EXCHANGING ‘PAYLOAD’

KNOWLEDGE

INTERPERSONAL KNOWLEDGE EXCHANGE
WITHIN CONSULTING COMMUNITIES OF PRACTICE

by

Kevin M. McKenzie

Dissertation submitted to

The Australian Graduate School of Entrepreneurship

In partial fulfilment of the requirements for the degree of

Doctor of Business Administration

June, 2002.

Dr Neil Béchervaise (Supervisor)
Abstract

Knowledge Management has evolved over time into the domain of Information Technology (IT), where codification, storage and retrieval of explicit knowledge is believed to lead to a competitive advantage for an organisation. More recently, knowledge management literature has suggested that knowledge is socially constructed and inseparable from the communities of practice in which it is held.

This dissertation examines the interpersonal process by which payload knowledge (a concept that emerged from the research data as comprising that specific distillation of knowledge, both tacit and explicit, required to resolve an applied problem in context) is exchanged in a consulting firm’s communities of practice.

Through a qualitative case study design involving sixteen in-depth interviews with consultants from a medium sized consulting firm, the nature of the interpersonal knowledge exchange process was illuminated. In this study, two inter-related research questions were addressed:

What is the interpersonal process by which knowledge is exchanged between consultants?

And,

Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

This detailed examination of consultants as knowledge workers, resulted in the proposal of a process based model of interpersonal knowledge exchange. Utilising the concept of payload knowledge, the interpersonal knowledge exchange process is shown to be predictable in terms of passing through eight identifiable stages, yet unpredictable in terms of knowing how each community interaction will lead to payload knowledge. Within this process, the sourcing, handover, distillation and implementation of payload knowledge are seen as an
artistic endeavour, characterised by social community based exchanges that 'hop' the consultants toward their specific contextual need.

Key advantages of this interpersonal process are the decontextualisation and recontextualisation processes carried out at both the request negotiation stage and the knowledge handover stage. This process uses the community's shared language, mental models, social etiquette and cultural norms to compress and funnel the meaning of the payload knowledge into a form that can be transferred meaningfully to a requesting consultant.

Through participating in the interpersonal knowledge exchange process, consultants save time, and are provided with an opportunity to confirm their personal knowledge as up-to-date and relevant to the specific context. By using the interpersonal process, consultants conform with and confirm the community's social etiquette, which dictates its preference for the identified exchange mechanism. The interpersonal process allows them to practice and learn the consulting community's professional artistry and, in consequence, to enjoy the exchange experience, and to have fun.

This dissertation contributes to making one aspect of the interpersonal knowledge exchange process explicit. The process, by its very nature however, appears to remain tacitly understood by those within the consulting community of practice. Through understanding the process and the reasons that consultants prefer to engage in interpersonal knowledge exchange processes, it is anticipated that managers will be better able to produce a knowledge-based sustainable competitive advantage for their firms.
Table of Contents

ABSTRACT .................................................................................................................................................. III
TABLE OF CONTENTS............................................................................................................................... V
LIST OF TABLES........................................................................................................................................ VI
LIST OF FIGURES: ....................................................................................................................................... VII
ACKNOWLEDGMENTS............................................................................................................................... IX
Declarations.................................................................................................................................................. xi
ORIGINALITY ................................................................................................................................................ XI
ANONYMITY ................................................................................................................................................ XI
GENDER SPECIFIC LANGUAGE ................................................................................................................ XI
LANGUAGE .................................................................................................................................................. XI
Chapter 1 - INTRODUCTION ..................................................................................................................... 1
1.1 INTRODUCTION TO THE RESEARCH ........................................................................................ 1
1.2 KNOWLEDGE MANAGEMENT ................................................................................................. 5
1.3 CONSULTANTS AND KNOWLEDGE .................................................................................... 8
1.4 KNOWLEDGE EXCHANGE IN CONSULTING FIRMS ........................................................... 9
1.5 KNOWLEDGE EXCHANGE AS A COMMUNITY ACTIVITY .................................................. 12
1.6 AIM AND OBJECTIVE OF THE RESEARCH ........................................................................ 15
1.7 OVERVIEW OF THE DISSERTATION ....................................................................................... 17
1.7.1 Part One - What is the Research About? ........................................................................ 19
1.7.2 Part Two - What has the Research Found? .................................................................... 20
1.7.3 Part Three - What does the Research Mean? .................................................................. 21
1.7.4 Supporting Information ..................................................................................................... 22
Chapter 2 - LITERATURE REVIEW ......................................................................................................... 24
2.1 INTRODUCTION TO THE LITERATURE ............................................................................. 24
2.2 KNOWLEDGE AND KNOWLEDGE MANAGEMENT ............................................................... 25
2.2.1 An Age Old Question – What is Knowledge? ................................................................ 26
2.2.2 Knowledge, Information and Data ................................................................................ 27
2.2.3 Knowledge Types ........................................................................................................... 30
2.2.4 Explicit Versus Tacit Knowledge .................................................................................. 32
2.2.5 A More Recent Question – What is Knowledge Management? .................................... 38
2.3 KNOWLEDGE EXCHANGE IN COMMUNITIES OF PRACTICE ............................................... 41
2.3.1 What is Knowledge Exchange? .................................................................................... 41
2.3.2 Exchange Between Group Members ............................................................................. 42
2.3.3 Exchange Between Knowledge Types ........................................................................... 47
2.3.4 Knowledge Exchange and Learning .............................................................................. 49
2.3.5 Barriers to Knowledge Exchange .................................................................................. 54
2.4 SOCIAL KNOWLEDGE EXCHANGE IN COMMUNITIES OF PRACTICE ................................. 57
2.4.1 Knowledge Exchange in Communities ......................................................................... 57
2.4.2 What are Communities of Practice? ............................................................................ 58
2.4.3 Participation .................................................................................................................... 61
2.4.3.1 Motivation to Participate - Individuals .................................................................... 65
2.4.3.2 Motivation to Participate - Groups .......................................................................... 67
2.4.4 Tacit Knowledge Exchange in Communities of Practice ............................................ 71
2.4.5 Community of Practice Research .................................................................................. 77
2.5 WHY STUDY CONSULTANTS? ............................................................................................... 79
2.5.1 Consultants as Knowledge Workers .............................................................................. 80
2.5.2 Knowledge in Professional Consulting Firms ............................................................... 81
2.5.3 Knowledge Exchange at Consulting Firms .................................................................. 87
2.6 CHAPTER OVERVIEW .................................................................................................................... 89
Chapter 3 - METHODOLOGY .................................................................................................................... 91
3.1 INTRODUCTION TO THE METHODOLOGY ....................................................................... 91
3.2 QUALITATIVE METHODOLOGY ............................................................................................ 92
3.3 RESEARCH DESIGN ...................................................................................................................... 93
3.3.1 Design Options ............................................................................................................... 94
3.3.2 Case Study Strategy ....................................................................................................... 95
3.3.3 Case Study..................................................................................................................... 96
Chapter 4 - THE INTERPERSONAL KNOWLEDGE EXCHANGE PROCESS

