident in the network maps and patterns of sharing, as well as in some of the interviews. Even the director acknowledged the coordinator’s position in the team in one of the interviews:

“...they (the members of the team) encourage it (integration) through sharing and reciprocity. This is what I have perceived. Honestly, B3 has the secret, B3 hired all of them, was responsible for that and what she promoted in them is wonderful, it is very good...” (B1 first in depth interview)

And when talking about who people approached to share something or ask for something the Director also said:

“...I’ve told every one of them that my door is open, to approach me if they need anything. Naturally, they will approach their direct boss, who is B3 for most of

them but even in the case of B5, who does not report to B3 anymore, B5 feels more trust with B3 to share what is happening at work.” (B1 first in depth interview)

Apparently, this is an example of informal knowledge sharing that cuts across formal roles. It seemed to be the idea that some people had of what B3 was doing in the network.

In fact, people from the other two participating departments also acknowledged the relevance of B3 and of other participants as key influential actors of their teams in their interviews. For example, from the Publishing department, when discussing the relevance of strong leadership in the different departments of the organization, a coordinator said:

“...it’s a strong team spirit. I mean, I see teams well formed, B3’s team, G1’s team, A1’s team, you see people with good leaders too...” (C6, second in depth interview)

From these extracts, one can build a positive image of the influence of B3 on this network. Indeed, and remembering what was discussed in chapter 4, B3 could even be enacting a brokering role between the network and other departments in the organisation.

However, regarding internal knowledge sharing, data from this research showed that B3 was regarded by other actors in the knowledge-sharing network as one who withholds much information from them, even when B3 was aware of the discomfort and frustration this caused in some of them. B3 also acknowledged this. The following extract exemplifies how other actors in this network felt about B3:

“...the moment the department was divided, B3 started to be like... this is my information, these are my things and I don’t want to share them, right? (43 -45) ...so sometimes it’s frustrating ...you are not involved but one day in a moment

they tell you - you know we need to do this (91 – 92)...I think B3 decides it herself. Her view is that everything is confidential, always and no one except her and her assistant can know” (B5 first in depth interview)

In the next extract, B3 acknowledges and tries to justify her unwillingness to share:

“... we (B3 and her assistant) don’t share it (information) not even within the department until the day we have to do it, unless we need their help and even then we share only little bits...(107 – 110) ... I think that B4 always gets offended of not knowing until the end – why are you not telling me, I am designing for something that I don’t even know what it is... - and he plays the victim but that’s the way it is... (B3 first in depth interview)

B3 also claimed that she shared whatever the others needed for their jobs, but if it was not strictly necessary, then she would not share it. Which implies that she decides who needs what knowledge or information from the one she has access to and which she can withhold.

Something similar seemed to be happening in another network in Organisation Y: the AC network, and there are also similarities with the third network studied, the EC network. The stories of these networks regarding the relevance of specific actors to the undermining of knowledge sharing will be discussed in the following sections.

6.4.2 The academic consultancy services department (AC network)

The second department that participated in this investigation was the academic consultancy services one (under a different “brand” name). This was an independent department for most part of the study until their operating area became part of the Marketing department and their sales team started reporting to the sales department.

As was explained in Chapter 4, this department was formed a little more than four years before the research was carried out. During those initial years, they were located

on the same floor as the sales department and even when they did not report directly to the Sales Director, the climate and power dynamics of that department and the “4th floor” seemed to have influenced the people that were part of the team since its early stages. This was something that people mentioned in their interviews from the beginning. Actually, and in comparison with networks KM and EC, this was the network where people appeared to be more conscious of the negative influence that the way of organising in Y had in them, and they seemed to relate it particularly to their experiences with the sales department. The general manager of the department talked about this in the first interview:

“some of us, not everyone, the ones who come from the 4th floor, which is traditional sales, traditional book sales...maybe we are stuck to that control and that way of thinking that you better not say anything to avoid getting yourself into trouble. And you remained silent. Because the situation was so serious back then that you risked your job if you didn’t agree...a tyrannical way of working...”
(A1, SNA interview)

Another team member said:

“...many of us, well, the eldest (referring to seniority) like A2 and A3 come from Y (the 4th floor) and are like - I’m not looking for what really caused the problem, but for someone to blame- and it’s that philosophy, they don’t share the information sometimes and when there is a problem, they don’t look for a solution but it’s like – it’s your fault, I told you so! – And you are like – when? ...” (A4, first in depth interview)

At the beginning of the research, the department was formed by 15 people (full-time staff) led by a general manager, an academic manager (who left the organization two months after the data collection started) and four coordinators. One of these coordinators left the organization after the academic manager did and the administrator left after the first in-depth interview. By the end of the data collection, the general manager had left the organization too and the organizational changes gave more responsibility to the three remaining coordinators, which was evident in the last

observation made to a meeting of this team, where most of the discussion was about how things were going to work from that moment on with the two operational coordinators as the formal department's leaders and the sales coordinator as the sales leader.

Similar to KM network, there was an actor in AC network, who appeared as key in the hindrance of knowledge sharing. This actor was A2: the senior consultant. A lot of the story of this team happened around A2, who was the only founding member that was still part of the department. The department started with three people (A2 included), who used to do everything from the development of the products, projects and proposals to the selling, administration and operation of them. When the other two members of the team left the company or were promoted to different positions, A2 became a type of "one-man-band" for a while until the company started hiring some staff to help. Later on, the company decided to invest on the growth of the department and recruited both external and internal people. A former founding member came back to the team (and left again before this research started) the team grew 5 times its size and was moved to a floor on their own in the building. Even so, the two managing positions in the department were offered and given to other people and A2 remained in the same position, with coordinating responsibilities and some junior consultants to manage but was not promoted.

This raises some similarities with the story of the marketing department, where the remaining founder of the department (B3) was also left with managing responsibilities but not promoted after having "kept the boat afloat" for the company. The two stories highlight the effects of a bureaucratic promotion system where as Höpfl (2006 p.10) explains, "promotion is not earned by merits".

Additionally, and since professional qualifications and knowledge are more important than merit in bureaucratic organisations, it is perhaps not coincidental that in both cases, the people that received the promotion that B3 or A2 might have expected (to a managing position), came from outside of their departments and held master degrees which neither B3, nor A2 had.

It also resembles the KM story given the influence that this senior consultant (A2) had in the knowledge-sharing network of the academic consultancy services department. A2, being a founding member of the department, and having access to most information, could have carried out a brokering role inside the network and with the outside of it, having a positive impact on knowledge sharing in the network. However, this did not happen. Instead, A2 was considered one of the actors, which shared less in this network. As an example of how this was evident in the interviews of the people in this network, the general manager said:

“...someone very important in terms of knowledge as such is A2 because A2 has been in the team since its very beginning, before me. A2 has established a very important role of...how can I explain...A2 possesses all this information and again, even with me it is difficult to get information from A2. Sometimes A2 manipulates information to A2’s advantage and is a very important character in the team...very strong...sometimes I think it is one of the biggest problems in the team (laughs), precisely there...” (A1, first in depth interview)

Other actors in this network also claimed that A2 withheld information and knowledge from them even when knowing that this could affect their work.

“For example A2, with contracts, he makes deals with big clients and one week or two before (the project has to start), he tells us – hey this is happening – wait a second! You should have told me this a month ago! ... or information like – hey we have this problem, what’s happening? – I don’t know – and you won’t get anything from him except for his – I don’t know – but if they have the information, why do they wait until last minute to let you know what’s going on?” (A4 first in depth interview)

A2 was also aware that he withheld information and knowledge from other actors in the network:

“...what happens is that if there is someone that has knowledge and who perhaps has not shared it completely, that is me, right? Given the time I have worked in AC in this case. Because I have more time here, then I understand each and every process because I’ve been in each step of each and every area and each and every service and product, right? Besides I understand the vision and the rationale behind things, right? And we are lacking maybe the initiative or maybe the spaces where knowledge can be shared...” (A2, first in depth interview)

So far, the two key actors in the networks described were apparently refusing to carry out brokering roles inside their networks, which might be an effect of the bureaucratic promotion system in Organisation Y. According to the SNA data discussed in Chapter 4, they were central, probably given the fact that they handled a large amount of information and were the most senior members of each department. People knew A2 and B3 could share both valuable knowledge and information and often they would try to approach them with questions. However, B3 and A2 voluntarily withheld information, and found excuses to avoid interactions where knowledge could be shared. People in their networks were aware of this too.

These two actors occupied pivotal roles in their knowledge sharing networks. However, they obstructed knowledge sharing by withholding information and knowledge from others. This behaviour, given the stories just presented, could be considered as political. It could be aimed at securing their power position, via protecting their knowledge base.

In a similar vein, the third network was also influenced by a key actor, which was no longer part of the network at the time of data collection, but who had been key in the department until a few months before.

6.4.3 The publishing department (EC network)

The third department and the last to come on board to the research was the publishing one. At the time of the research there were 26 persons working in the area (full-time staff) and more were being hired until it got to 35, after data collection was

finished. Only the first 26 people were invited to participate in the research. This contextual information is important because even when this was the largest department from the ones interviewed in Organisation Y, they seemed to be the one where clusters were more distant from each other. Not having worked with more than four people in a department that was almost nine times bigger seemed like evidence that knowledge sharing was not really a priority in this department.

As was explained in Chapter 4, work in this department is designed with a high level of interdependency within each cluster but not among clusters. Therefore, it happens that people working in one cluster, do not really know what the other clusters are working on, which reminds us of the strict boundaries that bureaucratic job design based on strict differentiation and a clear division of jurisdictions draws between people in this organisation. A theme discussed in chapter 4.

This network's story has been outlined in Chapter 4. The key actor I referred to previously was the former publisher and head of the department. The positive and negative influence of this publisher's way of working and the lack of a substitute for that position after the recent changes in the department were made evident in the interviews with people in the network. To give an example, a coordinator, who led one of the clusters said:

"...what happens is that for me, it's not clear who does what. When S5 was here, it was clear that she handled all that...now I am starting to handle that information but no one has told me – you are going to handle this and...no one has told me..."(C6 first in depth interview) and in the second interview, when talking about this lack of clarity, the coordinator said: *"...of course this has an impact because I think that there is a lot of pressure for us right now. Even this issue of the information, I think there is a lot of pressure. What do we say? How do we tell them? When do we tell them? Do we tell them now? Do we tell them later? Well people notice that, don't they?"* (C6 second in depth interview)

More evidence of the influence that the former publisher had in this network, particularly related to knowledge sharing was expressed in the claims of people about

a past time when information was strictly controlled and people were afraid of speaking out:

“... I think that when S5 was here, she played a much more central role, I am much less of a controller...when she was here, she had people tightly controlled...” (C1, first in depth interview)

A coordinator also said:

“... I think (fear of speaking out) happened a lot in the past and it was because of the (S5's) attitude, I mean if you tell me everything is wrong and that you have privileged information and that you can decide and I can't because I don't know a thing...” (C5, first in depth interview)...incredibly it used to be very difficult seeing people even sitting with someone else to work together...that didn't exist, it was very difficult seeing people working together. It's like (S5) needed to control all information, to be in control of what was happening outside (her office)...” (C5 first in depth interview)

This contextualisation of the networks studied highlights commonalities among them, mainly around the relevance of specific actors in each network to deter knowledge sharing, when they could have been knowledge brokers, who helped knowledge sharing be better in their departments. The three of them were in power positions where among other things they had access to more information than other actors in their networks. This in turn, might have encouraged them to perform political behaviours of a defensive type. Defensive behaviours, which are political in nature were highlighted by Ashforth and Lee (1990). These authors claimed that defensive behaviours in an organisation intend to “reduce a perceived threat or avoid an unwanted demand. More specifically, to avoid action, blame, and/or change” (1990, p.623). In these cases, hoarding knowledge and information, thus protecting these actors' “territory” may be a behaviour that aims to secure their positions in the organisation as well as their power base avoiding change partly because actors may not trust the organisation (if it has disappointed them in the past).

This hoarding can also be a negative result of what has been called “psychological ownership”, where employees may resist sharing the target of ownership (Pierce, Kostova, & Dirks, 2001), in this case knowledge or information they feel belongs to them. Given that these actors were influential in their networks and held key positions in the organisational structure, their behaviours impacted the way knowledge sharing happened and was understood in their departments importantly. These types of behaviours could have been encouraged by the bureaucratic practices in Organisation Y, like its promotion system, and its hierarchical arrangements. Being in a central position (coordinating, supervising or managing others), the influence of these actors was stronger than if they had been in the bottom line of the hierarchy.

The following sections focus on the ways in which other defensive practices were prevalent in Organisation Y and how they had a negative impact on the way employees from three networks in its departments understood knowledge sharing and enacted their knowledge sharing networks. These practices were present, regardless that the new directing team had apparently tried to convey a more positive message to the organisational members about the way things would happen in Organisation Y under their management. I will discuss first this change in management and the ideas of the new Country Director that were relevant for my analysis.

6.5 A new broom sweeps clean?

Before the data collection, there were some changes in the directing team in Organisation Y. Specifically, the director of the country’s office changed and brought with him a new director to the marketing department. This presented Organisation Y with an opportunity to change different aspects in the way things happened in the company, knowledge sharing included. In fact, it invoked some changes in the strategy, such as the knowledge-sharing initiatives discussed previously (the micro blogging system and the inclusion of the Publishing department in the Sales Convention). These changes had started happening only a couple of months before data was collected and coincided with the appointment of the new Country Director (my gatekeeper), who

was also perceived by some participants as intending to lead some important changes in the company in general. Some participants showed awareness that changes were happening under the new management and even talked about a different atmosphere in the company, which they regarded as positive and made them feel more willing to share. An example of this is the following claim:

“...under the new management we are trying to import this new way of being a company (53 – 55)...I feel safe to go to the different departments and ask for help...It wasn't like that before. It was very closed and there was a total control of two people, literally two people...now I feel that it is finally opening up but it is very recent...” (A1, SNA interview)

In line with this, the new Country Director expressed confidence when claiming that in his view, people in general in Organisation Y, felt free to come forward and share their ideas, needs and worries. It is important to remember, that he had been in that position for just a couple of months when the interviews took place:

“...in general, people participate a lot. That's the truth. And we listen to them and we normally implement things that have to do with their needs and worries” (D1, in depth interview)

He also thought that at a departmental level, knowledge sharing was basically dependent on the workload and pressure each department had at different times of the year and was aided by the skill of the managers to “make things flow”, placing all the responsibility (accountability) of successful knowledge sharing in the heads of each department, which exemplifies the bureaucratic features of “individual managerial responsibility and vertical accountability for an organisational sub-unit” (Hales, 2002 p.52) still prevalent in Organisation Y and in the new management:

“...it (knowledge sharing) mostly depends on the time of the year and the project that they are working on. If they are very stressed...there will normally be problems but this is logical and like I said, it is the manager's talent to make

things flow. If it's a "quiet" time of the year then people will share a lot because they will have time and the situation will provoke it..." (D1 in depth interview)

The quotes above transmit two basic ideas: The first one based on the quote from A1 that under the previous management things were perceived (at least by some) as being less open, probably limiting knowledge sharing. The second based on the claims from the new director, that the new management was communicating a positive message, where people are listened to, and if there were people that did not want to share knowledge or "raise their hand" it was because of their work load, in a way, individualising the problem. Nevertheless, the positive ideas of openness from the country's director were not prevalent among employees who participated in this research at all. Which relates to the discussion in Chapter 4, that the KIFs studied in fact were retaining key features of bureaucracy even when being knowledge based. Moreover, in Organisation Y, feelings of distrust and a blame culture were frequently conveyed in the claims of interviewees from the different networks studied. Issues like accountability and a fear of exposure emerged in the narratives of interviewees, and were important elements found in our analysis of the narratives of employees in this organisation.

The following section talks about the defensive practices that created and re-created these perceptions of fear and distrust in Organisation Y and which negatively influenced knowledge sharing in the networks studied.

6.6 The defensive practices in Organisation Y

In contrast with the findings in Organisation X, there was not an official discourse transmitted by the new director and his new directing team that was prevalent among employees. On the contrary, and based on the analysis of the claims of interviewees in Organisation Y, there was a ubiquitous mindset that had its roots in the practices of the previous administration of the country's office. This frame of mind was made evident in the accounts of employees of practices that were still in place in the

organisation and which were grouped in two main themes, which emerged from the interviews with employees from Organisation Y.

There were mainly two manifestations of defensive practices in the claims of participants from organisation Y. All of them were related to issues of accountability. In the first set, the common practice was for people to condition their sharing of knowledge, information and everyday communication to having evidence (e.g. written means) of it. This allowed them to be able to hold someone accountable for a given action or omission derived from that sharing, basically covering their backs.

The second one was the fear of being exposed to criticism or surveillance, which made people wary of what they would share, and who they would share it with, since that would put them on the spotlight, vulnerable to criticism, accountability and blameworthiness if there was any problem or mistake derived or related to that sharing. Each of these practices had different relevance in the different networks in Y depending not only on how knowledge sharing was organized in their departments but also, on how much contact they had with the rest of the company and the common practices in the organisation, derived from a defensive frame of mind. The tenure of the interviewees was also relevant because of the amount of time employees had been exposed to the blaming culture that most tenured participants talked about in their interviews and which was reported by them as a strong characteristic of the organizational culture during the previous administration. The practices previously described can also be seen as indicative of this culture.

A blaming culture or culture of blame has been previously described in research on organisational learning (Vince & Saleem, 2004), and in the fields of safety management (Waring, 2005) and error management, particularly in health services (Collins, Block, Arnold, & Christakis, 2009). For Vince and Broussine (2000, p.26) organisations, which are characterised by a blame culture, have a low tolerance of error and see problems as somebody's fault (individual or group). Dalton (2005 p.368) also claims that a culture of blame "supports expeditiously finding a culprit and punishing the individual (or individuals) as a means of establishing that the problem has been addressed". Also

and as claimed by Waring and Bishop (2010 p.338), in order to share knowledge, “staff need to feel they can speak out without being embarrassed or blamed”, that is, they need to feel there is enough psychological safety, so they can share. It is then understood that a culture, which encourages blaming others, will be detrimental for knowledge sharing.

In the following sections, the two representations of the defensive practices found as themes indicative of a culture of blame will be discussed, along with the sample claims that conveyed these representations.

6.6.1 The fear of being exposed

A fear of being exposed can be linked both to a culture of blame and one where accountability is emphasised. In Organisation Y, this emphasis on accountability is likely to have encouraged a culture where people expose each other mistakes and criticise each other performance as way of protecting themselves. This environment would then be a hinderer of knowledge sharing, given that people would not want to be vulnerable to criticism, ridicule or blaming.

There were participants in all networks in organisation Y that talked about a fear of ridicule or criticism of what they shared due perhaps to the potential consequences of exhibiting a perceived lack of knowledge or control or of being exposed as incompetent. The fear of ridicule or criticism has been documented before as a barrier to knowledge sharing (Ardichvili, Page, & Wentling, 2003a) and according to Schilling and Kluge (2009) fear of failure and blame has been amply considered an obstacle for organisational learning, particularly in the generation and sharing of new ideas. Also, according to Milliken et al (2003, p.1453), “one of the main reasons for employees to remain silent is the fear of being viewed or labelled negatively by those above them in the organisation”.

Additionally, Willem and Scarbrough (2006), in their study of social capital and political bias in knowledge sharing found that between units of the same organization, when

one unit was heavily criticized by the other units for problems (or mistakes) they had had in the past, this created distrust and a fear of criticism that instead of resulting in open conflict, encouraged knowledge and information hoarding from that unit. This resonates with the results from Organization Y in our study, since a fear of criticism, or to being exposed which was likely rooted in previous lived or witnessed experiences in the organisation was present as a practice of a defensive frame of mind in the accounts of actors in the three knowledge sharing networks studied.