INTRODUCTION TO THE INTERPERSONAL KNOWLEDGE EXCHANGE PROCESS
EXTENDING THE ORIGINAL MODEL
WHAT IS THE INTERPERSONAL EXCHANGE PROCESS?
Stage 1: Need Identified
Stage 2: Self Resourced Search
Stage 3: Pointers Sought
Stage 4: Request Negotiation Process
Stage 5: Agreement to Exchange
Stage 6: Knowledge Handover Process
Stage 7: Recipient Translation to Current Context
Stage 8: Recipient Implementation

AN ARTISTIC PROCESS

Chapter 5 - PREFERENCE FOR INTERPERSONAL PROCESS

INTRODUCTION TO THE QUESTION OF PREFERENCE
DO CONSULTANTS PREFER INTERPERSONAL EXCHANGE?
THE ALTERNATIVE – EXCHANGE VIA THE EXPLICIT STORE
The Explicit Knowledge Store
The Explicit Knowledge Transfer Process
Problems With the Explicit Knowledge Transfer Process

WHY DO CONSULTANTS PARTICIPATE IN ANY KNOWLEDGE EXCHANGE PROCESSES AT ALL?
Tangible Returns
Intangible Returns
Interaction With The Community

WHY DO CONSULTANTS PREFER THE INTERPERSONAL KNOWLEDGE EXCHANGE PROCESS?
Context, Context and Context Again
Time
Artistry
Confirmation
Social Etiquette
Social Enjoyment

Chapter 6 - CONCLUSIONS AND IMPLICATIONS

INTRODUCTION TO THE CLOSING CHAPTER
CONCLUSIONS DRAWN FROM CHAPTER FOUR – INTERPERSONAL EXCHANGE PROCESS
Extending the Knowledge Transfer Model
PayLoad Knowledge
Interpersonal Knowledge Exchange Process
Decontextualisation and Recontextualisation Process
Artistic and Unpredictable Process

CONCLUSIONS DRAWN FROM CHAPTER FIVE – PREFERENCE FOR INTERPERSONAL EXCHANGE
Clear Preference for Interpersonal Process
**List of Tables**

The numbering system used in this dissertation for tables includes the chapter number, followed by a dash, followed by the sequential number of the tables in that chapter. Hence, a table numbered 2-7 is the seventh table in Chapter Two of the dissertation.

| Table 1-1: Summary of appendices included in the dissertation | 22 |
| Table 2-1: Knowledge management sub-processes (Sarvary, 1999) | 38 |
| Table 2-2: 'Technical-rational' versus 'professional artistry' approach (Schön, 1983) | 52 |
| Table 2-3: Four barriers to knowledge exchange (O'Dell and Grayson, 1998) | 56 |
| Table 2-4: Motivation for participation in virtual communities (Wasko and Faraj, 2000) | 69 |
| Table 2-5: Typical KM activities in consulting firms (Rich and Duchessi, 2001, p.2) | 87 |
| Table 3-1: Sample of content analysis capture table | 115 |
| Table 4-1: Comparison of categories used with Dinur and Inkpen's (1996) four stages | 131 |
| Table 6-1: Summary of dissertation findings including references to previous chapters | 250 |
| Table 6-2: Summary of research conclusions and implications for practice and research | 284 |
List of Figures:

The numbering system used in this dissertation for figures includes the chapter number, followed by a dash, followed by the sequential number of the figures in that chapter. Hence, a figure numbered 1-3 is the third figure in Chapter One of the dissertation.