Particularly, people in network AC seemed notably affected by a fear of making mistakes and being exposed to ridicule, criticism or blame in the organisation, and they showed themselves to be very aware of some actions that people in organisation Y take to expose other people's failure or find a scapegoat for an error or a problem. The following extract shows how fear to be exposed, emerged as a theme in AC's participants' discourse about knowledge sharing in Y:

"...the policy here is zero tolerance to mistakes, right? I mean, when we know that the only thing you can learn from are mistakes, right? you stop (sharing) because I(you) don't want to be exposed, right?" (A3, first in depth interview)

This pressure on the individual to perform flawlessly and without the need to develop or share new knowledge, as if he/she knew it all already, nurtures the fear to expose knowledge gaps, mistakes or even the slightest imperfection in one's sharing actions:

"...I used to think – these are a bunch of assholes who want to withhold information and not share it – but it also has to do with fear, it has to do with fear maybe because their techniques are not the purest...they are not flawless so this exposure...that people say – look at how he did it!! – so they don't want to be exposed to that... I think people here are afraid to share, of course they are..." (A1, first in depth interview)

Among the things that contribute to this representation of the defensive practices, participants in AC network talked about how people try to expose others' failure or use

them as scapegoats as a common practice in Y, which in turn, prevents people from sharing:

"...e-mails are more like an occasion for...it looks as if e-mails work more to exhibit someone than as a tool for communicating. If a problem arises (because) someone made a mistake, you'll get the e-mail ..." (A2, first in depth interview)

"I mean that's the culture here...we're going to look for a way to protect ourselves, it doesn't matter who else falls but I mean It's me, me and only me, right?" (A2 in depth interview)

The fear of being exposed was a recurrent theme mostly in employees with more seniority in the organisation. It seemed to have emerged and was at the time reinforced by common practices in Organisation Y that date back to the previous administration of the country's office. Among these practices were: exposing others mistakes or omissions, pushing someone to do something by coercive means and covering one's back. These practices along with the fear of being exposed, were described by people in the other two networks too, even when some participants in them believed that they mostly happened outside of their departments. The following extracts show sample descriptions of these themes in EC and KM networks:

From EC network, the fear of being exposed and the consequent silence of people were perceived by actors in the network:

"...There are a lot of people who are afraid, who don't want to share information or even doubts for fear of being ignored, of receiving a negative reaction from the team. I perceive that from editors mostly, right? Because they are the "working horses" and they don't trust that they can say what they think about our procedures, if they work properly or not... they limit themselves to obey. And of course they all have interesting things to share, right? But they don't and it is because of that... Now I have noticed that people share

something in a meeting and others attack them immediately, they do... it's like a very impulsive negative reaction..." (327 – 325)... " now at a higher level (coordinators), people also reserve their right to talk and give an opinion...-(they say) what for? We will do things the way they must be done, the way X person wants-...and so there are a lot of people who avoid getting themselves into trouble (by speaking out), right?..." (C7 first in depth interview)

"Yes it has happened that even people believe that...for example you went into a meeting and you came out and they looked at you like they thought – they are handling ultra- secret information – and that stopped people from sharing their point of view. Even for silly things like deciding where to have the annual lunch, when you had the meeting nobody talked, only a few did. The moment you come out of the meeting, they start talking and sharing their opinions – why wouldn't they say it at the meeting?" ... (C5 first in depth interview)

From EC network these are some descriptions of using e-mails to expose someone's omission and using e-mails for coercion:

"...I think the way things work does have an impact. Maybe not much in the department but it is something that permeates to other areas, right? I mean this thing of asking someone for the second time to do something and copy his boss on the email...it is very strong in the organization in general, like – hey, I asked you to do this five days ago and you haven't...- and they copy the boss..."(C1 second in depth interview)

"...and when someone is not doing their job, the e-mail is a way of saying – well, I'm going to send a critique of this , I am going to copy his boss so this person can see and these other persons are aware and that way, push people to do their job..."(C4, first in depth interview)

From KM network these are sample descriptions of exposing someone's mistake and covering one's back:

“...I mean I think that they (others outside KM) often do it, like if someone does something wrong, they take the opportunity to write everyone about it and say – why this and why that and blah, blah, blah – instead of saying – hey, did you forget about this? How can I help you? - or – that thing that you did was excellent! – but that doesn’t happen in KM” (B3, first in depth interview)

*“...in terms of knowledge, there are some obstacles, right?
Communicating...There’s delicate information that...perhaps like in other companies, people get themselves into trouble and instead of raising their hands, they try to cover it up, to whatever cost, right...” (B1, first in depth interview)*

Along with these practices, there is a perception that the organisation disregards the need for spaces to share knowledge, because it is assumed and expected that people already know how things should be done – the same way they have been done for many years. Thus the demand for flawless performance, because not knowing how to do things flawlessly is not a possibility in Organisation Y:

“The way the company was created meant that the value in terms of knowledge or information is based on experience, not so much on learning... (346 – 348) – I (they) have done it for many years. I have been doing the same thing for 40 years – There is no way of sharing knowledge, there are no spaces in Y to do it. First of all, you already need to know how to do things, second, if you don’t, well you come and learn, and you learn by being thrown into the field, right?...if you do well, you are a star...if you don’t, then you were always stupid and didn’t know anything” (A2, first in depth interview)

What this representation of the defensive practices showed, is that contrary to what was expressed by the country’s office director, people did not really feel encouraged to come upfront and share or ask that someone else shared. Instead, the mindset they are being encouraged to have is one where sharing entails a considerable risk of being

criticized, exposed as a failure or be used as a scapegoat by others; where employees should fear being exposed to ridicule, criticism, or any other negative feedback based on what they share and who they share it with. Such a mindset would certainly prevent people from sharing openly and spontaneously and would strengthen feelings of fear and distrust among co-workers.

The next section discusses the second representation of the defensive practices in Organisation Y. These practices were directly related to the accountability emphasis in Organisation Y.

6.6.2 The accountability issue

The second representation of the defensive practices is more strongly oriented to the “issue” of accountability. The concept of accountability has been defined in research in different fields. In the organisational field, particularly in the Human Resource Management literature, accountability is conceptualised as “involving an actor in a social context (e.g. the employee in the organisation) who potentially is subject to observation and evaluation by some audience(s) (e.g. his colleagues, his boss)” (Frink & Klimoski, 2004). According to these authors, the actor’s behaviour will be compared by his audience against a standard or expectation, which will very likely result in important outcomes for him (e.g. sanctions, rewards). For Lerner and Tetlock (1999), the concept of accountability can be summarized as “an explicit or implicit expectation that others can demand that one justifies his beliefs, feelings and actions” Thus, accountability includes not only the expectations of the audience but also the expectations of the actor.

Organizations use different mechanisms as accountability sources such as: reporting relationships, performance evaluations and personnel manuals (Thoms, Dose, & Scott, 2002). Even when accountability has been regarded as key for the survival of social systems like organisations (Gelfand, Lim, & Raver, 2004), when these sources are also a vehicle to assign blame to others, accountability can become an issue and contribute to a defensive mindset where people understand that they must cover their backs

while accumulating evidence that holds someone else accountable for any potential problem. This in turn can have an effect on the way people understand knowledge sharing as was observed in Organisation Y.

The accountability issue was notoriously relevant in the claims of participants from the EC network. The EC network is located in a floor with no other department sharing the space with them, (just as with the AC network) and the layout of their desks is similar to that of the other departments from Organization Y (i.e. open plan, people facing each other with no physical barriers for face to face interaction). However, during fieldwork, people in this network did not move much from their desks. Compared to AC and KM, where people would constantly move around, shout out questions and comments from chair to chair and in general be “noisy”, actors in EC network were quiet and, with few exceptions, remained in their places for most of the time. This could be partially explained by the characteristics of their jobs, that demand that they work long hours in front of the computer, paying close attention to detail. However, this does not mean that they are supposed to work in isolation, avoiding collaborative work and the sharing that this entails. In fact, this network was organized in teams in which participants perceived themselves as highly dependent on each other’s work. It seemed then, that this “quietness” was also a consequence of the way in which knowledge sharing was organized in this network and the impact that the issue of accountability had on the actors understanding of it. C6 talked about this in the following extract:

“...it is very peculiar but there’s no...like in other departments I have seen that people stand up, go and ask – hey I need this... - here it’s always by e-mail. It is like internal policy between commas, that we have always done everything written, right? ...(20 – 23) ...and in general there is this rule that is not said that everything goes in writing and what goes in writing can be on your favour or against you...”(C6, first in depth interview)

Key in this statement is the weight given to “written evidence” of what is shared, agreed or even said between co-workers and the awareness of the fact that this

evidence can benefit you or work against you, being used as a power instrument, as Höpfl (2006) claims a characteristic of bureaucratic organising. It made people very wary of what was documented in the network. Interestingly and contrary to what the previous quote says, the EC network had not “always” done everything written.

According to claims of some of the senior participants of this network and even from other networks, they had gotten to this state of “documenting everything” after several years of tightening control and “polishing” their documentation system.

Additionally, their “quietness” was not a characteristic of the department in the past but they had become quieter and reduced their frequency of face-to-face interactions. The following quotes illustrate both claims:

“...let me tell you very quickly about our colleagues in EC network, who have taken 5 years or so in fine tuning their documenting mechanisms. It’s like having the evidence and saying – in this e-mail I informed you that I received this, right? And with this other one I am informing you about this -... they even have a template for their e-mails... it’s taken them at least 5 years and they almost don’t move a pen if there is no documented evidence that supports the move, right?...” (B4, second in depth interview)

“I think that in face-to-face (sharing), which was what we used to do a lot before, you have the opportunity of...aside from transmitting the information requested, you are in touch with the other, right?... and it helps you to build relationships...I think that would bring us closer together as a team...” (C9, second in depth interview)

Using written evidence to make people accountable for the information in it, to feel “protected” by leaving a trail of what was said and shared, was also an argument found in the interviews from participants of other networks in Organisation Y. This was considered an advantage of written forms of sharing. Though it was in EC network

where this practice was formalized and performed by all members of the network as part of the way they were expected to share information or knowledge between them.

Another argument in favour of the choice of written sharing was judging as “informal” or “non-memorable” what is agreed or said face to face claiming that people forget what they say and what people say to them. These are all claims that exemplify the same defensive mindset and the accountability issue that makes people in organisation X feel very wary of what they and the others share and what evidence is left of the exchange. The following extracts are examples of such assertions:

“ People forget, they don’t remember what they agreed to and in a moment of anxiety they say – you never told me anything... so I think it is very valuable to write an e-mail after we chat...” (C2, second in depth interview)

“...Well if there is no proof of what was said and what was not, you can forget it and then someone can later say – you didn’t tell me... and there is no proof of what you said or how you said it” (C11, first in depth interview)

“...it has to be written to some degree because if not, then later someone can deny that they knew something or that they were informed or something. So if it is written – there’s the e-mail that I sent you -...” (C4, second in depth interview)

“... people often don’t remember their promises, what they said, what their instructions were...so we always...well having it written gives you some evidence that – you said this and that’s why I did it – because often when the agreements are verbal (face to face) people forget them...” (C10, second in depth interview)...they say that words go with the wind...” (52 – 55)

“...communication (face to face) tends to vanish, right? There’s nothing written... and that’s a disadvantage...” (C1, second in depth interview)

Participants from the three networks conveyed this accountability issue, when arguing that there was a need to have written evidence of what someone had said or agreed, so that person could be held accountable for that sharing and the actions or omissions derived from it.

It seems that people from all the networks studied in organisation X prefer that their exchanges of knowledge and information are documented, particularly if there is the risk that their interlocutor forgets the content of these exchanges, and especially if this content is positive or “safe” for them. The following are extracts that exemplify how this perception (the accountability issue) was present underlying in the claims of people from the other two networks as well:

From AC network

...Face to face is... maybe unconsciously there is the expectation of having no commitment. I mean, I tell you something, I give you numbers, I give you information but since I don't put it in writing, I mean I don't have...if I needed to, I can easily say – Well I don't remember having said that...- I mean I hear that very often, right? I mean - no I didn't say that, what I really wanted to say was this...right? – (A3 first in depth interview) and you see it here all the time.

The spoken word then has no perceived value and people are not trusted to own up to what they say or agree in a spoken exchange. This perception that you need to rely on written evidence of what is exchanged, knowledge or information implies that people are aware that their exchanges will be documented too and that they can be held accountable for the content of them. They will, in turn demand the same from the knowledge or information exchanges of others.

“...we always need something as a back up so we also need to use the electronic part (aside from face to face sharing) like – remember when we talked about this and that, we agreed on this, I want it in writing – mostly to have a back up because often we forget the agreements we get too, including me or like – do

you remember I told you this? No I don't remember – so we rely on e-mails for that” (A4, first in depth interview)

All of this low level of trust among co-workers and the emphasis on having something to support their agreements and their exchanges is also the result of the actors' experiences in Organisation Y. It is derived from the defensive practices that have been promoted in the organisation since the previous administration and which contribute to the strengthening of a defensive mindset with which people interpret and enact knowledge sharing in their networks:

“...it is very common in X. This thing like – I won't own up to my part of the responsibility (in a problem), I will look for someone to pay for it...”(A4, first in depth interview)

“...for example, there are people like B2 (in Marketing) who put everything in writing because they've learnt with their internal clients...that they have to be very careful, even more than with the external clients because they (internal clients) don't honour their word and they don't have memory...” (A1, first in depth interview)

Even in KM Network, the smallest of them all, and where actors claimed to use face-to-face sharing more often than written forms of sharing, participants expressed this low trust in spoken exchanges and argued for the need to support these with written evidence. From KM Network:

“... there's no record, we have no way of backing up...- hey did you give me this information? – we talked about it – ahh but there's no evidence, how can I validate that the exchange happened?” (B4, second in depth interview)

“...face to face sharing depends on the memory of people for them to remember what was said...and perhaps they won't remember...” (B1, second in depth interview)

Additionally, this evidence of low trust in Organisation Y and the emphasis of formalised accountability in the departments, recalls the reliance of hierarchical (bureaucratic) structures on authority and power (Adler, 2001); whereas it is thought that post-bureaucratic organisations emphasize trust and autonomy in the way they “control” their employees (Maravelias , 2003).

6.7 Conclusions

In this chapter, the case of Organisation X was presented. Different defensive practices were discussed, most of which were responses to an emphasis on accountability that seems to prevail in this organisation and which reinforced a culture of blame in it. People in Organisation X seem to understand knowledge sharing in their networks through the defensive practices that are recurrent in the organisation e.g. hoarding knowledge and information, blaming and exposing others mistakes and remaining silent out of fear of exposure. These understandings and the defensive practices discussed in this chapter seem to be shaped by the prevalent bureaucratic features of the organisation. For example: the encouragement of the use of written evidence as an instrument of power; the strict delimitation of job boundaries and jurisdictions, the emphasis on vertical accountability and individual responsibility placed on managers for the performance of their units, as well as the promotion system that ignores merit. All of the practices presented are hinderers of knowledge sharing. A context like Y, where people are afraid and behave defensively on a frequent basis, cannot be fertile soil for knowledge sharing.

Organisation Y is different to Organisation X in several aspects, the first being their core business, along with their size and the amount of time they have operated in the country where this research was carried out. Another difference was the fact that Organisation X has an open strategy for knowledge management, including people that are devoted to knowledge managing activities both worldwide and at the local level. Organisation Y on the other hand, does not have a knowledge management department, nor did it have, at the time of this research, a defined strategy to manage

knowledge. This difference in fact, did not seem to be relevant when comparing data from both organisations in this research. Perhaps this was due to the fact that the KM strategy in Organisation X was not addressed to the participants in this research.

Moreover, the analysis indicates that both organisations share some characteristics that hinder knowledge sharing instead of facilitating it. One of these similarities is that both organisations have bureaucratic features and ways of organizing that are reflected and reproduced in knowledge sharing having a negative impact on it. These are also evident in common practices that have derived in defensive practices in the case of Organisation Y and a strong discourse on expertise that employees in Organisation X respond to depending on their position in the organisation and towards the official discourse. Another similarity between the organisations is that both highlight the political nature of knowledge sharing in their contexts, which is for example, shaped by the features of the organisational structure that guide the employees understandings of what should be shared and what should be hoarded, as well as how sharing or hoarding can help people in attaining their self-interests.

People engage in political behaviours when sharing knowledge or hoarding it in both organisations. They do so in different ways – for example using knowledge sharing to be seen and grow in the company via expertise or hoarding knowledge to maintain ones position and power in the organisation. They also refuse to share what they have learnt that is their territory (through the strict delimitation of job boundaries) for different reasons. They hide what can be used against them and refuse to share for fear of being exposed. All of these can be seen as political behaviours aimed at furthering individual interests of employees.

The qualitative data presented in the empirical chapters expands our understanding of the knowledge sharing patterns observed in the social network analysis. It does so by shedding light on the processes through which the organisational structure influences the way people enact knowledge sharing in their departments, the way they think about it and talk about it: the organisational discourse in Organisation X and the defensive practices in Organisation Y.

The similarities found in these cases and the fact that in both organisations there is a prevalence of features associated with bureaucratic organising, might also respond to an influence of the wider (national) context, which encourages and facilitates the maintenance of bureaucratic structures in organisations.

In the next chapter, the findings from both organisations will be further discussed. General conclusions and implications of the findings of this research will also be drawn, as well as potential avenues for future research.

CHAPTER 7: GENERAL DISCUSSION, CONCLUSIONS AND IMPLICATIONS

7.1 Introduction

The general objective of this research was to enhance our understanding of the phenomenon of knowledge sharing in the workplace, by exploring the experiences and perceptions of actors in knowledge sharing networks in two knowledge-based organizations. In particular, the role of some elements of the external and internal context i.e. the national culture and the organisational structure in the understandings of these actors were examined. The study drew upon theory and research from different fields such as social psychology, sociology, organizational learning, knowledge management and management studies to understand the different perspectives taken so far to the study of knowledge sharing. The research aligned with the views of researchers in organisational learning, organisational studies and critical literature in the way they view knowledge and how it is shared and the gaps in research on knowledge sharing were identified. These perspectives consider knowledge sharing as a social process, embedded in socio cultural and political relations that influence it. It highlights the complexities of knowledge sharing and questions mainstream assumptions about the extent to which knowledge in the organization can be managed.

In the literature that this research contributes to, the relevance of context in knowledge sharing has been acknowledged (Currie et al., 2007, 2008; Robertson, Scarbrough, & Swan, 2003). However, there is a lack of studies that focus on the influence organisational structure and the wider context, have on employees' understandings of knowledge sharing. This investigation aimed at grasping the understandings of actors, as well as the influence of both structure and the wider context. The relevance of looking at such issues was based on the assumption that social activity is always embedded in the context where it happens. In this case, organisational structure is an important part of the organisational context in which knowledge sharing is embedded and so is the organisational culture. I embrace a view

that recognises both, the relevance of the context and the importance of agency of actors in social phenomena. From this standpoint, understanding how context shapes and is shaped by the understandings of actors in social phenomena is of great relevance. The phenomenon of knowledge sharing was approached in this research based on the assumptions about knowledge, knowledge sharing, knowledge sharing interactions, actions and the individual that were developed in the first chapters of this thesis. These emphasize both: the social nature of knowledge and knowledge sharing as well as the reflexivity and intentionality of social actors.

The prevalence of bureaucratic structures and practices in knowledge intensive firms (KIFs) is being discussed in the literature (Courpasson & Dany, 2003; Hodgson, 2004; Kärreman et al., 2002; Robertson & Swan, 2004). This is perhaps unsurprising given the fact that KIFs are one type of organisation that has been depicted as an exemplar of post-bureaucratic work. This research contributes to such debate by adding to the knowledge of ways in which these bureaucratic forms shape the understandings of employees and are shaped by the sharing activities of employees, which are reflected in their patterns of knowledge sharing. It is then, a mutually reinforcing relationship where agents serve to reproduce and reinforce the bureaucratic features in their organisations through their sharing activities.