Figure 1-1: Overview of the dissertation ..........................................................................................................18
Figure 1-2: Overview of relationship between chapters of the dissertation....................................................23
Figure 2-1: Decontextualisation versus recontextualisation view of data, information and knowledge ........29
Figure 2-2: Four forms of knowledge (Cook and Brown, 1999)......................................................................35
Figure 2-3: Communication model of knowledge transfer (Dinur and Inkpen, 1996) ....................................45
Figure 3-1: Research design decision tree ....................................................................................................125
Figure 4-1: Representation of the ‘payload knowledge’ definition shown to respondents...........................135
Figure 4-2: Payload, administrative and prospect knowledge representation .............................................136
Figure 4-3: The interpersonal knowledge exchange process .........................................................................139
Figure 4-4: Stages 1 to 3 of interpersonal knowledge exchange process ...................................................153
Figure 4-5: Decontextualisation process for payload knowledge ...................................................................156
Figure 4-6: Decontextualisation and recontextualisation of payload knowledge ..........................................157
Figure 4-7: Unaligned language, mental models, social etiquette and norms ...............................................161
Figure 4-8: Aligned language, mental models, social etiquette and norms through negotiation .................162
Figure 4-9: Stages 1 to 6 of interpersonal knowledge exchange process ...................................................171
Figure 5-1: Functional summary of explicit knowledge storage and retrieval system at ABC .....................186
Figure 5-2: The alternative - The explicit knowledge exchange process .....................................................188
Figure 5-3: Integrated knowledge exchange processes at ABC (interpersonal and explicit) ......................198
Figure 5-4: Decontextualisation and recontextualisation process .................................................................209
Figure 6-1: Dinur and Inkpen’s (1996) foundation model of knowledge transfer for dissertation ...............230
Figure 6-2: Interpersonal knowledge exchange process overlayed with Dinur and Inkpen (1996) ...............232
Figure 6-3: Representation of payload knowledge .........................................................................................233
Figure 6-4: Payload, administrative and prospect representation of the firm ...............................................233
Figure 6-5: The interpersonal knowledge exchange process ........................................................................235
Figure 6-6: Combined reverse and traditional hierarchy of data, information and knowledge ....................238
Figure 6-7: Decontextualisation and recontextualisation of payload knowledge ........................................239
Figure 6-8: Negotiation aligns the community attributes of requesting and source consultant ...................240
Figure 6-9: Extracted explicit knowledge exchange process (original stage numbers unaltered) ............244
Acknowledgments

An isolated researcher does not carry out doctoral research. Without the support and help of many individuals and groups, the undertaking of such a large commitment would be impossible. This section is dedicated to those individuals and groups.

The research would not have been possible without the kind consent and volunteered time of the consultants interviewed in the data collection phase of the study. I would like to thank them all, and their company, for offering up their valuable time to explore the nature of knowledge exchange. To those people who helped, perhaps unknowingly, through the many debates and discussions on the topic - thank you. Without this level of challenge and argument, my understanding and the conclusions drawn from the data may not have been as comprehensive.

As the final draft neared completion, a small army of proofreaders was enlisted to provide feedback and to make any suggestions that would improve the quality of the final dissertation. I would specifically like to thank Adam Crook, Ivelise Roic, Anna Zantuck, Carol McManus, Marcus Hoof, Marylou Boffa, Kevin Whelan, Tony Hart, Peter Coram, Richard Beal, Vince Boffa, Chris Kuchel and Russ James for their time and effort in providing this great assistance.

I would like to thank Professor Geoff Prideaux for his active interest and attentive reading, and his detailed commentary on the later drafts of this dissertation.

I would like to wholeheartedly thank and acknowledge my research supervisor, Dr. Neil Béchervaise, for his support and guidance (often beyond the call of duty) over the past four years. The time and effort he invested in challenging my arguments, meeting with me regularly and providing guidance and motivation (especially in the early study definition and design phases) have led directly towards the highest quality this dissertation aspires to. Thank you for assisting and guiding me in my journey toward the core of the professional doctoral community.

Finally, and most importantly, I would like to thank my family. My ever-supporting wife Ivelise sacrificed as much as I (if not more) in creating this piece of work – thank you. Our first child Seth was conceived and born during this study, and his concept of family life to date involves daddy on the computer every weekend. He has learned the distressed phrases ‘No [com]puter daddy’, and ‘Put thesis away – come and play’ as some of his earliest phrases. Our second child, Raphaella, was also conceived through the duration of this study, and was born during the lengthy university examination process. So the family is relieved that this study has been completed and submitted. Once again, thank you to my entire family, direct and extended, for putting up with the challenge of me fitting in a family life whilst juggling heavy work, study and other time commitments.

Dedicated to Ivelise, Seth and Raphaella
Declarations

**Originality**

This dissertation is an original piece of work by the author. Except where indicated, this thesis contains no significant amount of material that has been accepted as part of any course of study in any other university.

To the best of the author’s knowledge, this thesis contains no material written or published by another person or organisation except where due reference has been made in the text and the reference section of the thesis. Any help that has been obtained from people other than the author in the preparation of the dissertation has been accurately described and fully acknowledged within the body of the work.

**Anonymity**

Research reporting tends to determine what are essentially and uniquely human activities involving real people doing real work. Recognising this fact, the dissertation provides its respondents and companies with fictionalised identities. As such, all organisations and people referred to or quoted in this thesis have been fictionalised to maintain their anonymity. Any resemblance to persons or organisations is coincidental and the reader should draw no conclusions as to their true identity.

**Gender Specific Language**

All gender specific language within this dissertation has been standardised to non-gender specific language where possible. In the case where this has not been possible for the purpose of style or preservation of meaning, ‘he’ and ‘him’ have been used to indicate both females and males. In the case where an oversight has occurred and the term ‘she’ or ‘her’ is used, this will also be referring to both males and females unless the context of the language use specifically indicates otherwise.

**Language**

The spelling and grammar used within this dissertation is Australian English. For consistency, all spelling has been standardised to this format, including citations, titles of works and reference list entries. Hence, words such as ‘organization’ will appear in this dissertation as ‘organisation’ in all instances.

The respondents quoted directly in this dissertation used spoken English as opposed to written English to explain their thoughts and ideas regarding the questions asked. The spoken language has been modified in this dissertation to transcribe it to written form, including a process of removing any content that does not directly add to the meaning of the message (for example, ‘ums’, pauses, poor grammar). In all cases where this has occurred, the respondent has been given the opportunity to review and confirm the meaning of the quotation represented in the written form.
CHAPTER 1 - INTRODUCTION

This dissertation examines the nature of knowledge exchange between consultants within their communities of practice. The opening chapter presents the background to the research and explains why the study is important. The chapter then provides an overview of the dissertation, explaining the logical structure and layout used to move the reader from the data and findings towards the conclusions of the study.

1.1 INTRODUCTION TO THE RESEARCH

A strong feeling of unease after sixteen years of study and knowledge intensive work prompted me to undertake this research. Having placed a heavy reliance on the traditional Australian education system to ‘give me knowledge’ in my areas of interest, the realisation emerged at the masters and doctoral levels that knowledge is an elusive concept to define and to grasp.

To attempt an understanding of the nature of knowledge, and specifically the nature of knowledge in relation to work, is a difficult task to undertake, given the long history of writers exploring the question ‘What is knowledge?’ From Plato and Aristotle, through Descartes and Locke, to modern literature focusing on knowledge and knowledge management, no solid agreed concept of knowledge exists, let alone how it is exchanged.
This is not to suggest that knowledge management scholars have achieved little or nothing over the past several decades and beyond. A solid history of research literature and professional comment in relation to knowledge in the work environment has emerged, and then exploded into a variety of competing views on how knowledge is created, managed, exchanged and stored in organisations.

My sense of unease has grown over the years, however, in relation to the large volume of literature driven from an Information Technology (IT) or information system perspective, that defines knowledge and knowledge management as a codification, storage and retrieval issue. This focus appears to have driven the research agenda in recent times, often from the information systems departments of universities. Evolving out of a long intellectual history, it treats knowledge as a private good, owned by either the organisation or its organisation members. It suggests that knowledge can be separated from the context in which it is generated and stored (Wasko and Faraj, 2000).

This is contrary to my experience in my role as a management consultant, and previously as a project manager. Knowledge transfer at the workplace, in my experience, is a socially constructed exchange process where people integrate and share their personal, social, academic and professional experiences with their work colleagues. Through this interaction, the construction of knowledge and its meaning within work practices appeared to evolve as a function of doing work. Often, consultants seek knowledge from sources that are most easily accessible (such as asking co-workers) rather
than the best and most up-to-date source (O’Reilly, 1982). This is a vastly different perspective to the IT focused literature that dominated the field of knowledge management until as recently as three years ago.

The pendulum appears to be swinging. In the past few years, a definite shift in focus appears to have emerged in knowledge management literature towards the social nature of knowledge exchange, focusing specifically upon the concept of knowledge existing within communities and the concept of knowledge as a socially constructed phenomenon.

The organisational imperative was to extract so-called tacit knowledge from individuals and to convert it into explicit knowledge that could be codified and stored in computerised knowledge repositories for perpetual access. In the later part of the decade [1990’s] there were expositions on the futility of such an endeavour, asserting that knowledge and the social systems in which it resided were too complex to be dealt with simplistically.

(Snowden and Merali, 2000, p. 5)

A parallel perspective sees knowledge as a public good, owned and maintained by the community of practitioners who are its custodian. When knowledge is considered a public good, knowledge exchange is motivated by moral obligation and community interest as opposed to self-interest (Wasko and Faraj, 2000). This shift has occurred through the period of this research project; hence the findings and outcomes of this study are immediately relevant to both scholars and business.

This dissertation answers the question:
INTRODUCTION

What is the interpersonal process by which knowledge is exchanged between consultants?

In answering this question, the research sought to focus on the way individuals or groups within organisations transfer knowledge when it is not explicitly written down and stored in databases. When knowledge does not exist in IT systems, or is not catalogued in documents, or is not codified into databases, how is it possible that knowledge workers flourish? The codification group of knowledge writers would argue that these workers must, post haste, implement a knowledge management system involving an IT system, and capture this knowledge in the form of documents, templates, procedures and other objects and artefacts.

My most recent experience in a consulting company where very little knowledge is stored explicitly (in fact the research responses never go above a twenty percent estimate) leads me, necessarily, to disagree with this codification ‘call to arms’. The research at this consulting company confirms that consultants themselves disagree with the codification approach to managing knowledge. Instead they prefer transferring knowledge in a face-to-face situation, or over the telephone with an identified expert.

Hence, to address the research question, sixteen consultants working within a consulting community of practice were interviewed in regard to the exploration of their interpersonal knowledge exchange processes. Consultants were chosen as the focus of the research since these workers are the embodiment of the ‘knowledge worker’ concept, where clients pay fees to obtain the benefit of the consultant’s accumulated knowledge and experience. The
research is therefore based in the field of knowledge management, of which much has been written in management literature in recent years.

**1.2 KNOWLEDGE MANAGEMENT**

The sharing and transfer of knowledge between organisation members has long been recognised as a contributing factor to a firm’s performance. In recent times, organisational knowledge has increasingly been recognised as a critical resource by both practitioners and scholars alike. With increasingly complex competitive environments characterised by globalisation, rapid change and hyper-competitive markets, the focus on knowledge management has become a strategic issue for all firms.