The main research questions that guided this investigation were the following, first: *How do individuals in knowledge intensive firms (KIFs) understand and enact knowledge-sharing networks within their departments? What barriers and enablers do they encounter to share knowledge in these networks? And second: How does the context of these organisations contribute to these understandings?* The specific aspects of this understanding that were explored (though not exclusively) were: the experiences actors have of the informal knowledge-sharing networks in their departments and the patterns of knowledge sharing interactions represented in these emergent networks and derived from the experiences mentioned. The participants' experiences of the knowledge-sharing networks, and the knowledge-sharing patterns in these networks were explored through interviews. The patterns of knowledge sharing interactions which emerged from a first set of standardized open-ended

interviews were analysed using Social Network Analysis, and were explored qualitatively through the exploration of the ways in which people experienced and accounted for them in the context in which they worked. In the in-depth interviews, the perceptions and interpretations that individuals had of knowledge sharing experiences, interactions, intentions and actions were explored and analysed using qualitative methods and they gave rise to a discussion on the barriers and enablers that actors encounter to share knowledge in the networks.

This research was planned as a multiple case study and it considered the nature of the business in its sampling strategy, aiming to include both organisations from a field that is typically found in KIFs' research as well as KIFs from a field that is not normally found in research carried out in knowledge-based organisations. Additionally, I considered the cases of the two organisations studied through the examination of different knowledge sharing networks embedded in them. These networks carried out knowledge work and were located in different departments in the KIFs studied. Important similarities were found between these networks and organisations regarding some elements of bureaucracy that seem to be shaping and shaped by the employees' understandings of knowledge sharing in their organisations such as the *centralization* of information and knowledge, and a low level of *integration* in the organisation. Moreover, and even when these elements influenced employees in both organisations, each organisation had its particular way of shaping and being shaped by their bureaucratic practices, understanding and enacting knowledge sharing interactions. Specifically, normative control manifested in two different ways was found: in the form of an organisational discourse in one organisation, and a strong emphasis on accountability, which derived in defensive practices in the second organisation. In both organisations, knowledge sharing was undermined and in turn, individualistic, power oriented and political behaviours were encouraged.

The preceding three chapters present the empirical findings of the fieldwork stage of this research. The analyses of these findings were directed to better understand the collectively constructed perceptions of the networks studied and the knowledge sharing experiences of actors in the network. These are key elements in the

individuals' understanding of knowledge sharing and the way these networks are enacted by individual actors in their departments. The discussion in this chapter is focused on integrating the salient features from the analyses of the findings as well as relating them to the existing literature. The aim is to provide the reader with a clearer presentation of the contributions to knowledge that this research offers.

In this chapter, I will discuss the contributions and implications of this research for existing theory, theoretical debates, methodology and practice in the field. The findings will also be discussed in relation to the literature to which this investigation is aligned and around the two research questions that guided this investigation.

Limitations of this research and potential avenues for further inquiry will also be considered and finally conclusions will be presented.

7.2 Discussion of the findings

According to the findings of this investigation, there is reason to claim that people construct their understandings of their knowledge sharing networks through their experiences of knowledge sharing interactions, the roles they perceive that people and themselves take in these interactions, and the way they interpret the knowledge-sharing behaviours of other actors in their knowledge sharing networks. Also, elements characteristic of the organisational structure, culture and the ways of organizing in their firms and departments emerged as strong influences in this understanding as well as in the patterns of knowledge sharing in the networks studied. These elements hindered knowledge sharing between individuals. At the same time, the wider context of the participating KIFs in this research appears to be relevant in the prevalence of bureaucratic structures, cultures and practices within them. This is a context that could be regarded as one that could encourage bureaucracy and facilitate its prevalence given its cultural orientations.

Through the methods used in this research to collect and analyse data, I had access to the individuals' understandings of their experiences of their knowledge sharing interactions. I was able to identify elements of these experiences that were made

evident in the structural characteristics of the mapping of their patterns (i.e. the networks). These structural data was better understood when looked at in relation to the data from the in-depth interviews, which helped to make sense of the results of the SNA data and which also gave me deeper insights into the perceptions of actors about these patterns and why they emerged.

Knowledge sharing patterns observed in the mapping of each type of knowledge sharing interaction, gave me insights into how people perceived their knowledge sharing networks. They also showed how these patterns are enacted and reproduced by actors. Centrality degrees and network maps showed where networks had differences and commonalities (e.g. the prominence of managers and supervisors in the networks) in terms of the influence of the organisational structure in the knowledge-sharing patterns of the networks studied. Claims made in the interviews with sampled actors from the networks allowed me to look at the network data in light of what the descriptions and interpretations of these actors were, about what they perceived that happened in their informal networks.

The analysis of the connectedness of each actor in the networks (centrality) was contrasted with what participants of the interviews perceived about themselves and the others in their knowledge sharing networks. It highlighted the influence of the formal structure and job descriptions in these perceptions and also drew attention to a well-accepted and previously studied type of knowledge sharing role: the knowledge broker.

The data collected through the in-depth interviews and the fieldwork provided a rich frame to interpret and explain the data derived from the SNA methods. It was also the most important source of insights in terms of the interpretations that actors made of each other's knowledge sharing intentions, behaviours and actions. Additionally, it helped in the development of a deeper understanding of how people believe things are done in their organizations and in consequence how they perceived knowledge sharing should be done and was (or was not) done within them.

The findings obtained from the data for each research question are discussed as follows.

7.2.1 How do individuals in knowledge intensive firms (KIFs) understand and enact knowledge-sharing networks within their departments? What enablers and barriers do they encounter to share knowledge in these networks?

Data from this investigation suggest that elements of the organisational structure and ways of organising work in the KIFs studied have an important role in the construction of the individuals' understanding and enactment of knowledge-sharing networks in their departments. They are also being shaped by these enactments in the knowledge sharing interactions of people in these networks. Additionally, the data from this research indicates that people construct their understanding of their knowledge sharing networks through their experiences of knowledge sharing interactions in the organisation, the roles they perceive that people and they take in these interactions, and the way they interpret the knowledge-sharing behaviours of other actors in their knowledge sharing networks.

7.2.2 How does the context of these organisations contribute to these understandings?

Context at different levels appeared as shaping (while also being shaped by) the understandings of employees in the participating networks and organisations. . Assuming that, "understanding guides action but action also informs understanding" (Brown & Duguid, 1991 in Crossan, Lane, White, & White, 1999), it follows that not only context shapes these understandings but these understandings also shape context, through action. The organisational structure, culture and the ways of organising work are elements of the context where the employees enact their knowledge-sharing networks. The research question addressed in this section was answered mainly highlighting the different ways in which elements of the organisational structure, culture and ways of organising influenced the understandings of knowledge sharing in employees. I will discuss these different elements below.

The prevalence of bureaucratic elements and practices in the KIFs studied makes it reasonable to think that the context is contributing to the perpetuation of bureaucracy in these organisations, regardless of the work they do. The organisational culture of the firms studied would facilitate this perpetuation through its elements such as the low level of interpersonal trust between co-workers; communication patterns between these; and even its reward systems (Al-Alawi, Al-Marzooqi and Mohammed, 2007), which can facilitate the permanence of bureaucratic practices and elements in the organisations. The findings from this research are consistent with the prevalence of bureaucracy in KIFs.

Following McDermott and O'Dell (2001), "an organization's culture is also reflected in its structure, stories, and spaces. Multilayered hierarchies or flat structures say something about the core values that directed the organization's designers, and the expectations of its members" (p. 77). At the level of the organisational structure and ways of organising, which are strongly inter-related with organisational culture, this research has highlighted specific elements, some of which, have been mentioned in the literature, and which contribute to the understandings that employees have of knowledge sharing in the KIFs studied.

Particularly resonant with what was found in this investigation, (Lam, 1997) examined among other things, the influence that two different ways of organizing work in two organizations in a cooperative venture, had on the way knowledge was transferred between teams across national boundaries. She found that the "organisational model", with broad, flexible and ambiguous job boundaries and high job rotation facilitated sharing knowledge because it created knowledge from experience, which overlapped between people. Meanwhile the "professional model" (a more bureaucratic one), which highlighted formal training, specialization and clear job boundaries, made it more difficult for people to share because it created knowledge that was highly individualised and task-specific. The results of this research echo her mentioned claims, but at the level of individual knowledge sharing in knowledge-sharing networks. In this research the accounts of participants in both organisations

often revealed an approach to work that through a clear and strict delineation of responsibilities and job boundaries (a bureaucratic approach), encouraged perceptions of ownership as well as a specialization of knowledge in individuals. These served as justifications for people's unwillingness to share.

This is one way in which, the organisational context influences knowledge sharing negatively. In this research, the employees' understandings of knowledge sharing in their networks were permeated by the way work was organized in both their departments and organisations. As will be summarised in this discussion, a focus on training and specialization, a clear delimitation of job boundaries, and a hierarchical distribution of information and power, created knowledge silos in both organizations, which hindered knowledge sharing.

In both organisations, little was done to facilitate the development of what has been called architectural knowledge (Finn & Waring, 2006, p.118) in the actors. In the organizational context, component knowledge refers to "specialized knowledge found within discrete parts of a team regarding one particular element or task that contributes to the wider process, typically held by one member and manifest as technical skill or ability". Whereas architectural knowledge refers to "knowledge that connects and integrates these individual components and informs the wider team processes, for example how the different components should fit together and be coordinated within the broader teamwork processes" (Finn & Waring, 2006 p.118). In both organisations, people were only encouraged to develop component knowledge. In fact, the organisational discourse in Organisation X highlighted the need for employees to become experts in their fields and show others that they were experts, which resonates with the importance given to knowledge and qualifications in ideal type bureaucracies (Höpfl, 2006). This often resulted in unwillingness to share and people perceiving others as being uncomfortable or upset if their 'territories' were invaded or if people tried to help and made suggestions to improve their work. This also matches the feature of what Adler and Borys (1996) called "coercive bureaucracy", where there is a lack of global transparency in the design of procedures; tasks are divided and employees do not really know where their tasks fit into the

whole. If employees move beyond their boundaries, they are told they should not do it because it is not their job (p.13)

In this research the 'ignorance' about how the different components of the system fit in the whole and worked together, possibly gave room to the apathetic attitudes perceived by the participants of the study, where people did not show themselves interested in knowing about their peers' 'territories' (e.g. what they did, how they did it, what they could share, etc.) except when they needed specific information from their colleagues to do their tasks. The influence of a bureaucratic structure, which is, as mentioned in Chapter 4: characterised by a strict hierarchy, centralisation of information and delimited jurisdictions, did not only affect knowledge sharing between individuals but also seemed to weaken the possibility of sharing between internal areas / small teams in the departments where the networks were located, strengthening another characteristic of bureaucracy: a low level of integration. This was evidenced in the accounts of actors who perceived little if any sharing between internal areas and explained that they did not see a need to share with the others if their tasks did not demand it.

Another aspect of the findings of this research that can be related to bureaucratic structures is the prominence of managers in the different knowledge-sharing networks, which was evident in the patterns of knowledge sharing interactions found in the SNA data. As indicated by Hales (2002) "bureaucracy can be seen as a 'structure of control' applied predominantly, though not exclusively, to the managerial/administrative component of the organisation" (p.52). The prominence of managers and supervisors in the knowledge-sharing networks can be an indication of the influence of the hierarchical arrangement of the organization and the department, in the actors' decisions on who to contact for knowledge sharing purposes. The degree of inbound connectedness for individuals in the knowledge sharing networks was frequently high for actors in the higher levels of the departmental hierarchy in the networks. It was not only managers who were densely connected but also supervisors were often located high in the rankings for this inbound degree.

On the basis of that, we can argue that in the networks studied, for employees in the higher hierarchical levels of the departments the chances of being perceived as a prominent actor in a knowledge-sharing network were higher. This can be a reflection of the hierarchical information distribution system in the organizations studied, which aligns with bureaucratic ways of organising. It can also be considered evidence of the influence of the organizational structure and culture on the way people perceive things should be done. In this case, the organisational structure influences how it is thought that knowledge sharing should be done in each organisation, particularly when formal guidelines for it have not been established.

Research has shown that people in higher positions in the organizational hierarchy usually have access to information that is not available for employees at lower levels (Cross & Cummings, 2004), which could be a motivator for people to approach their bosses or people at a higher level than theirs with knowledge seeking purposes. Consequently, people in the organizations studied might have fixed ideas of having to address their direct bosses for all knowledge seeking purposes on the basis that they are supposed to have more access to information and give better advice given their position in the organization. As has been argued before, individuals in high positions of the organizational hierarchy have access to valuable information, resources and experience (Brass, 1984; Cross & Cummings, 2004), which other employees do not have. This again, talks about a bureaucratic structure, a hierarchical distribution of information and power and their influences on employees' understandings of knowledge sharing in their organisations.

Additionally, the fact that managers did not claim to approach their subordinates much for knowledge sharing can be strengthening this hierarchical distribution of information, knowledge and power in the networks studied. Looking at the patterns of interaction expressed in the SNA interviews with participants from the networks, it could be thought that hierarchy (a bureaucratic element) influences the managers' choices on who to share knowledge with, particularly when they initiate the interaction i.e. asking for information, advice, opinion, or sharing ideas. In both organizations, managers almost did not claim to approach people below their

hierarchical level in the knowledge-sharing networks. Their outbound ties were often and almost exclusively directed to other managers in the network (see networks HC, MI, EC). In some interviews, participants would even point out that managers would also tend to limit other interactions such as having lunch together with their group of similar others in the department. However, contributors (“subordinates”) perceived their managers and supervisors as hubs of information and claimed to approach them for all knowledge-sharing purposes explored. This understanding of how knowledge and information sharing should happen resembles the way it is normally done in a bureaucratic context.

This could also be partly due to the way in which managerial roles are enacted in what Hales (2002) has called “bureaucracy-lite” organizations, which seem to fit the characteristics of organizations in this research. In this way of organizing, one of the managers’ constant moral dilemmas regards the “acquisition, interpretation, manipulation and dissemination of information” (Hales, 2002 p. 63). It is not just about the amount of information that they are compelled to handle but also that they have to carefully measure their responses to information requests. Because managers in this context are still “held personally responsible for the performance of their units, they are not likely to begin to treat employees as independent partners” or equals (Tengblad, 2006 p.1440) and they still control most of the information. This accountability might make them more controlling and strengthen the idea that because they cannot treat their subordinates as partners or equals, and they still want to get results from them, they have to combine benevolence with control, as in paternalistic leadership (Pellegrini & Scandura, 2008), protecting their subordinates so that they keep being loyal to them and help them get the results for which they (managers) are accountable.

Two more aspects of the organisational context in this research were interesting: the differences between the KIFs studied, that could be attributed to the presence/absence of a knowledge management strategy and the ones that seemed to be caused by the fact that the KIFs were from different sectors: one frequently found in research on KIFs and the other one largely ignored by the same research. In general,

there did not seem to be strong differences directly related to such aspects. However, in the case of the presence/absence of a KM strategy, it is important to remember, that Organisation X, which did have a knowledge management strategy in place, did not address its KM efforts to the employees in the administrative areas, who participated in this research. Thus, it was almost as if no KM strategy was present in either of the organisations, given that their strategy was exclusionary.

Additionally, and regarding the fact that one of the organisations was a representative of a field that is commonly found in research on KIFs and the other one was not, the only difference that I could identify, was that people in Organisation X used some terms that are found in KM literature and that refer to the tools and systems that are used basically to store and retrieve information in organisations that have KM strategies in place. These findings do not mean that there were no differences in the way employees constructed their understandings of knowledge sharing in the participating organisations. As much as there were important similarities between these organisations, there were differences between them as well. Yet, I cannot claim that these are derived from the aspects just discussed. Particularly, when looking at the embedded cases, i.e. the networks within each organisation, some elements of bureaucratic structures and ways of organising were more evident and influential in one network than in the other. The same happened for organisations when looked at as cases embedding other mini cases (their networks). The main differences found between both organisations, were discussed around an organisational discourse (in Organisation X) and a focus on accountability (in Organisation Y). These pointed at an emphasis given to specific bureaucratic practices in each organisation that helped shape the understandings and enactments of knowledge sharing networks in the participating departments. A brief discussion of these findings is given below.

7.2.3 Organisations X and Y, similar results but different emphases.

In Organisation X, a strong organisational discourse was constructed around the need to become experts and be regarded as such in the firm in order to be noticed and have growth opportunities. This is concordant with the importance given by bureaucracy to

formal knowledge, training and expertise in the organisation (Hales, 2002). The organisational discourse in X had effects on employees' expectations, perceptions and behaviour without giving specific rules or explicit guidelines to be followed. As a way of normative control, it influenced employees' understandings of knowledge sharing and encouraged both hoarding and sharing which was motivated by self-serving goals. One example of such goals was illustrated when people's knowledge sharing actions were interpreted as tactics to show their expertise or mastery of a subject, thus enhancing their expert reputation. This kind of self-serving orientation in knowledge sharing behaviours can be categorized as political behaviour aimed at gaining or maintaining power, and has been observed in research before (Fandt & Ferris, 1990). In this research it was more frequently found in the accounts of actors from Organization X where expertise and an expert status were overtly aimed at. Thus, knowledge sharing in its donating form was perceived by some actors in this research as one more thing people did to prove their worth to the company and their peers. Eventually this type of behaviour could accentuate divisions and emphasize employees' focus on their individual benefit and reputation, and the careful selection of their knowledge sharing actions based on that focus.

An integral aspect that this organisational discourse also brought to the table was power. Power and political behaviours have been associated to knowledge sharing in organizations before (Currie & Suhomlinova, 2006; Hart & Warne, 2006). In this research, power oriented behaviours were perceived by interviewees in different forms depending on the network. Maintaining control over information was one of them, and was found in both organisations. It was supported by the job boundaries and the information distribution system, which limited access to information depending on the hierarchical level in both organizations. It accentuated the hierarchical power distribution and the differences between bosses and subordinates in each level of the organizational structure. Image building and keeping a reputation were also tactics perceived by the interviewees and could work to acquire or reassure power and status in the networks. They were not only perceived in individual's overt actions to show off or demonstrate their expertise but were also suggested in the

actors' motivation to share in order to produce a team's outcome that would indirectly enhance their individual reputation through the enhancement of the team's image.

Aside from power and political behaviours being found at different levels in both organisations, employees from Organisation Y presented a particular focus on accountability that was not found in Organisation X and which influenced knowledge sharing between them. This focus was reinforced and fed by different defensive practices in the organisation, which drew employees' attention to accountability issues and the risk of being exposed or criticised in any sharing action. What this created was that employees feared being exposed, thus hoarded knowledge and documented all sharing exchanges in order to use them as evidence to hold others accountable for any omission or error derived from the interaction. Fear of criticism and ridicule were also found to deter people from sharing knowledge at an individual level in Ardichvili, Page and Wentling (2003) study of virtual communities of practice in a multinational corporation.

Results from this research that pointed at this focus on accountability are concordant with the literature on psychological safety and learning. Psychological safety is based on beliefs about the consequences of taking interpersonal risks in a given context (Edmondson, 1999). It stems from mutual respect and trust among people in the organisation (e.g. team members) and if present, "alleviates excessive concern about others' reactions to actions that have the potential for embarrassment or threat, which learning behaviours often have" such as: "asking for help, admitting errors, sharing information, experimenting and seeking feedback" (Edmondson, 1999 p.351, 354, 355). All of these learning behaviours present people with opportunities to share knowledge or information that people might perceive as threatening or risky if influenced by past negative experiences in the organisation. This seemed to be the case for employees in Organisation Y. Feeling threatened when performing sharing actions would trigger defensive practices and deter knowledge sharing between employees, concordant with the results reported in this investigation. Additionally, resorting to the documentation of sharing interactions to cover their backs can also be

related to bureaucratic practices based on the great importance given to keeping records and reporting systems, which work as instruments of power (Höpfl, 2006).

Having addressed the research questions that guided this investigation, I will discuss the contributions and implications of this research to theory, methodology and practice in the next section.