This recognition of knowledge as an important resource and asset has encouraged many researchers and authors to contribute to an emerging, yet significant body of knowledge on the topic. Seminal works such as Teece's (1977; 1982) work on technology transfer and proprietary knowledge, Nelson and Winter's (1982) examination of organisation routines, Nonaka's (1990; 1994) studies of knowledge creation and Lave and Wenger's (1991) work on Legitimate Peripheral Participation have built a foundation upon which further research has advanced. More recently, the concept of treating organisational knowledge as a valuable strategic asset has gained popularity in leading management literature (Zack, 1999a; Brown and Duguid, 1991, Davenport, et al, 1998; Quinn, et al, 1996).
The key issue and common research goal of knowledge management researchers is to investigate how an organisation can efficiently and effectively utilise knowledge management systems to remain competitive. Knowledge management in this context remains a complex concept with little agreement upon a single definition. One definition sees knowledge management as the systematic and integrative processes of coordinating the organisation's activities of acquiring, creating, storing, sharing, diffusing, developing and deploying knowledge by individuals and groups in pursuit of major organisational goals (Rastogi, 2000). This, in turn, allows the organisation to leverage knowledge and expertise to solve problems and exploit opportunities (Zack, 1999a).

Indeed, what a firm knows, how it uses what it knows, and how fast it can know something new and important, are part of an inclusive meta-capability, a process of generating insights, developing and using foresight, engaging in skills and capabilities based in action, and learning from feedback. The goal of this process is,

… to maximise a firm's response effectiveness across challenging situations through a relentless cultivation and exercise of its holistic intellectual potential.

(Rastogi, 2000; p. 4 electronic version)

Organisations increasingly manage their knowledge resources across distributed working arrangements. Multinational and national organisations now make extensive use of virtual teams that infrequently meet face to face. Manufacturing organisations more often than not have their factories in geographically separate locations from their marketing or product
development departments. And consulting companies often have teams of people and individuals working alone in satellite groups on a client's site solving context specific problems. These groups and individuals are engaged in processes that are creating and exchanging new knowledge remote from the head office, factories, and repositories of explicit information.

These workers are utilising improved communications and IT infrastructure in order to combine site, product or context specific knowledge, often producing new and valuable knowledge in the process. Distance and national borders, although still a barrier to knowledge transfer, have diminished in their effect of keeping individuals and groups apart. This trend toward distributed knowledge systems has drawn attention to a conflict that exists between group knowledge processes and the technologies built to support them. This conflict centres on the observation that authentic and efficient knowledge creation and sharing is deeply embedded in an interpersonal face-to-face context. However the technologies to support distributed knowledge processes rely on the common assumption that knowledge can be made mobile apart from these specific contexts (Kanfer, et al, 2000).

Building intellectual capital within organisations relies on learning and knowledge, both of which have been extensively researched in recent times. Through extremely complex mechanisms, existing individual and group knowledge is levered to create new knowledge. The new knowledge created is both explicit and tacit, existing in both the minds of individuals and in group practices. In this dissertation, the focus is upon the unwritten and tacit knowledge that exists within the minds of individuals, and the process by
INTRODUCTION

which it is exchanged. Through examining consultants and the learning process that occurs when knowledge is exchanged, it is expected that a broader understanding of the interpersonal knowledge exchange process will be developed. This is based on the assumption that consultants represent an extreme case of the knowledge worker, and as such are worthy of closer examination.

1.3 CONSULTANTS AND KNOWLEDGE

Consultants in any field carry expert knowledge that has been accumulated in a variety of forms over time. In many fields, the academic achievement of a university degree or other qualification is the entry mechanism into that field. In the case of technical or trade consultants, this entry may be via apprenticeship, traineeship or through simply working in the industry and moving into more skilled roles. There is little disagreement that, upon entering the workforce as a new graduate or trainee, there is still a lot to learn about the practice.

Regardless of the technical area of expertise, consultants and consulting firms are in a unique position in relation to knowledge creation, exchange and use. Consultants gain their knowledge by working in their respective client organisations, and add value by leveraging past experience from other organisations to solve problems and to provide advice. Consultants also have the benefit of drawing on the collective experience of their colleagues, either in the form of explicit knowledge stored in knowledge bases, or through
the personal transfer of knowledge utilising peer networks both within and outside the employing firm.

It is suggested that consultants are an extreme unit of analysis when examining the nature of knowledge exchange. The generic goal of this research is to understand the way in which consultants use their accumulated individual experience, and that of their colleagues, to add value to their client, their team, or their organisation. By focusing upon how consultants exchange knowledge about consulting assignments and their client's situations and problems, and examining this within the context of the consulting community of practice, this research makes an incremental contribution to the knowledge management body of knowledge and a major contribution to practice.

The interpersonal processes of knowledge exchange between consultants within their consulting firms are therefore of great interest to a research agenda focusing on how knowledge is exchanged, especially in relation to tacit knowledge within defined professional communities.

1.4 KNOWLEDGE EXCHANGE IN CONSULTING FIRMS

Professional consulting firms, and service firms in general, have at their core a knowledge base that is used to form a saleable product to their clients. Consulting organisations rely upon this knowledge base and the individual knowledge and experience of their consultants as their primary product. As opposed to physical assets and capital that firms consume and depreciate, a consultant's knowledge provides continuous and increasing value over time.
In a study specifically focusing upon understanding the nature of knowledge in consulting firms, Rich and Duchessi (2001) highlight that collectively the various types of knowledge possessed by consultants represents organisational knowledge. When a consultant's knowledge is collected and shared,

…it becomes a part of the collective wisdom of the firm (i.e. organisational knowledge). Organisational knowledge accumulates over time. It is largely dependent on the development of personal knowledge, but may also decay from obsolescence. It may be explicit, in the form of databases or documents, or tacit, expressed by action.