7.3 Contributions and implications of the findings

7.3.1 Contributions to Theory

Within the context of the organizations and networks studied and from a theoretical perspective, contributions and implications of this research can be summarized in the following: First, the study extends prior research by providing insights into topics explored and debated previously in the literature, such as the prevalence of bureaucratic structures and practices in knowledge intensive firms (e.g. Courpasson & Dany, 2003; Hales, 2002; Hodgson, 2004; Kärreman et al., 2002; Robertson & Swan, 2004). It extends this knowledge by discussing the influence that these practices and structure have on the way people understand, and enact knowledge sharing networks in the two KIFs studied. Results of this influence are exposed in both organisations studied: A focus on accountability and defensive practices in Organisation Y; and an organisational discourse focused on expertise, with its corresponding reactions in Organisation X. Both of them hindered people's intention to share knowledge.

It also extends our understanding of how the design of work influences knowledge sharing through the job boundaries set by the organisation, thus contributes to the literature that has explored this influence (e.g. Lam, 1997). Elements of the ways of organizing, such as the formal distribution of information and the organizational structure appeared as key factors affecting the individuals' understanding of knowledge sharing networks. This research helps to further understand how this happens and how people serve to reinforce this through their knowledge sharing actions. Related to these, power, and political behaviours are also identified and

analysed as a response to the contextual conditions that people in these networks and organisations were circumscribed by. Hence this research also contributes to the literature that highlights power and political behaviours as influential in knowledge sharing (Fandt & Ferris, 1990).

This research offers an alternative to the understanding of knowledge sharing through the investigation of how individuals understand their knowledge sharing networks. Importantly, the knowledge-sharing phenomenon in this research was not situated in a context of an emergency, breakdown or other dramatic event in the organization that would give rise to high levels of uncertainty demanding from the employees that they urgently made sense of it and act upon it. Instead, and following the ideas of Holt & Cornelissen (2013) we question ourselves “whether sensemaking has become its own habituated frame, category and narrative and whether, in being so, sensemaking studies are ignoring or discounting experiences of sensemaking in ordinary organizational life” (p. 2). Such an experience might be the way in which knowledge and information sharing are understood between employees. The fact that sharing knowledge is something that can happen every day does not mean that individuals do not need to understand it. In fact the findings of this research also suggest that a lack of methodology and clear guidelines for knowledge sharing in the organization make people turn to their interpretations, habits, experiences as well as the formal structure and perceived ways of doing in their organizations to understand how knowledge should be shared in their workplace.

7.3.2 Contributions to Methodology

In terms of methodology, the study is counted among the few that have offered a way to approach the study of social phenomena that mixes qualitative techniques with Social Network Analysis (Martínez et al., 2003). This responds to a call for mixed approaches to SNA that has been made by researchers before and which addresses both the “outsider’s” view of the network through the study of its structure and form, as well as the “insider’s” view, investigating the processes that generate the network, through the understanding of the contents and perceptions of it (Edwards, 2010). An

antecedent of this type of research in the knowledge sharing literature is the study by Currie and White (2012) on knowledge brokers in the healthcare sector.

Additionally, we have used and interpreted some SNA measures in slightly different ways to the regular ones, i.e. strength of ties is conceptualized as the scope of similar knowledge sharing situations (four knowledge sharing purposes) in which one person would approach another one; while outbound and inbound degrees of connectedness were understood as proxies to knowledge sharing roles in the network, based on the concept or role-based identities of Sheldon Stryker.

Reciprocity was also conceptualised in different terms to the common ones in SNA.

Lastly, by looking at four different types of knowledge sharing purposes and interactions, this research offers a different way of investigating this phenomenon, that acknowledges the fact that “sharing knowledge” can refer to different things in practical terms and in the minds of people. We are also making explicit that there is a difference in donating and collecting purposes and actions that should be taken into consideration when studying knowledge sharing.

7.3.3 Practical implications

From a pragmatic perspective, the findings of this study have implications for organisations wanting to improve their knowledge sharing practices. One of the first assumptions that guided this research was that each organisation would have different needs and present a different context for knowledge sharing to happen among its employees. The purpose of this research was not to generalise its results to all of the inevitably varied organisational contexts. However, there are some things that can be argued based on our findings and that could be of use for the participant organisations and for other organisational contexts that resemble the ones in this research. Particularly, if the wider contexts in which they operate are also similar to the Mexican one.

Both organisations, at least at a national level, still show hierarchical, bureaucratic features in their structures as opposed to the assumed organizational trend of having

flatter structures, de-bureaucratising, decentralising and coordinating through the use of information technologies (Swan, Newell, Scarbrough, & Hislop, 1999). This is true for Organization X at least in their administrative departments in Mexico and was found in Organization Y country's structure as a whole. In fact, both cases particularly seem to fit a category of attenuated bureaucracies (Courpasson, 2000; Hales, 2002), where, in the words of Hales(2002 p.52) "...the principle of hierarchical control is retained (regardless of any reduction in the number of hierarchical levels), and centrally-imposed regulations are retained (regardless of changes in their focus) the result is not a 'post-bureaucratic', 'network' organization but an attenuated and more efficient version of bureaucracy." The findings of this research also show how knowledge sharing is influenced by these bureaucratic features and also reproduces them. This might also be the case of other knowledge-based organizations in the country, for example competitors of the companies, which participated in this research, and will probably not change in the near future. Even less, if changing the structure of the organization and its consequent ways of organizing is not even considered by the management in these organizations.

Whatever the reason for keeping this structure, it does not necessarily have to be thought of as an impoverished environment for the encouragement of knowledge sharing. Especially given that we know that the informal and formal organisation do not map together neatly. On the contrary, and in terms of knowledge sharing and learning, this type of arrangement still allows these organizations to take advantage of numerous casual opportunities of sharing interactions between employees given their physical proximity (Swan et al., 1999) which is perhaps an advantage of these organisations, where for example, people in the same team are not globally dispersed. Perhaps this type of organisations should be looking at how these characteristics work in their favour instead of focusing on the development and implementation of IT tools to enhance knowledge management, thus, knowledge sharing, in which both were investing at the time of data collection and which has proven to be limited and insufficient for the task (Swan et al., 1999). As was explained by Currie and Kerrin (2004 p.12) managing knowledge may imply "more sensitive management of social relations and less the management of corporate information".

The findings of this study add to the body of research on knowledge sharing that call for a better awareness of the social nature of knowledge processes and support the nurturing of contexts where these processes can happen. Particularly, we have highlighted the elements of bureaucratic ways of organising that are acting as hinderers of knowledge sharing in the organisations studied.

Organisations could look at ways of adapting their practices to enhance the conditions for knowledge sharing interactions between their employees to happen frequently and freely. They could for example, bear in mind the physical proximity and layout of the spaces; design and organise work that brings disciplines together through authentic collaboration instead of separating them into knowledge or information silos as much as possible. Re-think the degree of control over employees they need to have and the importance given to individual competition that they want to convey in their organisational discourses and practices. All of these could enhance the conditions for individuals to voluntarily look for knowledge sharing opportunities.

One aspect that could aid this new way of organising is changing the type of knowledge people acquire during formal training organized by the company, instead of highly specialized and disconnected from the others, this knowledge should be more architectural and linked to those others, maybe even overlapping when possible. A designer will always be a designer but this does not mean he cannot develop a broader perspective of how his work relates to that of the non-designers in the department and be able to work in collaborative ways with them, enriching and developing a shared practice that could become their common ground.

Knowledge brokering has also been suggested as a good way to develop architectural knowledge in networks where there are multiple specialist domains (Currie & White, 2012). It should be easier in networks like the ones in this research, where there are only two or three significantly different knowledge domains in each network, to encourage knowledge brokering. Particularly, transmitting the idea that anyone can be a knowledge broker and not only people in the highest hierarchical levels in the

departments, can help change the way people understand their roles in the knowledge sharing process.

Also, and as has been discussed, it was observed in this research that bureaucratic elements of the organisational context, seem to have a negative impact on knowledge sharing. They appear to encourage: power-oriented behaviours of their employees; a highly individualised and competitive environment; the praising of gaining and showing expertise above all; a defensive frame of mind and a generalised fear of criticism or accountability issues. All of these make knowledge-sharing networks more prone to fragmentation as actors behave on the pursuit of self-interest and protection more likely if they are encouraged to do so.

Organizations and their leaders can address these issues. For example, they can start by analysing their reward and feedback practices; their human resource management practices; their ways of control; and make the necessary changes to enhance the conditions for knowledge sharing to happen between their employees.

7.4 Limitations of the study

Within the closing stage of this thesis, it is important to reflect broadly on the research approach and the limitations to the study. The first research limitation regards the access to participants. As explained in the methodology and context chapters, this was a drawback that was not foreseen and which in fact prevented me from interviewing the sampled participants in one of the organizations one more time as was planned. Had the conditions of my access been different, more data for comparison and analysis would have been available for both cases studied.

The second limiting factor was that being a lone researcher it was difficult mainly due to time concerns, to carry out more fieldwork e.g. non-participant observations while doing the rest of the data collection and the on-going analysis of the data. Additionally, and since in both organizations it was agreed that I would not observe “meetings” to which I was not invited by the managers, I found myself in a position where these were

in control of how much I was going to be allowed to observe regarding their teams' formal knowledge sharing practices. In fact, even after my frequent insisting on being invited to the meetings, managers would often not respond to my messages or claimed that they were not going to have a meeting soon (or at least while I was going to be in Mexico, collecting data). I understand that this last consequence could have been prevented with a more favourable negotiation of access and that this would have resulted in the collection of different data, which would have allowed for triangulation in the stage of the analysis.

A self-imposed limitation was also the boundary settings of this research. Limiting the investigation to only two cases was basically a decision taken due to time and money concerns. However, if circumstances had allowed it, including at least two more cases would potentially have yielded richer data thus a richer discussion of the findings of this investigation. In addition, because this research is more aligned with a constructivist epistemological stance in which knowledge is understood as dependent on the individuals' perceptions and their social experiences, it seemed more sensible to take a methodical approach that involved qualitative research, with a manageable amount of data (for one investigator) and this had its own limitations.

7.5 Future research

A variety of ideas for future research arise from the findings of this work. Some of the research questions that could be addressed in future research are:

Regarding the influence of ways of organizing in knowledge sharing, and based on the results of this research in this matter, a starting point could be: How do different forms of organizing (not only bureaucratic) in different types of organizations (not only knowledge-based) shape the ways in which people share?

In terms of the direct efforts of the organisation to formally encourage knowledge sharing: How different is the understanding of actors when knowledge sharing is overtly encouraged by the organisation and aimed at through the implementation of clear guidelines and methodologies that orient people in all the organisation in their

knowledge sharing initiatives, as opposed to when these guidelines and methodologies are not clear?

Based on the relevance that managers had in the knowledge sharing patterns of networks in this research: What roles do different types of managers or leaders think they have in leading the knowledge sharing processes in their teams and when do these thoughts match the perception of their employees?

Oriented to a more practical contribution of research: How can work in different departments and functional areas be organized so that complex, novel and relevant knowledge is prone to be shared frequently but the job still gets done timely? And related to this: What paradigms about work would have to change in the organization and in employees' minds for this to happen?

Assuming that many organisations will keep being bureaucratic to some extent: What would be realistic expectations on how knowledge sharing can happen depending on the type of work the department and the organization are doing? How do these contexts influence what people think they should be sharing?

7.6 Conclusions

Knowledge sharing is a complex phenomenon and for every different knowledge-sharing situation a part of the understanding of actors changes (e.g. different experiences of interactions in a network; different roles to be enacted, different means to share, different content to be shared) and so is their behaviour likely to change. In this research, I have tried to acknowledge this complexity of the knowledge sharing phenomenon, that demands for approaches to research that do not over-simplify it by trying to fit the way individuals, networks and organizations share into a model, given that even between organisations that are similar, there are differences that escape the possibility of finding a "size that will fit them all".

However, there are some aspects that are relevant to the understanding of knowledge sharing that individuals have and that I believe can aid the design of strategies in the organization that facilitate knowledge sharing while drawing adequate expectations of it depending on the conditions in which it is expected to happen. Some of them have been identified in this research: the ways of organizing work in the different departments, the structure of the organization and its consequent distribution systems (e.g. information and power) the focus of the work and the development of architectural knowledge; are all aspects that are subject to manipulation and adaptation or change on the part of the organizations if they want to change the way knowledge is shared between their employees.

As per the features that pertain the understanding of knowledge sharing of the individuals, the findings in this research suggest that by exploring their experiences of knowledge sharing, their interpretations of others' knowledge sharing behaviours and the roles they take in their knowledge-sharing network, we can reach a better understanding of how this understanding happens and what matters to actors when trying to understand the way knowledge sharing materializes in their workplace.

APPENDICES

A. Material used in fieldwork

A.1 Standardized open-ended interviews (SNA questionnaire)

GROUP	QUESTION	TYPE OF KNOWLEDGE SHARING INTERACTION / PURPOSE
1	People that you go to when you want to get information about the status of a project or a process	Asking for work-related information
	People that you go to when you want to get information about strategic changes or new regulations in the organization	
	People that you go to when you want to get information about who can help you solve a doubt related to your work	
	People that you go to when you want to get information about the veracity of work-related rumours (about the past or future)	
2	People that you go to when you want advice on how to perform an activity or complete a task that has been assigned to you	Asking for advice on work-related matters
	People that you go to when you need advice on how to solve a problem related to your work	
	People that you go to for advice on how to improve your performance or how to do something better	
	People that you go to for advice on how to find information that you need to do your job	
3	People that you share your creative ideas spontaneously with	Share one's ideas, insights, experiences or opinions
	People that you go to when you want to share something that you have learned or found out recently and that relates directly or indirectly to your department's work.	
	People that you go to when you want to share your ideas about new ways of doing things or improve processes	
	People that you go to when you want to share your experiences and opinions about a process or a project (present or past)	

4	People that you go to when you want to know their opinion on a decision in your job that you feel uncertain about	Ask for an opinion or a different perspective
	People that you go to when you want to know a different perspective about an existing situation in your work	
	People that you go to when you want to know their opinion about changes proposed to a process or project	
	People that you go to when you want to know a different perspective on the results of a process or project	

A2. Choices of participants for in depth interviews

DEPARTMENT AND ORGANIZATION	PARTICIPANT	CONNECTEDNESS	ORGANIZATIONAL LEVEL*
Academic Consultancy /Publishing Company	A1	Inbound - Ranked first in the four networks Outbound – Ranked above the mean in three networks	One middle manager, two supervisors and two contributors
	A2	Inbound – Ranked above the mean in the four networks Outbound – Ranked above the mean in two networks	
	A3	Inbound – Ranked above the mean in the four networks Outbound – Ranked above the mean in three networks	
	A4	Inbound – Ranked above the mean in one network Outbound – Ranked above the mean in one network	
	A5	Inbound – Ranked above the mean in one network Outbound – Ranked above the mean in one network	
Marketing /Publishing Company	B1	Inbound – above the mean in four networks Outbound – above the mean in two networks	One director, one middle manager, one supervisor and two contributors
	B2	Inbound – above the mean in one network Outbound – above the mean in three networks	
	B3	Inbound – ranked first in the four networks Outbound – below the mean in the four networks	
	B4	Inbound – above the mean in the four networks Outbound – Above the mean in two networks	
	B5	Inbound – Below the mean in all networks Outbound – Above the mean in three networks	
Publishing /Publishing Company	C1	Inbound – Above the mean in the four networks Outbound – Above the mean in the four networks	One director, two middle managers, four supervisors and six contributors

	C2	Inbound – Above the mean in the four networks Outbound – Above the mean in two networks	
	C3	Inbound – Above the mean in three networks Outbound – Above the mean in three networks	
	C4	Inbound – Above the mean in the four networks Outbound – Below the mean in the four networks	
	C5	Inbound - Above the mean in the four networks Outbound – Below the mean in the four networks	
	C6	Inbound – Above the mean in the four networks Outbound – Below the mean in the four networks	
	C7	Inbound – Above the mean in two networks Outbound – Above the mean in the four networks	
	C8	Inbound – Above the mean in two networks Outbound – Below the mean in all networks	
	C9	Inbound – Above the mean in two networks Outbound – Above the mean in three networks	
	C10	Inbound – Below the mean in the four networks Outbound – Above the mean in the four networks	
	C11	Inbound – Above the mean in one of the networks Outbound – Above the mean in two networks	
	C12	Inbound – Above the mean in one of the networks Outbound – Below the mean in the four networks	
	C13	Inbound – Above the mean in one of the networks Outbound – Above the mean in one of the networks	

DEPARTMENT AND ORGANIZATION	PARTICIPANT	CONNECTEDNESS	ORGANIZATIONAL LEVEL*
Human Resources Internal Consultancy / Business Consultancy Firm	E1	Inbound – Ranked first in the four networks Outbound – Ranked first in the four networks	Two middle managers, one supervisor, two contributors
	E2	Inbound – Above the mean in three networks Outbound – Above the mean in one network	
	E3	Inbound – Below the mean in the four networks Outbound – Above the mean in three networks	
	E4	Inbound – Above the mean in three networks Outbound – Above the mean in one network	
	E5	Inbound – No mentions in three networks Outbound – Above the mean in three networks	
Marketing / Business Consultancy Firm	F1	Inbound – Above the mean in the four networks Outbound – Above the mean in three networks	Three middle managers, two supervisors, three contributors

	F2	Inbound – Above the mean in the four networks Outbound – Above the mean in three networks	
	F3	Inbound – Above the mean in the four networks Outbound – Above the mean in the four networks	
	F4	Inbound – Above the mean in the four networks Outbound – Above the mean in one network	
	F5	Inbound – Above the mean in three networks Outbound – Above the mean in two networks	
	F6	Inbound – Above the mean in one network Outbound – Above the mean in one network	
	F7	Inbound – Above the mean in three networks Outbound – Above the mean in one network	
	F8	Inbound – Below the mean in the four networks Outbound – Above the mean in two networks	

A3. Sample questions for first in depth interviews

Batch A

How do you share knowledge between members of your team? Can you recall specific actions that are done to share knowledge in your team? Can you tell me about these practices? In your case, how do you share knowledge with people in your department? What kind of things do you normally do to share knowledge? Do you remember the last time you shared knowledge with someone here? Can you tell me about it?

Batch B

Do you think there are different ways in which people in your department share different content? Can you tell me about it? Do you think there is knowledge that belongs to specific persons in your team? What about knowledge that belongs to all of you? What makes you think that way? Do you think others in the department feel the same way? How?

Batch C

Do you think that knowledge is shared in informal interactions between people in your team? How does this happen? How often do you think it happens? Can you give me an example of such an interaction? Did you participate in it? Tell me about one in which you participated...

Batch D

What do you think motivates people to share here? How have you identified this? Can you give me an example? Do you think different people in your team have different reasons to share? What makes you think that way? Can you give me an example? Do you think others in the department feel this way too?

Batch E

How is knowledge shared here? Do you remember our first interview (remind about network), what role do you think you play in that network? What makes you think that way? Do you think playing that role affects the way you share? Do you think people expect specific behaviours from you given that role? What makes you think that way? What role do you think others play in this network? Why?

A4. Sample questions for second in depth interviews

1. What advantages and disadvantages do you think face to face interaction has as a way to share knowledge or information? Why is this type of interaction good or bad for your team?
2. How important is it to formalize knowledge sharing in your team and what kind of information or knowledge should be shared via “formal” means?
3. Do you think there knowledge and information are different? How?
4. If they are different. Do you think they should be shared in different ways? How?
5. Do you think there are situations in which “holding” information or “restricting” it is justified? When?
6. What about knowledge? (If the person made the distinction between them)
7. What type of information /knowledge is restricted in your team? Who restricts it?
8. Do you think that the perception of others’ deliberate restriction of information has an impact on other members of your team? What type?
9. Are there any situations in which you consciously hold or restrict information or knowledge? Which? What motivates you to do that? What do you think people in your team think/feel about it?
10. Are you happy/satisfied with the way knowledge / information is shared in your team? If not, what would you change? Is there anything that could be improved? How?
11. Do you think that your personal way of sharing knowledge has an impact on the way your team shares knowledge? How?

A5. Sample interview transcript 1 (A3 – AC network)

Adriana: Alright, the first thing I want us to talk about... do you remember last time when we talked about people whom you relate to when asking for information, share knowledge, people you ask for advice to or that you share your ideas with?

A3: Yep

Adriana: Ok well I would like us to talk about that. How would you describe the way in which knowledge is shared in your team, in AC?

A3: It intuitive I'd say. I mean there is no established process, right? There is no process as such... if you need this, you go here, you ask here... I mean we take it for granted... that's why I say it is intuitive, right? I mean if something comes up with one of the clients that we have... for example yesterday with exams, if anything happens, I know I have to go and tell A1 but maybe A1 doesn't have the answer and A2 has it. And so it is like that, there is no clear process, no line that says – if this comes up, the person who owns the information is this one...right? That's why I think it's part of the organizational culture, right? I mean the climate, the organizational culture are laid so that this happens. The type of situations where the impression that I get is that it is assumed, it is taken for granted that if you have a problem, you know who to go to, very precisely, right? And I think this causes situations in which the lack of information or if not the lack of it, but the different versions of information that are handled... right? But I'm telling you that this is what happens as...well I don't only see it in AC but in other matters...all of a sudden I get calls and people ask me- when does the next course for this start? How much does this service cost...and you are like... well it's logical that people call and assumes that I could give an answer because the plaque says "exams AC", right? hahahaha

Adriana: ok and what type of activities do you think people do in AC to share knowledge?

A3: In my team it is like I said, that's the practice that I see, right? Taking for granted, assuming that if you have, if you need information, you know who to ask it from, right?

Adriana: and would that going and asking for...be face to face?

A3: no, it's done via mail or face to face or maybe by phone but...

Adriana: what do you think happens more often?

A3: from what I just said, I think that orally, I mean face to face and phone. I say orally because either you talk on the phone or you go and ask the person. I also think that this is because of the size of the team, right? It's a small team, and if you think you need something from someone, some information, then you just – Hey A2...you have him there it's one step right? I think it's also because of that...

Adriana: and in your case, what type of actions do you carry out to share knowledge?

A3: in my case, the information that for example sales people must know are exam dates that are set. So I have a calendar and when an update comes I send them an e-mail. Even so, it often happens that they ask us – hey do you have this day free? – and sometimes it is hard for me not to be ironical and say – well if you check your mail and the calendar I sent you, there it is – and so I give them the information, right? And in more than one occasion I've found people that, for example, A15, the other day told me – well it's easier, it's more practical, you have the dates there, it's no trouble for you to give it to me...I have to check my mail and look for it, right? Hahahaha and so you say well, why do I have this tool if you want me to give you the information at any moment, any way because you need it and because your client is on the phone... and they tell you... right?

Adriana: and so this is regarding information for exams but what about other type of knowledge that you share? Or do you share everything by mail, when somebody asks for it or you want to share it spontaneously...

A3: by knowledge do you mean everything? Not only...because in my area, we are focused...

Adriana: Yes I mean not just information about exams but all type of knowledge that you share in the team

A3: well basically, everything is around exams. I mean knowledge...maybe I don't understand the question or it's not clear for me...like what type of knowledge?

Adriana: anything you consider knowledge that can be shared and that sometimes you need to share or want to share. That's why I asked you if in the team there were more ways, for example - we have meetings every week...

A3: we don't have any. The only meetings that A1 has tried to establish, and I say "tried" because I think she has lacked continuity... I imagine it's because of reasons I can't see from my perspective but she has tried to organize meetings with us and I think they don't...well it's only my perception that A3 is in an initial learning curve in this type of meetings and we all are in a similar situation. The feeling or the general feeling, I would dare say is that these meetings are lacking structure because you attend them

but you might as well share whatever you share there in an e-mail, right? You create a group and everyone sends their information. You can read it and you don't need more, right?

Adriana: so you think interaction does not add anything to what is shared in those meetings?

A3: yep...

Adriana: and how does this happen?

A3: Well, I believe it happens because we are not given that... it's not that they don't give it to us as blaming someone but like we all are in our comfort zones and from there it's like – well she asked me to talk...it also depends on how much you submit to the task – she asked me to give her a report of the exams we have done and that's it, right? I mean she asked me to give information about exams, what does she want to know? She wants this, so I prepare a couple of slides, I put it there and I tell my colleagues, right? Then it's like there is no... there hasn't been that interaction of taking us to make connections and I say if we go in a comfort zone to present what is there and maybe only make a couple of questions of things that you are interested in because it's your exams or because your exams are connected to that course or... like it hasn't been any, or maybe in meetings there has not been any interconnection between different areas in a way that we see what everyone is doing and how that affects the others. Like it hasn't happened in meetings and I think that is what motivates my perception and other people's, right? Not just mine. I've heard colleagues that feel the same, right? – why the hell do I have to waste four hours if I can send an email and if I have questions I can address them to the person I think can answer them, right?

Adriana: and do you think that people in your team have different ways of sharing knowledge or information?

A3: different ways? Well basically we still trust too much on verbal communication, right? I think verbal communication is practical and common, there is no... well for example a small group...now A7 is trying to do something in Moodle to see what we can do and have more online interaction. Anytime you can check and see, right, but it's an idea, it still doesn't have the strength or the structure, I think... that could be a way of communicating between us, a way of sharing, like you call it, knowledge, but it is still an idea, right?

Adriana: So you think it's mostly face to face...

A3: face to face, there's a lot verbal communication, a lot face to face and even, I think, I am convinced from that I see it is a question of working culture, right? I mean people, the e-mail resource in more

than one occasion is more like...it looks as if ...it would be interesting to make an analysis of that correspondence because now that I think about it, it seems as the email works more to expose someone than to use it as a tool for communicating, right? If there is a problem with someone, you'll get the e-mail – what's happening?

Adriana: so it's like it depends on the type of content, the way you share?

A3: yeah, yeah sure, now that you say so, yes, depending on the content, different forms are used and yes, if it is an information request of a specific topic, product, solution, then the first option would be verbal communication whether face to face or by phone and as a second choice would be ...the only ones I see, the common one, verbal and written, right? Email, phone, right? Or face to face are the ones that work best or that are more frequently used, right? I think the most common is face to face, then phone, and last e-mail

Adriana: so this difference in content, let's say that people base their decisions of how to share based on it. Would it be related to an objective like – I want this person to see it for this purpose? Like to ridicule someone else...

A3: yes or like to show there is a problem, right?

Adriana: So it's not about classified information or very simple information, or...

A3: No, I think it is more on that line. However, there have also been a couple of emails like – here I share this information, it is important, please be discrete – but they are very few.

Adriana: and it's by email...

A3: yes but they are very few

Adriana: and do you think that in your team people perceive that certain information or knowledge belongs exclusively to specific individuals?

A3: In AC?

Adriana: Yes...

A3: Yes and it has been, even in one session of this diploma that we were taking, or well at least the instruction was that I won't take it anymore... we were taking this diploma and in a meeting, A1 said

that she cannot be giving out information to everyone, right, that we shouldn't expect that she will give us the information because who are we that she has to tell us everything, right? I mean I understand that there are things that she shouldn't or maybe the owner of the information believes that the rest shouldn't know, right? I imagine that, or I would like to believe that this is common practice for some reason...If it is an issue of confidentiality then I imagine we wouldn't need to know, right? I think the issue here is when there are situations in which, I don't know why, they sell exams, I don't know, until after I insist. Then because I don't know how they sell, what price they give to an important client, well I calculate expenses based on the official price... then, I take decisions because I think we are all in the same page and we are using the same price and later I find out it isn't like that when they tell me off because I am using...

Adriana: more money...

A3: Well I base my decisions on the analysis that I have, the earnings should be these and that – no it's not that way – well then if you had told me from the beginning that this service was sold at this price, then I only have this to spend then this would be different, right? So I think there is information that A1 and A2 deal with and that at least in my perception, they believe it's part of their territoire

Adriana: only them or do you think...

A3: they must share it with someone else right? But not with us because they surprise us at times...

Adriana: sure but is there any other person in the team ...or do you think this ownership perceptions are held by other people in the team? Have you seen them?

A3: talking to some of my colleagues, and they haven't said so in a direct manner, some of them have been more direct than others but yea, there have been comments that you can associate with a general perception...

Adriana: like which?

A3: yes well- you never know, you see, you find out until the end, right? Hahaha - I mean that is a very common expression around here...

Adriana: and what do you think motivates that, I mean do you think it's like – keep the right to own certain knowledge, or information and to gain what?

A3: why people keep information to themselves? Well I think it's a very broad question, it can be personality, it can be perception, it can be...

Adriana: and thinking about AC?

A3: thinking about my team in particular; I think it could derive from the style of management of my boss... she is like... her personality outside affects her personality here. Outside she is overprotective, she wants everything in control...what she says about her family, what she shares, when you put that aside and see what is happening here...everyone, well it is well known that you bring your personal life to the job, there is no middle ground there, right? So I think that's the line, right? Her personality is like that, she is overprotective and she brings that to practice here at work. And I would dare to say that this is what causes it, - No, you can't know this because you are very young to know, you don't need to know – like dealing with a child... you must not know we have financial problems at home, I don't want you to be affected, when in fact you are being affected...

Adriana: and do you think that permeates to the rest of the team?

A3: I think so, yeah

Adriana: so the rest also do it in that sense or...

A3: yes I mean, we replicate, you end up replicating, unconsciously we adopt forms and we all enter a group dynamic, I don't know. I think organisations become big because they have people leading them, the way they behave is replicated all over the organization.

Adriana: You told me at the beginning of the interview, that often in the team you share knowledge verbally, face to face or on the phone, in interactions...

A3: yes

Adriana: and do you remember the last time that you participated or saw an interaction where people were sharing knowledge in AC?

A3: It's interesting because I think there is a lack of form, that's it. Because we do share knowledge between members of AC but it's not like, it depends on time and the moment, and the form in which we share...we often do it informally

Adriana: How often?

A3: all the time, right? The last meeting we had in AC must have been two months ago. Since then, we've been sharing very informally, spontaneously but because of that we don't have specific moments of ways to do it. I was going to make myself a cup of coffee and I started talking to A16, then A7 heard and we had a brief exchange of information and knowledge... like it doesn't have that impact, we don't take it seriously like we should, right? Because it's not formal, there are no specific moments to do it, right? One of the reasons when a colleague and I (talking about a different job) thought about doing small meetings, that was our idea, giving formality to it, make it 5 or 10 minutes but that people can sit and talk about a topic in particular that they are interested in, right? But it acquires this dedicated time, maybe you weren't in a good mood but you were there... I mean...

Adriana: and what do you believe motivates people in AC to share?

A3: it's the need, right? The need because you need that knowledge for your job, and I think that very selfishly, if I don't need to know about other areas, I don't get involved, right? And it's the same for the other areas, if they don't need it, if it's not helpful or useful, what we do in our area, if they don't need to know, they don't need that knowledge of what we are doing, well they don't come closer right? They don't get involved...

Adriana: and do you think that people share stuff spontaneously, like things that are not related to what they have to do in that moment? Like not just to get the job done but stuff they read, they learnt, they've experienced...

A3: Very informally, yes we do... or I mean... For example A8 was in a programming course recently. We knew... well I knew that he was and that's why he'd missed work. So when he came back I asked him about the course, right? Because I am interested, because I have an interest in knowing what is happening up there in terms of programming, or out there to see how I can use it in my area... that is an explicit one, right? That I know he took a course and I want to know to see how I can benefit from that... or maybe now that they went to this conference (a big conference they went to) was there anything interesting? What did you see?...

Adriana: but it's like do you ask or do they share spontaneously?

A3: No, occasionally, mostly now it was very common with S1, hey I found this on internet I found this, I was looking for another thing and I found this other thing and it sounds interesting... it was very common, the thing is that if he found something on evaluation or if he found an interesting article on a topic we were interested in, he would come and share it with me, or if I found something about what he was doing with platforms or with technology in education... the same, hey check this page, I was looking for this and I found this talk online, it looks interesting, see what you think...

Adriana: but S1 is not in the team anymore

A3: he is not in the team anymore, so I now do that with A7, but it is not as frequent, with Si it was not just jokes that we shared and stuff we talked about but also there was this deep aspect, right? What's beneath, it's not our job but it's part of our job, right? It enriches what we do...now what I do, because I like it, if I find videos, articles, materials, books, I share them, right? I don't know, I even shared with you that I am reading a book that I found – deep survival – and it's the same... look what we do is related to this, check it, if it helps you... in that sense, I do like to share anything...

Adriana: So, do you think that people share in AC basically because they need information from someone else to do their jobs and nothing else?

A3: Yes, that would be the main motivation, right? I don't think we have as a team this closeness, like we are not there... but I think it is part of the culture like these strong relationships, deep relationships do not exist...maybe as a culture we still do not know how to divide friendship, being good friends but also being responsible for a function in the organization. And so relationships remain superficial... and another thing I feel is that there is no trust, like yesterday, something very enlightening...talking to A1, she says: if you want to get the job done, you have to do it yourself... and I don't think it has to be that way, right? I mean if communication is effective, the mean is adequate, the people are capable of doing what they need...right?

Adriana: You wouldn't need to do it

A3: Yes you wouldn't...but then it's part of, not only here but outside there's no trust, no absolute trust that you can do the job

Adriana: So there's no like, because there are people that even when there are no deep relationships, or friendships and trust, there are people that still share and it could be to show off or like to be seen, to prove something...have you seen that around here?

A3: I haven't seen them... no actually no.. maybe because of my tone or my intonation, a colleague used to tell me (he doesn't work here anymore) he said I was a bit rude, right? Because a couple of times he was talking about some stuff and if you don't ask me what I think, I won't say it but if you ask me – what do you think? Then I am going to tell you what I think, because you asked me – he was in charge of some courses and I just turned around to listen to his talk and another person asked me, what do you think? And I said what I thought and where I got my arguments from and well when you start an informed discussion sometimes you get altered and you raise your voice and you sometimes don't control your

emotions, right? I mean it's no excuse but for some of us it's just more difficult to control them, so the tone of voice, or you make comments that later when you analyze them you think – well maybe I shouldn't have been sarcastic or ironic... because that takes you somewhere else...so this colleague kept that, every interaction where something like that happened he kept that and in one group dynamic that A6 organised, because I doubt it would have happened without her, we were three days in a group dynamic and then this guy told me, right? In one of those dynamics where you have to confront each other and say what you like and what you don't like about the other person, right? And in that moment, he told me, right? He said well I see you this way and so...but in my case it's not to show off, it's because I got used to it with the brits, right? Either you made a comment that way or you were out of the chat, right? With Alex, with Graham, (in a previous job), it was always like that, your opinion had to be informed because otherwise you were swallowed, and if you didn't enter the dynamic, part of the culture was making a sarcastic comment to exemplify something, or you were not in the discussion, right? So my problem here is that I haven't been able to leave that behind, and I do the same here and...

Adriana: do you remember that last time I told you I was going to map a knowledge - sharing network of AC?

A3: yep

Adriana: ok, if you think about AC as that network and each person as a node, what role do you think you play there? In terms of knowledge sharing?

A3: In terms of knowledge and information I think most of the times I am more like a link than a knowledge generator. Because of my job, my function in AC I am more like, maybe not much but more like a link than a generator

Adriana: you mean a link between people...

A3: yes, but I also generate information...but not knowledge, looking at it I am more of a link...

Adriana: a link between who and who?

A3: between my, in this case sales and the people in my area, right? Logistics, examiners, authors, etc

Adriana: what makes you think that this is the role you play?

A3: what my job is about, right? If they tell me, we have to create a version of this exam, we have to create... maybe they don't give me a set date but they tell me, this year, we need to create this and that

and I don't go and tell A15, we have to create this, nor do I tell the authors but I am the link, right? So I have to plan, organize, see what has to be done, hire people, distribute tasks, it all translates into – hay please I need you to write this with this characteristics...

Adriana: and do you think people in the team see you like that? With that role?

A3: good question, I wouldn't know what to answer, definitely I wouldn't know... some of them have trusted me, even when A1 and A2 are not here, it's like they founded AC and when they are not here, guys come and expect me to say something, right? So I wouldn't know if they see me as a link or as the next in line, right?

Adriana: so you don't think that for example you have perceived that people approach you to share or to ask in another sense that is not looking at you as a link? For example based on this idea that you say that you express your opinions... do you think it has something to do with it?

A3: probably, maybe...I think so...well this guy, after he told me what he thought and felt, he gained trust and he asked me things, right? If he thought I could help, he would approach me and asked me and many times I didn't have an answer to give him but I tried maybe I told him where to look for or I would look for the answer and tell him. Also, A4 comes to me and asks me things like, hey I am doing this and where can I find that...

Adriana: and do you think that the role you are telling me you play, has an influence in the way you share?

A3: yes sure, because I consider myself a link between everyone and the way I do it is by doing my job, which is coordinating, putting pieces together and transmitting knowledge and information. People that I work with directly under my supervision, I coordinate their work and so they, for example A2 asks me, tells me that someone is interested on a specific date for an exam and so in the beginning I used to do it all, because I felt I had to, but little by little you think no I don't have to do it all...and so now I delegate more, for example with A15, I tell him it's these dates, you are very organized, please ask A8, and just keep me posted. "A8, A1 is sending us this information, what do you think we need to do? How? Same with A11 – we need to make this revisions, when do you think we can have them? What do you suggest? What changes do we need to make? Ask this person, ask this other person...and I try to work as a link, right? Like someone that takes information from one area to another.

Adriana: and do you think people in AC expect certain behaviours from you, based on that role?

A3: yes I think A15 expects me to tell him where we are, how we are doing...

Adriana: And what other roles do you think people play regarding knowledge sharing? Like links, or hubs or maybe peripheral roles...

A3: It's like I said, right? I think most part of the information that is handled in our team is... the receivers of everything are A1 and I think she shares a lot with A2, so their role in the team is that, right? To be information hubs, or knowledge hubs and at the same time they get information from outside, things that happen in the organization that affect AC and I think they are information hubs... I see some people in the periphery, like A16 she doesn't integrate, she's not linked, and it is easy for me to say it but I don't do much to help her, right? I am so absorbed by my job that I find an excuse not to get involved with her...but now that I think about it, I have time to talk to A7...

Adriana: to share with him and not with her, and it can be like that for her outside

A3: like that shouldn't matter, looking at things the way they are, I should make an effort to approach her if she doesn't, that's why we are team...

Adriana: what does it mean to you, to have that role of being a link between people? For knowledge sharing, does it mean anything?

A3: It's a big responsibility because if I don't, if the information is not given in time and form, it affects other areas, right? If I start thinking about the fact that I planned for my new exam to be ready in December, and I didn't think of scenarios that happened like a massive project that has been absorbing my time for a month and it has been very stressful. It's a lot of pressure because the culture in this organization is that heads determine who the main clients are, and from there their actions are based. And so this project is being coordinated for an important client and so the pressure is big

Adriana: not only from your team but the organization...

A3: Exactly, and so I see it as a big responsibility, I am starting November and I have not even started recording, when in my plan, that should have been finished in October, right? So this is a big responsibility, I feel it is big a big commitment

Adriana: Is there any other thing you'd like to tell me now that you are reflecting on this, whatever you consider important to say...

A3: well it's like the other day I was telling you about our team interaction, right? Last time, about how we communicate who with, what was my perception and I think we all share the knowledge that our interactions are shaped by a culture

Adriana: do you mean, a national culture?

A3: yes...organisations are small islands that replicate what happens outside...there are few exceptions, right? The people that leads organisations can make the difference...

Adriana: and do you think that this happens in Organisation Y and particularly in AC?

A3: well yes, it happens, right? When I was interviewed I was told – here the policy is zero tolerance to error – right? When we know that you only learn from mistakes, right? I mean maybe I am being drastic but a mistake is a great opportunity to learn, right? So the role of mistakes is like an opportunity to learn, to improve...