(Rich and Duchessi 2001; p.7 electronic version)

Rich and Duchessi’s (2001) study highlights the general recognition among consulting firms that the forces affecting organisational knowledge are not fully understood. Many researchers, and a large volume of the knowledge management literature, focus on the use of IT to facilitate the exchange of explicit knowledge. However this is only one piece of the puzzle.

Knowledge management systems existed long before IT systems. A research case study of the successful knowledge management system employed by London Taxi Cabs for the past century, in which prospective licensees learn an enormous amount of tacit and explicit knowledge to obtain the highly prestigious London Taxi Cab licence (Skok, 1999, 2000) submits the view that IT is not an essential element of a knowledge management system. However, although interpersonal and tacit knowledge exchange processes may often be preferred or more appropriate, IT systems are
undeniably a powerful tool in the knowledge management systems of many organisations.

Managing organisation knowledge is a difficult task considering the variety of factors that affect it over time, including organisational structure, informal social processes, interactions among people, activities and incentives, and market changes (Hansen, et al, 1999). In addition, in consulting firms, personnel turnover is an important determinant of organisation knowledge. When experienced consultants leave the firm, they take their knowledge with them, especially when little of it has been captured (Rich and Duchessi, 2001). New recruits then change the mix, nature and variety of experience available to draw upon, which in turn changes the organisation’s knowledge.

Rich and Duchessi (2001) note further factors that influence the dynamics of knowledge exchange and the nature of a consulting company's organisational knowledge. The nature and volume of tasks performed by the firm has been identified as a factor, along with the available staff and the personal knowledge bases that they have acquired through experience. A further important factor identified is the nature of corporate policies and procedures for collecting, storing and disseminating knowledge. Depending upon the time allocation volunteered by consultants to organisational knowledge activities and the corporate knowledge management practices enacted by the firm, the competitive advantage offered by organisational knowledge may differ greatly between firms.
However, from these factors influencing knowledge exchange, the important contributing area covering the role of the *community of practice* is largely neglected. The dynamics of the community in which the consultants carry out their work practices plays an important part in the success of knowledge exchange.

### 1.5 KNOWLEDGE EXCHANGE AS A COMMUNITY ACTIVITY

Knowledge does not exist in isolation from its use; it is only useful if it can be given a context. Hence the pure codification and storage view of knowledge management ignores the mechanisms by which this knowledge comes into existence.

A common assumption is that all people can reconstruct a codified artefact, either in the form of a document, drawing or other form, which has been codified by another person or group. This deconstruction and reconstruction process is mainly a function of the unique attributes that each community, be it a professional or other form of community, has developed over time. Communities have their own language, norms and rules that help reconstruct knowledge objects with the original intent and meaning assigned by the author.

An example of this concept is the use of mathematical language; a multi-page mathematical equation proving an engineering concept is well accepted by mathematicians and scientists in the field. But if this equation is given to a concert pianist, the embedded knowledge is lost on the reader. And similarly,
the meaning of an orchestra’s music score would be lost on the engineers, but make perfect sense to a community of pianists with the relevant training and experience.

What people learn about their work role in an organisation is often a direct result of how they learn it (Van Maanen and Schein, 1979).

From the time an individual first enters a workplace to the time they leave their membership behind, they experience and often commit themselves to a distinct way of life, complete with its own rhythms, rewards, relationships, demands, and potentials.

(Van Maanen and Schein, 1979, p. 210)

It is argued that consultants may gain much of their practical, tacit knowledge through their projects and through exchanges with other consultants and clients within the firm (Sarvary, 1999; Nahapiet and Ghoshal, 1998). Organisation knowledge within consulting firms, and any other firm, can therefore be viewed as a social and collective phenomenon. It may be based on practice and the idea of a community of practice, a construct conceptualised by various authors as an informal aggregate defined by its members, and the shared ways in which they perform their work and interpret events (Brown and Duguid, 1991; Lave and Wenger, 1991; Wenger, 1998a).

The management of meaning and the cultural aspects of communities represent only one aspect of knowledge in relation to communities that must be considered when discussing the exchange of knowledge within the work context. Every work group, organisation, or professional group can be considered a community. In fact, there is a growing body of research and discussion elaborating on the concept of ‘communities of practice’,
considering how knowledge is exchanged within professional practices, and identifying the relationship between this knowledge and the identity of individuals as they move from novice to expert within the community. However, there is a second, and fundamental aspect to knowledge exchange related to communities.

This second aspect can be synthesised into a question. Although this research is primarily focused upon examining the interpersonal process by which unwritten tacit knowledge is exchanged, there is a secondary question that emerges and cannot be ignored. This question became apparent through the course of carrying out the research, and as such has been included in the dissertation. This question is ‘Why is knowledge transferred this way?’

This question can be further refined to a more specific question, which I believe lies at the heart of knowledge exchange, whether it be the codification view of knowledge management, or the socially constructed view of knowledge exchange.

Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

Why is it that consultants will go out of their way to meet a consultant personally to transfer tacit knowledge over a coffee or lunch, even though it means that they must work longer hours that night to make up time? Why is it that people give up valuable knowledge that could form a useful power base
within the organisation on the basis that someone has a need for this specific knowledge, and they have the answer?

Although it was not initially the primary focus of the research, this second question has been addressed as it was embedded within the data collected through the research process. As such, these two questions came to form the basis of the aim and objectives of the research.

1.6 AIM AND OBJECTIVE OF THE RESEARCH

The initial aim of this research was to answer the question:

What is the interpersonal process by which knowledge is exchanged between consultants?