Adriana: and do you think that could be having an impact...I mean like I have zero tolerance to mistakes, then people keep information and don't share it so that others don't see...

A3: Sure, sure... I don't want to be exposed, right? That's what I am saying

Adriana: and when I see someone else's mistakes...

A3: oh look! There it is so I protect myself, right? I mean part of the culture that I see in general terms as a country is that we don't assume responsibility for our actions, right? And we wait until someone does for us what we should do, right? And in a way, we take that to our jobs, right? We want someone to decide for us, if we see that someone asks a question or someone questions something it is bad, right? It's negative, you have to be careful with what you say and who you say it to...

Adriana: and do you think that happens here?...

A3: Yes. I mean, all the time it feels like you are being threatened that something bad can happen to you, that you can lose your job if you make a mistake, you'll lose your job...because you see it, right? With your colleagues, the colleagues that left AC are not here because they made a mistake, right? It's not that they found a better job, maybe that happened later but two of the colleagues that are not here anymore made a mistake. The other colleague left because she probably saw something that the rest of us didn't want to see and she said – what am I doing here?

A.6 Sample interview transcript 2 (E3 – HC network)

Adriana: So, do you remember that in our last interview we were talking about whom you relate with to ask for advice, to ask for information and that kind of things? I want to start today's interview talking about the ways in which you perceive that your team share knowledge, like specific actions that you do as a team.

E3: Ok. Very well. I only see it as my team, talking about my team as such, the area that I belong to...or can it be about Human Resources as a whole?

Adriana: Well, who do you consider your team? I would think that people in HC but if you want to talk about Human Resources, it's fine.

E3: Ok. So the ways, errm well this question applies I think to both, my team and Human Resources. I try to be informed or at least to have a notion of what each person does and what things they handle. I have very general information on that, right? In my team, well I know who's in charge of talent attraction, who's in charge of consultancy... I mean in the end I try to know in general, in human resources who sees compensation, at least what is the specialized area each person is in charge of. Then, depending on the information I handle from the web, the news, or wherever I hear it, I immediately relate it. If I met someone in the weekend who works for a company that deals with compensation, then I send an email to the girl that is in charge of that area and I tell her, I found this page, or this person, that can be interesting for you. That's it. I look into it to know a bit but in the end I search for the person that can be more interested and I send them the document, the link, whatever. It's the same inside of the team when I see something that is being done and which can be interesting or useful to someone for their jobs, I share it with that person in particular.

Adriana: Do you send it by mail?

E3: Yep. Whether by mail or maybe very informally, just chatting – hey you know, I found this and that...like talking, right? A conversation, which is more informal, right? Errrm it's basically like that with everything I get. I get it, I distribute it with the people that will find it useful. Errmm.. and with my team, specifically on a daily basis, I try to be informed of what people that work with me are doing, if I can be of help, I intervene – “Hey, you know? You could do this and that, double click here, etc – things like that and I think it can be of help. When I explain something to someone, another person ate the back is hearing and suddenly interrupts and asks if he can come and see and then we explain it to both, right? But that's like in the everyday work. In other circumstances, I try to give them information but not detailed processes. Our database is wonderful because you can look for examples and methodologies. So I look for examples and I send them – so they have an idea of the deliverable they must produce. Of

course I identify and see what information is useful. This is with my direct team. I tell them what I do, I give them contextual information and I've noticed that helps with the ones doing internships. They come and say – Hey we talked about this and that in class and it reminded me of the project we have here – and we talk about it. It's not only me but they give me information of what they see in school. They give me names and references and if someone else is interested, I share it with them. So those are the ways I can think we share in my team.

Adriana: Ok but all of these are your ways, right? Ways in which you share. Now what do you do as a team?

E3: As a team...it's difficult, I think about it as experiences... As a team they send meeting requests for brainstorming. The person that needs that sends the request and tells us – I am doing this project. do you have any ideas on how to make it innovating? Interesting? – I don't know, they give us the context and people give ideas. They give what they can from their experience and that is what is done. At least in HC...and I think it's the only one. At the level of the company, we have JAMER. Not everyone has it but some of us do.

Adriana: Is it like Facebook in Organisation X?

E3: Yes, exactly. But professional. So people upload stuff they find and others give feedback. I don't really participate much, because almost everyone in there is from technology areas. What I do is not related with technology so... but I find the information useful for me. Well at least the summary of what they upload. But formally as a team I think it's just brainstorm meetings that we do.

Adriana: and informally?

E3: informally, mmm I'd say that once in a while, when we coincide after a meeting or something, either before or after the meeting – hey how's it going? – fine thanks – and then we start talking, but it's the same team that goes to the same meeting. Very briefly. But something as a team, I think we don't have it...

Adriana: And do you remember the last time you shared knowledge with someone in your team?

E3: mmm...well what can I say... like for example...well like two weeks ago, there was a girl from Recruitment, and she was transferred to HC. She knew I was handling a project...well I had been in recruitment before so she knew me, she knew I had been transferred too and she found out one of my projects is mapping processes. And so she contacted me directly and said – hey I know you were in charge of these projects and I need to map a process in recruitment before I get transferred to HC. Can

you help me? – yes, sure – So we got together and I explained how to map a process. I gave her tips and suggestions. More than telling her how to do it, I told her what has worked for me. It happened to me here, that I got confused between activities and tasks, so I gave her personal tips that won't be found in any methodology...

Adriana: by methodology do you mean a document in the database?

E3: Yes exactly. Or even at a level I mean knowledge that you find in google. Those are the type of things I like to share. So that was the last time. It was very formal, she approached me to ask for help to do her job. And it was because she knew that was what I did. I think more people then knew because other people are mapping, without me knowing and then they come and ask me for help. I help them very generally.

Adriana: do you think there is any difference, like in your case, is there any difference in whom you decide to share with, based on the content of what you share?

E3: Yes definitely. The one I told you about, identifying what is the specialization of each person is and sharing with them on that basis because maybe someone is interested in compensations, or in psychoanalysis and I send them stuff. I am not going to send something about psychoanalysis to someone that is not specialized in that. And so you separate the information you share on that basis. Obviously, there are things that can be valuable for anyone but I've never send anything to the whole department. If I do, I do it through E1. I tell her I found something interesting and she decides with the director of the area if it gets distributed. But yeah, the specialization of each person is important.

Adriana: So, is that what you would consider, the area to which every person belongs? I mean that what you share is useful for that person's job in particular... And do you think that in the team they feel the same? I mean that other people in the team classify the knowledge they share depending on its context? How do you think they do it?

E3: Errm...I think one part of it is because of the type of information, or the content. And also based on friendship. I've noticed that a lot here. If I like you, I include you, I share with you...if not, then it's only with my group, right? And on the other hand it's like ...besides, you won't use it, you don't need it...but it's a lot like a group thing, I've felt that people are very jealous of their information...

Adriana: In what sense?

E3: it's like: If I share it with you, you'll know more, or if I give it to you...I don't know...like if I don't like you, I won't send it to you, period. I've noticed it a lot all over Human Resources.

Adriana: Not in HC?

E3: No. Well yes, I have noticed it in HC but like the trend is like “whatever comes to me, I hold it here, I keep it”. And a lot of people share based on friendship, if they like you, if they don’t.

Adriana: Do you believe that there is knowledge or information that belongs to specific individuals in the team?

E3: Yes

Adriana: How does this happen?

E3: Well, a project that is exclusive of one person, sometimes it is difficult that they share information with you or like, a little piece of what he did in his project is going to help me in mine – hey can you share this with me? – It’s not updated – It doesn’t matter, send it as it is – errmm well let me look for it and I’ll send it to you... a week goes by and nothing, right? – hey do you have it? – oh guess what? I deleted it – I didn’t find it – I don’t know... and then you have to look for other means to get what you need.

Adriana: And so you’ve seen that in HC or in human resources?

E3: More in HC. Yes I have noticed it, or that they send you exactly the little piece you asked, right?

Adriana: and just that...

E3: Yes... and in my view I think it is important to give contextual information like I said before: where information came from, what for, obviously sometimes you don’t have all the time to tell the story but at least ask the people if they need anything else. Let me know, ask me, no problem – but sometimes when they give you the information it’s like: you asked me from point A to point B or A and M and they cut A, and they cut M and they send it to you, right? And I have noticed that, for example. Or sometimes you ask for information and they send it to you but it’s like – hey can we look at this, I have some doubts – I don’t have time – and I don’t have time, I don’t have time and you say well, I respect, right? But after a while you realize it’s not about time, it’s something else...I don’t know why, I don’t...

Adriana: Why do you think it is like that?

E3: I have no idea.

Adriana: How does this happen? How do people reserve the right to share or not share?

E3: I don't know if it is friendship, if I like you or dislike you, if it's laziness, laziness of teaching, of sharing, of giving some time...because in the end it is time that you give, I think, a little... I imagine... but I don't know why...

Adriana: Do you think that some individuals in the team believe they own certain knowledge or information and that it gives them advantage over someone else?

E3: Yes and I think it's a well-known saying : Information is power. And I have noticed that here...

Adriana: How have you noticed it?

E3: mmm it's like... I can't think of any example right now, but it's not like that obvious. It's not like "no I won't give it to you because if I do you'll know more than I do" though once it happened that someone said that to me face to face like – I learned on my own so I won't teach you. If I learned on my own, you can do it on your own – besides why if you have a higher position, you should do it alone, shouldn't you? – literally, someone said that to me but it was once in the two years I've been here.

Adriana: But do you feel there are other people with the same attitude even if they won't say it?

E3: Yes it can be, yeah... but I don't know much, I think it can happen...on the other side is also that people are not sure what information they are allowed to share or not. Confidentiality is an issue and so I think that sometimes, maybe, it has happened to me that I don't remember if something is confidential and so you don't share it so that you don't screw it. But this can happen like – I give it to you but I give you the sheet of paper because you can't print it your self and I can't send it via e-mail – And this is because of confidentiality issues. I thins sometimes we don't really know

Adriana: Among the things you told me, that the team does to share, you said that before a meeting or after, you talk about things, right? Do you think people in the team share knowledge face to face?

E3: I think it's more like I send you a document via e-mail. More often electronically than face to face.

Adriana: And why do you think it is so?

E3: I think that in the end we are human beings, we are social... being able to communicate with someone else makes the difference. I think it is easier to share informally, face to face than by other means. I think that once you do it formally, you feel obliged to those things...

Adriana: obligated to what?

E3: to share, I mean we are having a session in which you have to bring your...- like the fact that it is imposed, sometimes it makes it harder that when it comes naturally, right? It's innate, you are talking to someone, you find out what they do and you chat about it and it is much easier face to face because in the end you have feedback and it happens. But if you send information you don't know if they read it, you don't know if they agreed, if they were interested. If you talk about it face to face you have that feedback if they agree, if they have other ideas, if they know more, and it becomes like a snow ball, you have more to talk about than if you send an email...

Adriana: how frequent do you think this type of interactions happen?

E3: I think it depends on the team and the project. I mean if it is a project like the one I told you last time, my projects, well one project is all about being there with the system, and sometimes the type of project I manage does not allow me to do it as frequently because I have to be in front of a computer and be alone because we can't be working on the same computer, the four of us... but it's because of the project. For example the team that manages talent attraction, they are more like public relations, like organizing events, presenting...and so their projects are ideal for that type of thing...

Adriana: Ok. And how often do you think it happens in HC?

E3: In HC, how frequent... I'd say very rarely because we are segmented by projects. My team is often left aside. I think it happens frequently within clusters but not as a team – HC but like within the divisions or the projects, right? So I have noticed that if one day I go and visit someone and I see something by chance – oh look that's cool – Yeah we did it in our team – and it stays there and if you ask because you happened to have seen it they might agree to share it but in reality it is very segmented.

Adriana: Within the project teams...ok. And do you remember any interaction where knowledge was shared among people in the team?

E3: Brainstorm meetings are the only one. But it is because someone requests it because they need help and honestly it's not frequent. It happens but it's not common practice. I don't know if it is because of this segmentation...

Adriana: And this brainstorm meeting...is it voluntary? I mean you go if you want to or do you have to go if you are invited?

E3: well we should participate because participation is measured but in the end it is not compulsory. If you can't go, you don't and that's ok.

Adriana: So in this brainstorm, how do you see people behave, do they share spontaneously, or do they wait until being asked...

E3: Once we're there, everyone participates. The problem is that they attend. That's what I have noticed too. It depends on who sent the request, the amount of audience you will have. But once they are there, they are and you don't need to be asking: what else? What else?

Adriana: and what do you think this relates to? This thing of: depends on who sent the request... what does it mean?

E3: If you like him or not. I've seen that a lot

Adriana: it's not because of hierarchy?

E3: No. It's not because of hierarchy

Adriana: and is this the same in all human resources or just HC?

E3: HC. The brainstorm meetings are only done in HC

Adriana: and what do you think makes people share in your team, I mean in HC, what do you think are their motivations to share?

E3: ...to avoid re-work. I think it's one of the main reasons, just knowing that someone else is doing something similar, and if in the end the products are very different, well one of you will have to do it all over so they match, right? So part of it is avoiding working twice. At the same time to follow the same guidelines. If we are working on the same thing, well let's know the same... what else? That their teammates have the same knowledge and the necessary knowledge to deliver. To give them knowledge that they have to use... I think that's it...

Adriana: and individually, what do you think motivates them to share? Because what you just told me looks like ways of aligning, ways of working but personal motivations...do you think they have them?

E3: Emmm... I don't know...generally maybe the fact that if you share information, you start being an expert, a point person. Let's say that in that topic it's also about image. I think you can summarise it into image, like "I know, I am a good boss and I share it" or "I am a good colleague and I share my information". What else? I don't know, maybe just for not keeping things, and saying here it is, right? Whoever needs it?

Adriana: and have you seen those motivations in people? Is there anything you can think about that has made you think like this, like this could happen in HC? How do you notice it?

E3: Honestly it's not very obvious. It's like "petite comite" that they send it, they see it but I think we fall a lot in the way of work, the tools for the job, more than any added value to what is being done. And I see that we are strongly segmented.

Adriana: and do you think that the rest of the people in HC think like you in that respect? I mean about motivations and that the rest see it like it is for the job, as a way of working...

E3: eermm, I think opinions can vary. Each one has their philosophy. I think that is what I can see from my position in HC but I don't know about the others...

Adriana: And do you think there is a chance that people have a truly altruistic motivation to share? Like to do good to others or that they share always thinking what they will gain from it?

E3: I think there's both.

Adriana: and what would the gain be related to?

E3: Well everything that has to do with image, like more expertise, higher hierarchy, more knowledge on a subject...I don't know, everything image can bring...

Adriana: Ok. And do you remember that last interview I told you I was going to map a knowledge network from HC? What role do you think yo play in that network?

E3: what role do I play? Well I think I see it in two ways. I think one of my roles is absent regarding integration. In a way, but I think people know they can approach me. Sometimes I see myself very isolated but I believe people trust that they can come and ask me whenever they need to. That's what I perceive.

Adriana: Do you think people in HC have expectations on your behaviour that are based on that role? That they expect certain things from you? That they perceive this role?

E3: Yes, definitely

Adriana: So what do they expect?

E3: The only thing I think about their expectations is that when they approach me, they obtain what they need. It's strange, I think they feel they can approach, that I can share and help but like they see that I am workaholic and it's like – I don't want to interrupt her, I don't want to disturb her – but once we are there it doesn't matter and we share. So in a way I think they expect me to be less workaholic and be more integrated...

Adriana: Ok and what do you think are the roles of other people in this network?

E3: well the roles, I think sometimes the careless, the on that thinks – this does not involve me, I don't do this things, I won't care – just like that – if it won't be useful for me or is not related to what I do, then I don't care about it – and there's this other side, that they like knowing more about other things. I can see those roles

Adriana: Who takes those roles?

E3: you want names?

Adriana: Don't worry. It won't leave the room

E3: people in the talent attraction area are completely opposite to what is done in organizational development. I have noticed in both sides that if something comes from there, it's almost deleted... and if they send anything to others, they omit this side. They say it's because it won't be helpful and you won't be interested, or that it has nothing to do with what you are doing. Some are systems and the others are relations so yeah they are opposites but we mistakenly believe that the others don't care or that it won't help them.

Adriana: and the others that you say are interested in other areas?

E3: same, even when it is not part of their projects, they at least take the information.

Adriana: and they are not talent attraction, so they are...

E3: it's another area, it doesn't have a name but we could call it change management.

Adriana: and do you think people are conscious of those roles?

E3: Yes, I believe so.

Adriana: do you believe those roles have an impact on the way they share or not share?

E3: yes that too. I think it goes hand in hand with content. It's a reason to share or not or whom with

Adriana: and in your case, do you believe that the role you perceive as yours and that you believe the others see, do you think it has an impact on how you share?

E3: yes because I know that the role I play sometimes prevents that I share face to face, which I like the most, right? So, for example, this role that I play in HC – I'd rather send it by mail. Telling the person – look I have this, I'll send it to you- However, with people that are in recruitment, who are not part of my team, but area mostly psychologists, I am a psychologist too, we have many things in common and with them I even wait for lunch – hey guess what, I found out that this and that and we start chatting and it is much easier for me to come to them and talk to them and I rarely send them an email unless it is a video...but I am better integrated there...

Adriana: and what does that mean to you?

E3: mmm...it's uncomfortable that you can't share that easily, right? That you see that because of the role you play or the way you are, the flow of information is blocked. But on the other hand, I feel well that despite my role there are people that come to me and ask me things. And it happens frequently. In the end, I don't know if they come to me only when it's urgent but they do come. I think if I wasn't so attached to my job I could share. I could have the same role but have a different vision of the team and the fact that they ask me things motivates me to know more. So that they know I not only know about systems, that you know other things so I think that's it

Adriana: what consequences do you think you get when you share knowledge?

E3: I don't know...maybe make the team more knowledgeable, that we can all talk about something, right? Like we know it, we can discuss it... maybe that sometimes the fact that you share information helps you reinforce your knowledge and sometimes you are sharing something and you have a doubt and you go and look for the answer and that takes you somewhere else... Sharing generates questions

and I look for answers. On the other hand, and it's part of the motivation, why not? That they see you as an expert of a certain area and it is satisfactory that they do. And well in the end they say that if knowledge is not shared, then it gets rotten and it's true...what's the use of knowing if you don't share it? We can all do something with that knowledge even when I think you won't use it, what if you do?

Adriana: Ok. Anything else you'd like to say?

E3: Well I think we still need a lot as a team, like HC not like clusters. We need a mechanism... I think somebody should do it...someone needs to take the initiative to break those barriers that "we are different projects". In the end, we are all HC we should all know the same because we don't know. Tomorrow I can be handling another project that I don't know anything about and if we had shared knowledge it would have been easier to do something different. We need to break that barrier. I think I speak for everyone, not just me but every member of the team. Breaking that selfishness of not wanting that you know more than I do, or that I wrongly believe that you won't be interested or that it won't be useful for you. And I didn't say it before but I think time is also impeding that we share. We are always in a rush, we never stop, or maybe we fake it but sometimes time doesn't allow you to organize a meeting or request more brainstorm meetings or maybe just ask people for ideas for a project and just present what everyone is doing and give a context to what is being done...

Adriana: Ok...not like a follow up

E3: Yes, and I think that's all I can say...

A.7 Informed consent letter (In Spanish)

(CONSENTIMIENTO INFORMADO)

Muchas gracias por participar en esta investigación. La recolección de la información para este estudio se llevará a cabo en dos etapas; entre agosto y septiembre de 2012. Este documento le ofrece detalles sobre el propósito de este estudio, los métodos a utilizar y sus derechos como participante.

El propósito de este estudio es:

Entender la forma en que los miembros de redes internas de información de equipos en las organizaciones participantes, experimentan e interpretan el fenómeno de compartir conocimiento entre ellos.

Los beneficios esperados de esta investigación son:

- Contribuir a la construcción de un conocimiento más profundo sobre cómo se comparten la información y el conocimiento al interior de los equipos en las organizaciones.
- Identificar componentes relevantes que pudieran ayudar al diseño y/o mejoramiento de la estrategia de gestión del conocimiento de las organizaciones participantes.

Los métodos a utilizar en este proyecto son:

- Entrevistas uno a uno (de distintas duraciones)
- Observaciones espontáneas y planeadas

Usted puede hacer preguntas sobre la naturaleza del estudio o los métodos utilizados directamente a la investigadora si lo considera necesario. Para ello, se puede contactar vía correo electrónico a la siguiente dirección.

adriana.maldonado@sheffield.ac.uk

Las entrevistas en las que participará serán audio grabadas para ayudar a capturar fielmente sus narraciones e interpretaciones, usando sus propias palabras. Dichas grabaciones sólo serán escuchadas por la investigadora para fines del estudio. Usted puede solicitar que se apague la grabadora en cualquier momento de las entrevistas.

Durante las observaciones de campo, la investigadora tomará notas; mismas que se destruirán una vez transcritas en archivos digitales. Dichos archivos estarán protegidos con contraseña y serán resguardados por la investigadora, quien sera la única persona con acceso a los mismos.

Usted puede decidir dejar el estudio y de hacerlo, puede solicitar que las grabaciones de sus entrevistas sean destruidas y omitidas del estudio.

Toda la información se utilizará para la elaboración de la tesis doctoral de la autora; la cual será revisada por los supervisores asignados a su investigación en la Universidad de Sheffield, Reino Unido.

Es probable que se utilicen citas directas derivadas de las entrevistas y observaciones en la tesis. Sin embargo, toda información con la que pueda identificarse a los participantes del estudio (incluyendo sus nombres); así como a la empresa (Deloitte) será tratada cuidadosamente en anonimato y será omitida de todos los reportes derivados de esta investigación y de la tesis.

Adicionalmente y una vez concluido el análisis de la información, se entregará un reporte a la organización, que se ponga a disposición de los participantes interesados

Al firmar este documento, certifico que yo

_____ (nombre completo)

accedo a participar en el estudio de la referencia bajo los terminos aquí descritos.

(Firma)

(Fecha)

A.8 Invitation for participants (In Spanish)

Invitación a participar en el proyecto de investigación: "Understanding knowledge sharing in knowledge sharing networks"

La presente es una invitación para participar en un proyecto de investigación a realizar entre Agosto de 2012 y Febrero de 2013 con el personal de los equipos en dos departamentos (██████████ y ██████████) en ██████████ ██████████, en sus oficinas de la Ciudad de México.

Dicho proyecto será llevado a cabo por la c. Adriana Maldonado Torres; quien tiene la licenciatura en psicología, una maestría en negocios (MBA) y que actualmente está realizando sus estudios de doctorado en el Instituto de Psicología del Trabajo en la Universidad de Sheffield en el Reino Unido. La investigación formará parte de su tesis doctoral.

El objetivo general de esta investigación es entender la forma en que los miembros de redes internas de información de equipos en las organizaciones, experimentan e interpretan el fenómeno de compartir conocimiento entre ellos. Para ello, es de particular interés trabajar con equipos que realicen trabajo mayormente intelectual, especialmente en organizaciones donde el conocimiento sea considerado como un activo clave en el desempeño de su quehacer y el logro de sus objetivos. De ahí el interés de la investigadora de trabajar con ██████████ ██████████ y particularmente con los departamentos mencionados. Consideramos que contar con su participación como miembro de uno de los equipos mencionados será muy enriquecedor para los resultados del estudio.

Por ello, le extendemos esta invitación para participar en dos bloques de entrevistas; el primero entre agosto y septiembre de 2012 (dos entrevistas), y el segundo entre diciembre de 2012 y febrero de 2013 (una entrevista). La primera entrevista tendrá una duración de entre 10 y 15 minutos; la segunda de entre 40 y 60 minutos y la tercera entrevista durará entre 20 y 30 minutos. Las preguntas de dichas entrevistas estarán orientadas hacia la narración de sus anécdotas, experiencias e interpretaciones personales de las mismas con respecto al tema de la investigación. Tanto los datos de los participantes (nombre e información identificable) como los de ██████████ ██████████, serán manejados cuidadosamente en anonimato y serán omitidos tanto en la tesis como en todos los reportes derivados de la investigación.

Le pedimos responda a este mensaje, dirigiéndolo a ██████████ y/o ██████████ (cc Adriana Maldonado) indicándonos si está disponible para participar en este estudio, y así poder comunicarnos con usted para brindarle mayor información sobre el mismo y acordar la fecha en la que podría ser entrevistado(a)

██████████
adriana.maldonado@sheffield.ac.uk

Muchas gracias por su atención y pronta respuesta

B. Social Network Analysis (SNA): Tables and network maps

B.1 Degree centrality tables for each network and knowledge sharing purpose

Table 8. Degree centrality **MI network** – Ask for information

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
F2/F14	20	F14/F6	13	F1	26	F1	16
F21	15	F10	11	F13	22	F13	14
F3/F6/ F10	14	F20/ F21	10	F3	21	F26/ F2	12
F20	12	F3/F26 /F2	9	F2	19	F3	11
F18/F19	11	F17/ F18	7	F19	17	F19	10
F28/F15 /F17	10	F1/F4/ F15/ F16	6	F6/F8/ F24	9	F24	8
F26	9					F4/F7/F8/ F25	7
						F23	6
<i>F23/F24</i>	<i>2</i>	<i>F7/F24</i>	<i>1</i>	<i>F18</i>	<i>1</i>	<i>F17/F18</i>	<i>1</i>
MEAN	8.4		5.6	MEAN	8.4		5.6
MINIMUM	2		1	MINIMUM	1		1
MAXIMUM	20		13	MAXIMUM	26		16

* Actors who participated in the in-depth interviews F1 to F8

Table 9. Degree centrality **EC network** – Ask for information

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED DEGREE CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED DEGREE CONNECTEDNESS (IN)
C9	15	C9	11	C1	31	C1	15
C18/C7	12	C1	9	C2	20	C3	11
C1	11	C16/C4/C7	7	C3	17	C6/C5/C8	10
C10	8	C18	6	C5	15	C4	9
C4/C16/C26/C2/C22	7	C11/C10	5	C6	13	C2	8
				C4/C8	12	C16/C9	6
				C16	7	C18	5
C12	2	C15	1	C26/C23/C20/C25	0	C20/C23/C25/C26	0
MEAN	6.3		4.3	MEAN	6.3		4.3
MINIMUM	2		1	MINIMUM	0		0
MAXIMUM	15		11	MAXIMUM	31		15

* Actors who participated in the in-depth interviews: C1 to C13

Table 10. Degree centrality **KM network** – Ask for information

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED DEGREE CONNECTEDNESS (IN)
B2/B7	11	B2	6	B3	18	B3/B1	7
B4/B8	7	B7/B8	4	B1	13	B2	4
B1	2	B3	1	B7	0	B7	0
MEAN	6.1		3.2	MEAN	6.1		3.2
MINIMUM	2		1	MINIMUM	0		0
MAXIMUM	11		6	MAXIMUM	18		7

* Actors who participated in the in-depth interviews: B1 – B5

Table 11. Degree centrality **HC network** – Ask for advice

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED DEGREE CONNECTEDNESS (IN)
E1	10	E1	8	E1	19	E1	9
E3	8	E5	5	E2	14	E10/E2	7
E5	8	E7/E3	4	E10	10	E6/E4	4
E9/E8	7			E4	9		
E6	6			E6	5		
E2/E10	3	E11	1	E5	0	E5	0
MEAN	5.5		3.1	MEAN	5.5		3.1
MINIMUM	2		1	MINIMUM	0		0
MAXIMUM	10		8	MAXIMUM	19		9

*Actors who participated in the in-depth interviews: E1 to E5

Table 12. Degree centrality **MI network** – Ask for advice

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED DEGREE CONNECTEDNESS (IN)
F3	27	F15	10	F3	23	F3	14
F1	17	F10/F3/F8	9	F2	22	F13	11
F19	16	F1	7	F26/F13	19	F19/F26/ F2	10
F8	14	F9	6	F19/ F4	18	F1	8
F10/F15	12	F19/F23/ F2/F27	5	F1	13	F4	7
F23/F18	9			F5/F24	9	F5	6
F9/F27/F29	8			F7	8	F7	5
F26	0	F26	0	F15/F18/F28	0	F15/F18/ F28	0
MEAN	7.4		4.1	MEAN	7.4		4.1
MINIMUM	0		0	MINIMUM	0		0
MAXIMUM	27		10	MAXIMUM	23		14

* Actors who participated in the in-depth interviews: F1 to F8

Table 13. Degree centrality **AC network** – Ask for advice

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
A3	21	A3/A14	14	A1	22	A2	10
A14	20	A4	6	A2	15	A1	9
A4	9	A8	5	A6	12	A6/A3	6
A7	8			A3	10	A4/A10	5
				A4	9		
A1/A2	3	A2	1	A14	1	A14	1
MEAN	7.2		4.4	MEAN	7.2		4.4
MINIMUM	3		1	MINIMUM	1		1
MAXIMUM	21		14	MAXIMUM	22		10

*Actors who participated in the in-depth interviews: A1 to A5

Table 14. Degree centrality **EC network** – Ask for advice

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED DEGREE CONNECTEDNESS (IN)
C7	17	C1/C7	7	C2/C1	21	C1	10
C1	13	C9/C10	6	C6/C5	19	C3/C2	8
C10/C9	12	C11/C12	5	C3	14	C6	7
C26	10	C21/C22/C2/C26	4	C4	13	C5/C4	6
C21/C11	9			C7/C11	9	C8	5
C12/C22/C4/C2	8			C9/C8	8	C9/C7	4
C6	0	C6	0	C26/C21/C14/C23	0	C14/C21/C23/C26	0
MEAN	6.9		3.1	MEAN	6.9		3.1
MINIMUM	0		0	MINIMUM	0		0
MAXIMUM	17		7	MAXIMUM	21		10

*Actors who participated in the in-depth interviews: C1 to C13

Table 15. Degree centrality **KM network** – Ask for advice

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED DEGREE CONNECTEDNESS (IN)
B7	10	B7	5	B3	15	B3	6
B8	9	B5/B2/ B8	3	B1	9	B1	5
B5/B2	5			B4	7	B6	3
B1	0	B1	0	<i>B7</i>	<i>0</i>	<i>B7</i>	<i>0</i>
MEAN	5		2.3	MEAN	5		2.3
MINIMUM	0		0	MINIMUM	0		0
MAXIMUM	10		5	MAXIMUM	15		6

* Actors who participated in the in-depth interviews: B1 to B5

Table 16. Degree centrality **HC network** – Share ideas, insights, opinions and experiences

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
E4	24	E4	8	E10	23	E10/E1	9
E1	21	E6/E7/ E3/E8/ E10/E1	7	E1	21	E6	8
E3	19			E6	17	E4/E9	7
E10	14			E4	16	E7/E3/ E8	6
E7	14			E3/E7/ E8/E9	13		
				E2	8		
E2	5	E12	3	E11	3	E12	3
MEAN	12.8		5.9	MEAN	12.8		5.9
MINIMUM	5		3	MINIMUM	3		3
MAXIMUM	24		8	MAXIMUM	23		9

*Actors who participated in the in-depth interviews: E1 to E5

Table 17. Degree centrality **MI network** – Share ideas, insights, opinions and experiences

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED DEGREE CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED DEGREE CONNECTEDNESS (IN)
F26	24	F1	11	F2	24	F2	10
F3	23	F3/F26/ F2	9	F26/ F3	20	F3/F26	9
F2/F5	16	F21	7	F4	19	F4/F1/ F13	8
F10	15	F9/ F4/F5/ F13/F14/ F19/F27	6	F13	18	F5/F19	7
F11	14			F5	16	F11	6
F28/F1	13			F1/F19	15		
F21	12			F10	13		
F19/ F24	11			F9	12		
				F11	11		
F22	3	F22	1	F28	3	F28	2
MEAN	10		5	MEAN	10		5
MINIMUM	3		1	MINIMUM	3		2
MAXIMUM	24		11	MAXIMUM	24		10

* Actors who participated in the in-depth interviews: F1 to F8

Table 18. Degree centrality **AC network** – Share ideas, insights, opinions and experiences

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
A7	22	A7/A3/A2/A14/A1	14	A1	25	A1	12
A2	21			A2	20	A2/A9	11
A3	19			A6	19	A6/A3	9
A1	18			A3	17	A7	8
A14	16			A9	15		
A15	3	A15	1	A14	4	A14	4
MEAN	11.1		7.2	MEAN	11.1		7.2
MINIMUM	3		1	MINIMUM	4		4
MAXIMUM	22		14	MAXIMUM	25		12

*Actors who participated in the in-depth interviews: A1 to A5

Table 19. Degree centrality **EC network** – Share ideas, insights, opinions and experiences

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
C3	26	C23	11	C4	24	C1	13
C21	18	C9	10	C1/C12/ C5	19	C12	9
C10/C15	17	C21/C7/ C10	9	C2	17	C13/C5/ C4/C3/C2	8
C23	16	C3/C2/	8	C9/C13	15	C15/C9/ C6/C19/ C20/C7	7
C7	15	C17/ C18	7	C6	14	C21	6
C18	13	C4/C24	6	C19/ C3	13		
C2/C9/ C13	12			C16	12		
C26	11			C15/ C7/ C11	11		
<i>C14</i>	<i>4</i>	C1	2	<i>C23/ C14</i>	<i>1</i>	<i>C14/C23</i>	<i>1</i>
MEAN	10.6		5.7	MEAN	10.6		5.7
MINIMUM	4		2	MINIMUM	1		2
MAXIMUM	26		11	MAXIMUM	24		13

*Actors who participated in the in-depth interviews: C1 to C13

Table 20. Degree centrality **KM network** – Share ideas, insights, opinions and experiences

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
B4	10	B5/B6/B4	4	B3	15	B3/B4	5
B6	8			B4	10	B6	4
B2	7			B1	7		
B7/B3	4	B7	1	<i>B5/B8</i>	2	<i>B7</i>	1
MEAN	6.2		3	MEAN	6.2		3
MINIMUM	4		1	MINIMUM	2		1
MAXIMUM	10		4	MAXIMUM	15		5

*Actors who participated in the in-depth interviews – B1 to B5

Table 21. Degree centrality **HC network** – Ask for a different opinion or perspective

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
E1	12	E1	8	E1	16	E1	10
E8	7	E5	5	E2	12	E10/E2	6
E5/E6/E7	6	E9	4	E10	11	E6	4
E9/E12	5			E4	6		
E2	0	E2	0	E11/ E12/E5	0	E11/ E12/E5	0
E10	1	E10	1				
MEAN	4.8		3	MEAN	4.8		3
MINIMUM	0		0	MINIMUM	0		0
MAXIMUM	12		8	MAXIMUM	16		10

*Actors who participated in the in-depth interviews: E1 to E5

Table 22. Degree centrality **MI network** – Ask for a different opinion or perspective

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNES S (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDN ESS (IN)
F1	16	F1	11	F13	18	F1	11
F29	14	F3/F29	9	F2/F1	16	F13/ F3/ F26/ F2	9
F14/ F8	11	F9/ F5/ F13/F14	6	F4/F3	14	F19	8
F27/ F3/ F17/ F9	9			F26	12	F4/F5	7
F28	8			F5/F7	8	F10	6
F5/F13/ F21/ F19/ F2/ F11	7						
F26	1	F23/F26	1	F17/ F29	1	F17/F28 /F29	1
MEAN	6.6		4.5	MEAN	6.6		4.5
MINIMU M	1		1	MINIM UM	1		1
MAXIM UM	16		11	MAXIM UM	18		11

*Actors who participated in the in-depth interviews: F1 to F8

Table 23. Degree centrality **AC network** – Ask for a different opinion or perspective

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNES S (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDN ESS (IN)
A14	19	A3/A5/ A14	14	A6	22	A6/A1	11
A5/A3	17	A8	10	A1	21	A3	9
A6/A8	11			A2	15	A2	8
A7	9			A3	13	A7	6
				A7	8		
A2	2	A9	1	A5	2	A5	2
MEAN	7.9		5.5	MEAN	7.9		5.5
MINIMUM	2		1	MINIMUM	2		2
MAXIMUM	19		14	MAXIMUM	22		11

*Actors who participated in the in-depth interviews: A1 – 15

Table 24. Degree centrality **EC network** – Ask for a different opinion or perspective

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
C3	14	C9/C18/ C11	7	C1	21	C1	12
C9	13	C1/C15/ C21/ C7	6	C6/C2	17	C5	11
C18	10	C6/C23/ C3	5	C5	16	C6/C4/C3	9
C1/C11/ C10	9			C4	15	C2	8
C21/ C15/ C7	8			C3	13	C7	6
C16/ C6	7			C7	8		
C12	3	<i>C20/ C12/C5/ C8/C24</i>	2	<i>C21/ C14</i>	0	<i>C14/C21</i>	0
MEAN	6.5		4.1	MEAN	6.5		4.1
MINIMUM	3		2	MINIMUM	21		0
MAXIMUM	14		7	MAXIMUM	0		12

* Actors who participated in the in-depth interviews: C1 to C13

Table 25. Degree centrality **KM network** – Ask for a different opinion or perspective

HOW ACTORS PERCEIVE THEMSELVES IN THE NETWORK				HOW ACTORS ARE PERCEIVED BY THEIR COLLEAGUES IN THE NETWORK			
ACTOR	OUTBOUND DEGREE SCOPE (OUT)	ACTOR	OUTBOUND UN-WEIGHTED CONNECTEDNESS (OUT)	ACTOR	INBOUND DEGREE SCOPE (IN)	ACTOR	INBOUND UN-WEIGHTED CONNECTEDNESS (IN)
B7/B6	5	B8	4	B3	7	B1	5
B4/B8/ B1	4	B6/B4/ B7	3	B4/B1	6	B3	4
				B2	4	B6/B4	3
B2	1	B2/B3	1	<i>B8</i>	<i>0</i>	<i>B8</i>	<i>0</i>
MEAN	3.5		2.3	MEAN	3.5		2.3
MINIMUM	1		1	MINIMUM	0		0
MAXIMUM	5		4	MAXIMUM	7		5