The research focuses on the socially constructed nature of knowledge at a medium sized consulting company, and looks at knowledge from the perspective of communities. The transfer of explicit knowledge from the IT knowledge store is discussed in relation to its complementary and separate roles to the interpersonal knowledge exchange process. A significant volume of past research literature tends to exclude specific reference to tacit knowledge, or relegate it to the 'other end of the spectrum' in a knowledge management strategy, as opposed to being a different and separate form of knowledge. This research aims to add to the convergence or Western and Japanese thought towards the realisation that tacit knowledge is very important within organisations.
While the initial aim of the research was focused on the interpersonal knowledge exchange process, an evermore compelling second question emerged through the data collection process, and as previously discussed in this introduction, focuses on answering:

Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

In seeking to answer these two questions, the researcher’s objective was to balance the knowledge management literature with empirical research in relation to the tacit and interpersonal dimensions of knowledge exchange. The goal was to reduce the feeling of unease that existed with the view commonly held in the management literature that characterised knowledge management as an information systems issue, whose solution lays in the implementation of a new IT system. Although possibly an easier course for management to adopt because of the tangible outcome of an IT system asset that can be capitalised on the company asset base, the danger of this approach is that it ignores the reality of how work is really carried out by knowledge workers within their communities of practice.

The research aims to strike a balance between attempting to solve real workplace issues (or offering novel or insightful comment on workplace problems/opportunities), and extending theory beyond the insights gained from a review of the current literature that bears on the topic. Although the dissertation contains a large component of theoretical review and discussion, the objective of the researcher is to integrate theory and practice to provide major and actionable contributions to practice.
In carrying out this research, the researcher's goal was also to clearly and concisely communicate the research findings and conclusions to other researchers and practitioners, thus advancing the theory and practice of knowledge management. The research described in this dissertation extends the concept of knowledge exchange in consulting *communities of practice* by providing a description of how knowledge exchange occurs in a single consulting practice of several hundred consultants.

This research provides a tool for consultants and consulting organisations to examine their own knowledge management systems, and to draw recommendations from the findings of the dissertation that are applicable to their own organisation or personal context.

1.7 OVERVIEW OF THE DISSERTATION

This dissertation is divided into three parts that contain a total of six chapters. The structure of the dissertation is shown in the following Figure 1-1:
INTRODUCTION

Part One of the dissertation contains three chapters:

Chapter One
Introduces the reader to what the dissertation is about.

Chapter Two
Covers what the literature says about knowledge management, knowledge exchange, communities and consultants.

Chapter Three
Discusses the method used to answer the research questions and explains where the research was conducted.

In essence, this section answers the question, "What is the dissertation about?"

Part Two of the dissertation contains two chapters:

Chapter Four
This chapter presents the findings in relation to the interpersonal process by which knowledge is exchanged between consultants.

Chapter Five
This chapter presents the findings in relation to why consultants prefer to participate in the interpersonal knowledge exchange process.

In essence, this section answers the question, "What has been found?"

Part Three of the dissertation contains one chapter.

Chapter Six
This chapter synthesizes and integrates the findings and the literature, and provides indicators for future management practice and research.

In essence, this section answers the question, "What does it mean?"

The Supporting Information section contains two parts:

References:
The reference section contains a listing of all works cited in the dissertation.

Appendices:
The Appendices contain relevant supporting information required to support the conclusions of the dissertation.

Figure 1-1: Overview of the dissertation
1.7.1 PART ONE - WHAT IS THE RESEARCH ABOUT?

Part one of this dissertation contains three chapters that essentially answer the question ‘What is the thesis about?’

This first chapter has presented the background to the research, covering both the researcher’s motivation for committing to undertake this work, and touching upon the theory and practice that shaped the research questions. The chapter also establishes why this particular research is important to both theory and practice, and finishes by explicitly stating the aims and objectives of the research.

The second chapter of the dissertation delves more deeply into the current research literature that forms the foundation of the research project. By critically examining the work that has been carried out in this area, the research questions emerge as an important area that is yet to be examined in the field of knowledge management.

The literature review is presented in four equally important and complementary sections. The research questions are clearly embedded within the field of knowledge management, seen from the strategic resource view of knowledge within organisations. Consequently, the first section of Chapter Two examines the nature of knowledge and knowledge management, highlighting the tacit and explicit dimensions of knowledge within organisations. The second section of the chapter narrows the very broad field of knowledge management to a specific focus on knowledge exchange.
The third section of the literature review examines the knowledge exchange literature from a community perspective, focusing on the socially constructed nature of knowledge within workgroups. This aspect of knowledge management is extremely important in examining both interpersonal knowledge exchange processes and the question of why consultants prefer to participate in the interpersonal knowledge exchange process. Finally, to undertake the research on interpersonal knowledge exchange, a group of knowledge intensive workers was required to participate in the data gathering for the dissertation. Consultants were chosen for this role and, in consequence, an understanding of consultants and consulting firms was required in order to design the research process. The fourth and final section of the literature review covers this topic.

Chapter Three discusses the selection and application of the methods used to answer the research question, and explains why other methods were not used. Due to the focus on socially constructed knowledge inside communities of practice (as opposed to the codification and storage focus provided by IT based knowledge management research), a qualitative case study approach was used, with in-depth interviews being utilised as the major data collection method. The chapter details research design issues including a discussion of issues relating to the role of the researcher in the research, and the ethical considerations identified and resolved.

1.7.2 PART TWO - WHAT HAS THE RESEARCH FOUND?

Part Two of the dissertation contains two chapters that essentially answer the question, ‘What has been found?’
Chapter Four presents the findings and analysis of the research in relation to the interpersonal process by which payload knowledge is exchanged by consultants. The chapter presents a process-based representation of knowledge exchange involving several steps, including the model that was produced from the data gathered.