* Actors who participated in the in-depth interviews – B1 to B5

B2 Network maps – Figures 7 – 21

Fig. 7 HC network: Share ideas, insights, opinions and experiences

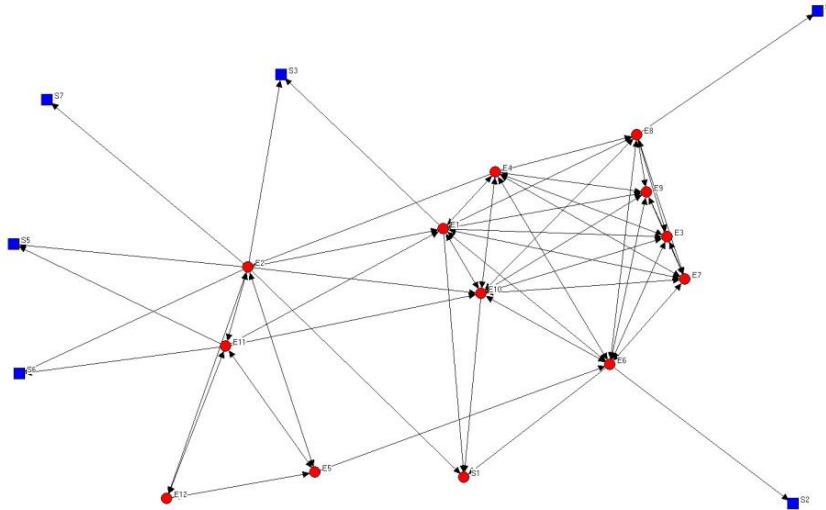


Fig 8. HC network: Ask for advice

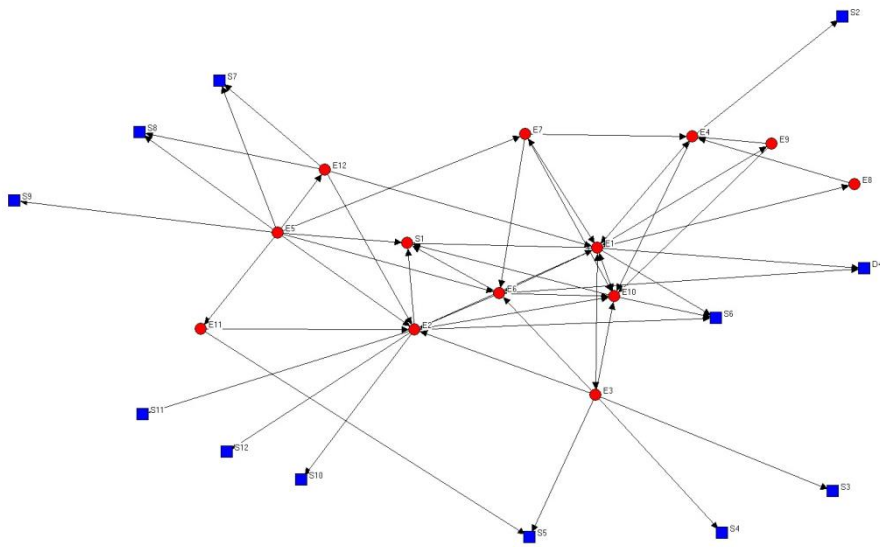


Fig 9. HC network: Ask for information

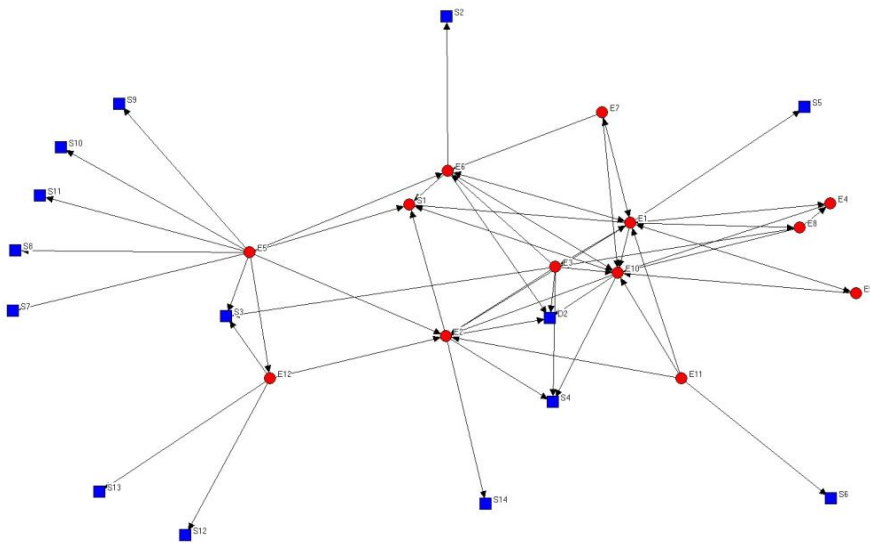


Fig 10. MI network – Ask for advice

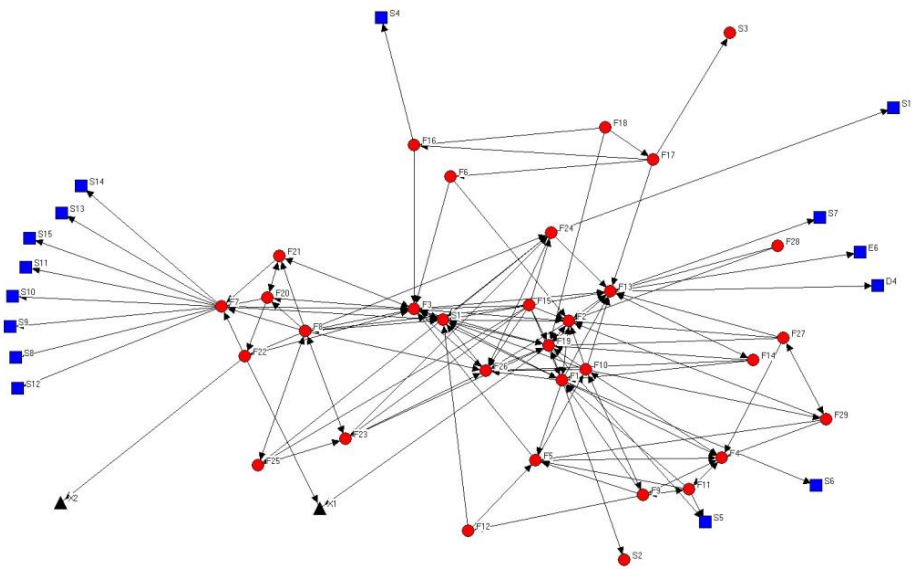


Fig 11. MI network – Ask for an opinion or a different perspective

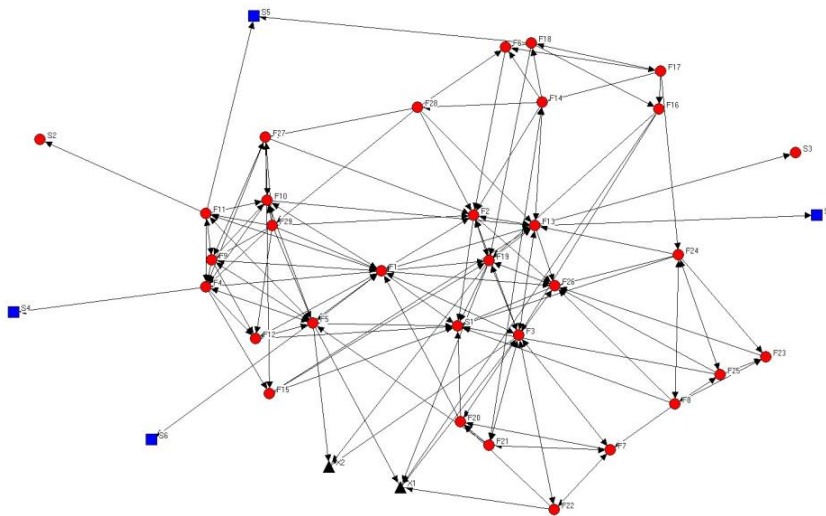


Fig. 12 MI network – Ask for information

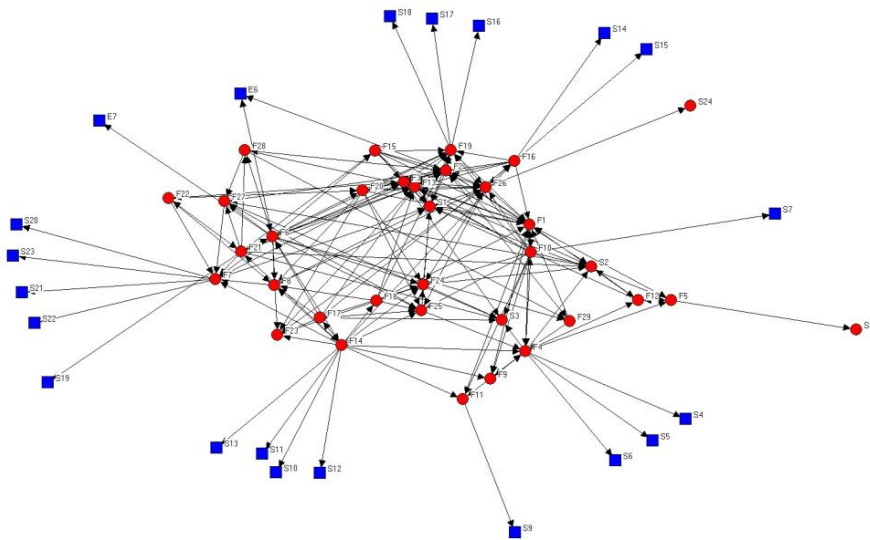


Fig. 13 AC network – Share ideas, insights, opinions, experiences

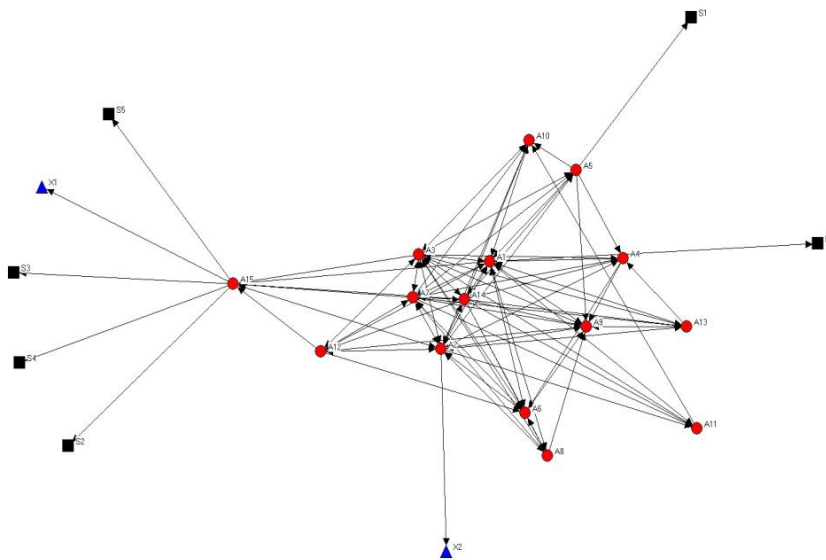


Fig. 14 AC network – Ask for advice

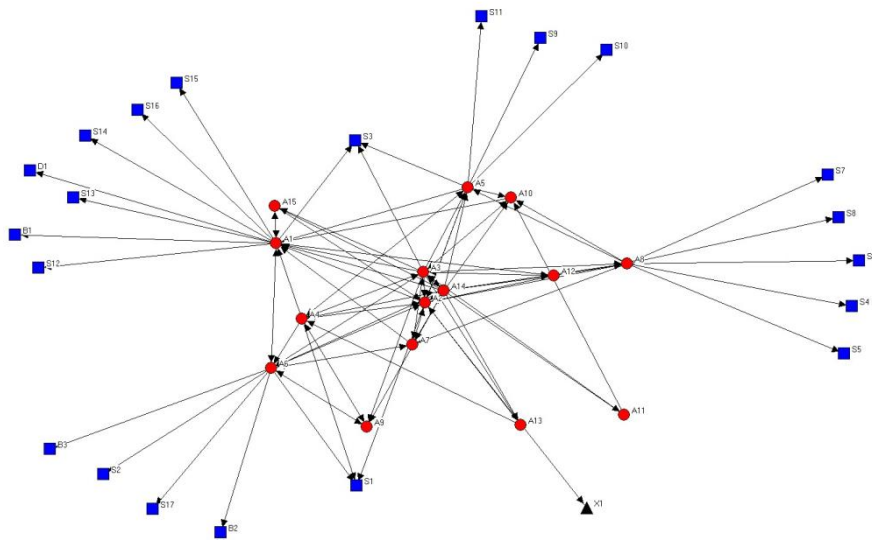


Fig. 15 AC network – Ask for information

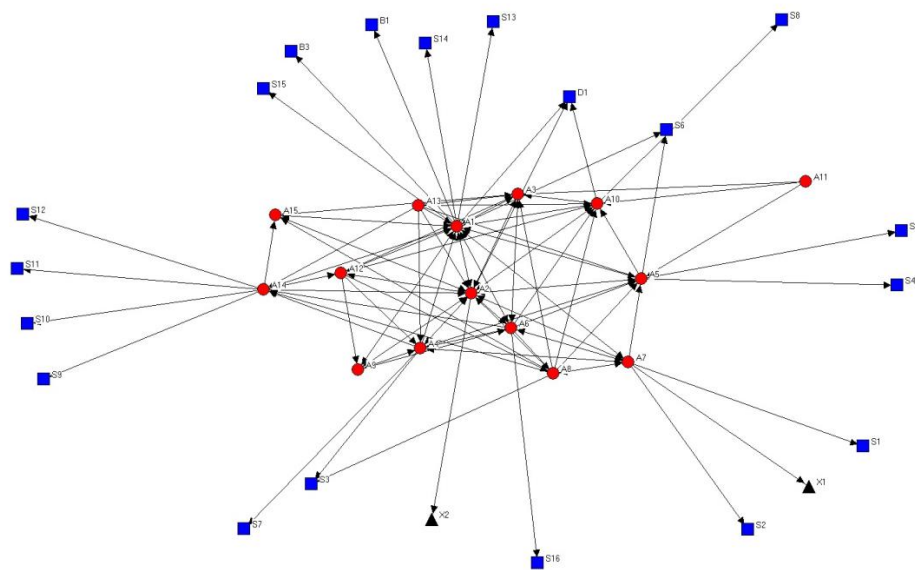


Fig. 16 KM network – Ask for information

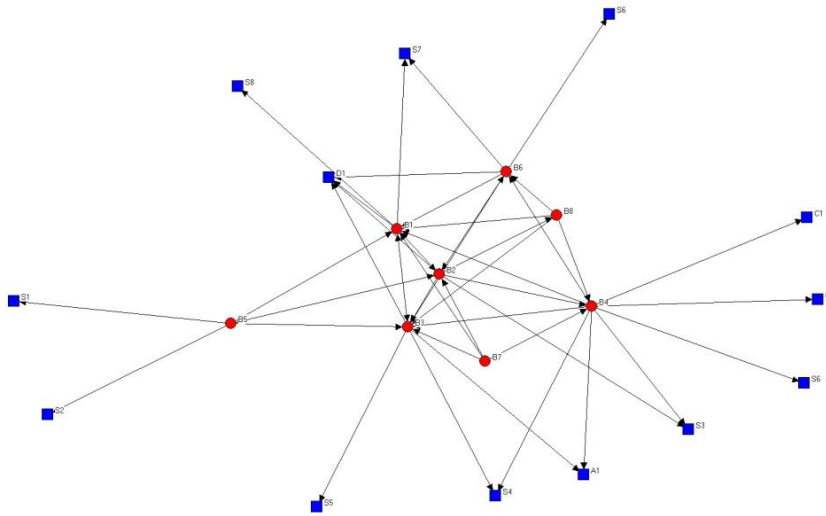


Fig. 17 KM network – Ask for advice

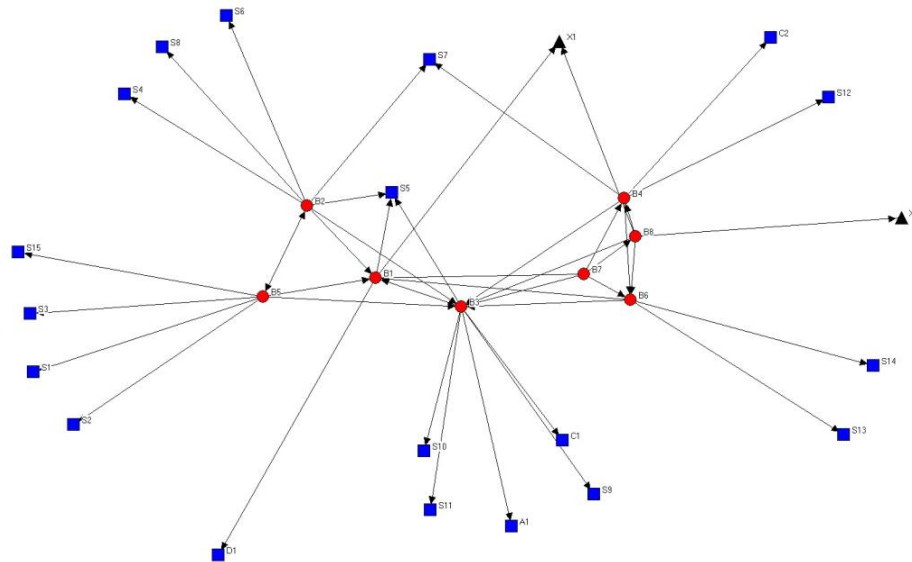


Fig. 18 KM network – Ask for an opinion or a different perspective

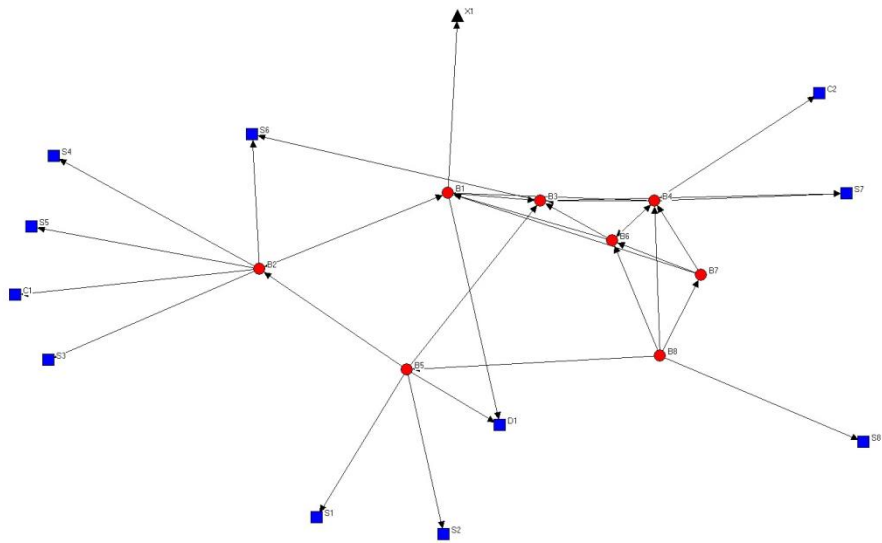
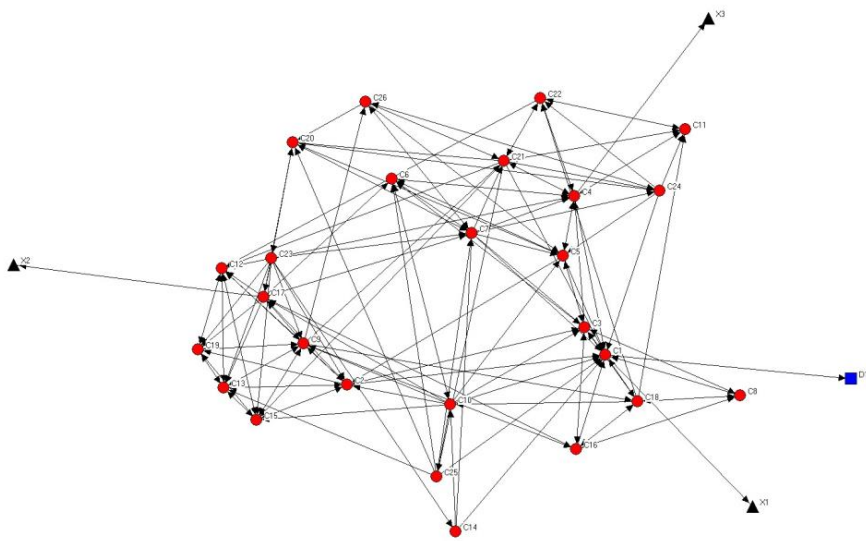


Fig. 19 EC network – Share ideas, insights, opinions, experiences



B3 - Summary of Reciprocity measures

TABLE 26. RECIPROCITY IN THE NETWORKS PER ORGANISATION

KNOWLEDGE NETWORK	ORGANISATION X		ORGANISATION Y		
	HC	MI	AC	KM	EC
Asking for advice	0.3103	0.2632	0.2182	0.0556	0.2029
Asking for information	0.2222	0.2791	0.3607	0.1818	0.2527
Asking for an opinion / different perspective	0.2857	0.3505	0.2206	0.1875	0.2414
Sharing ideas, insights, opinions, experiences	0.7750	0.6782	0.4730	0.7143	0.3304

*All the calculations of measures were done on the “core” of the network, i.e. the people interviewed using the SNA questionnaire

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