In carrying out the research into how tacit knowledge is exchanged, the second fundamental research question emerged in relation to participation. Chapter Five explores the findings in relation to why consultants participate in, and prefer, the interpersonal knowledge exchange process when the personal benefits do not appear to outweigh the ‘cost’ of exchanging knowledge. This area draws on social theory and the role of individuals within their professional communities of practice.

1.7.3 PART THREE - WHAT DOES THE RESEARCH MEAN?

Part Three of the dissertation contains one final chapter that attempts to answer the question, ‘What does the research mean?’

Chapter Six discusses the conclusions drawn from the findings and analysis of both chapters Four and Five. Drawing the whole research project and findings together, this chapter integrates the findings with the literature to blend theory with practice. The concluding chapter covers the implications of the research for both theory and practice, and provides suggestions for further research.
1.7.4 SUPPORTING INFORMATION

In accordance with accepted academic principles, the supporting information for the dissertation includes a complete reference list of all works cited in the dissertation. No reference is made to supporting works that have been read but not directly used to support the conclusions in the body of the work.

In addition, eight appendices are included to support the reader in fully understanding the research process and findings. A table summarising the appendices is presented below in Table 1-1:

<table>
<thead>
<tr>
<th>Appendix Number</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A</td>
<td>Informed consent letter to participants</td>
<td>299</td>
</tr>
<tr>
<td>Appendix B</td>
<td>Initial interview guide</td>
<td>302</td>
</tr>
<tr>
<td>Appendix C</td>
<td>Modified interview guide used</td>
<td>304</td>
</tr>
<tr>
<td>Appendix D</td>
<td>Exchange Process: Sample coded interview transcript</td>
<td>305</td>
</tr>
<tr>
<td>Appendix E</td>
<td>Exchange: Coded interview transcript summary table</td>
<td>325</td>
</tr>
<tr>
<td>Appendix F</td>
<td>Preference: Sample coded interview transcript</td>
<td>331</td>
</tr>
<tr>
<td>Appendix G</td>
<td>Preference: Coded interview transcript summary table</td>
<td>351</td>
</tr>
<tr>
<td>Appendix H</td>
<td>Summary of interviews carried out and quotations cited</td>
<td>357</td>
</tr>
</tbody>
</table>

Table 1-1: Summary of appendices included in the dissertation

The following Figure 1-2 provides a summary of the relationship between the dissertation chapters. This diagram shows the chapters and parts explained in the overview section, and indicates where they fit within the overall dissertation structure.
INTRODUCTION

Chapter One

Background to research in order to establish why this knowledge management study is important

Aim and Main Objective of the Study

Answers the general question:
1. Why was the thesis undertaken?

Chapter Two

Understanding Knowledge Exchange

The Research Questions

Answers the general question:
1. What is the dissertation about?
2. What does the literature say about the topic?
3. What were the research questions that were answered?

Knowledge and Knowledge Management

Why Study Consultants?

Social Knowledge Exchange and Communities

Chapter Three

Method

Answers the general question:
1. What method was used to answer the research questions?
2. Where was the research being carried out?

Discussion and Analysis of Findings

Chapter Four

Chapter Five

Chapter Six

Conclusions

Answers the general question:
1. What was found by the research?
2. What do the research findings mean?
3. What are the implications of the findings for research?
3. What are the implications of the findings for practice?

Figure 1-2: Overview of relationship between chapters of the dissertation
2.1 INTRODUCTION TO THE LITERATURE

Chapter One introduced the research to the reader, briefly touching upon the research questions and the related areas of previous research and opinion. This chapter presents the literature in more detail, covering the supporting research and opinion that has shaped and refined the research questions in the definition stage of this research project. The literature presented here also shaped the research project through the data gathering and analysis phases. As new research findings became available for consideration, relevant literature was sourced and reviewed for inclusion in both this chapter and for consideration in the overall investigation.

The study of the interpersonal knowledge exchange processes used by consultants draws on several areas of research literature as a foundation for the advancement of theory and practice. The research has been built upon a theoretical foundation in the field of strategic management, specifically focusing on the strategic acquisition and flow of knowledge as a critical resource. Hence the strategic management literature in the area of knowledge management reviewed in Section 2.2 ‘Knowledge and Knowledge Management’ includes both the information systems and the socially constructed perspective on knowledge management.
Researchers in the field of knowledge exchange processes are involved in complementary work. In Section 2.3 ‘Understanding Knowledge Exchange’ (beginning on page 41) the literature focusing on processes by which explicit and tacit knowledge are exchanged is summarised, leading directly onto the nature of socially constructed knowledge exchange within communities. Literature covering the view that knowledge is socially constructed within professional communities of practice has gained momentum in the past few years, and is covered in Section 2.4 ‘Social Knowledge Exchange in Communities of Practice’.

To further focus and refine the research questions, the research literature was examined to explore the nature of knowledge management processes used by consultants and consulting firms. This body of literature is reviewed in Section 2.5 ‘Why Study Consultants?’

2.2 KNOWLEDGE AND KNOWLEDGE MANAGEMENT

The scholastic debate focusing upon the nature of knowledge, and more recently on knowledge management practices within firms, has a complex and long running history. This section reviews that history, defines knowledge for the purposes of the research, and focuses the reader’s attention on more recent discussion and research of knowledge management in organisations.
2.2.1 AN AGE OLD QUESTION – WHAT IS KNOWLEDGE?

Knowledge is an abstract and vague concept that has been discussed and argued since the classical Greek era, and possibly even earlier. A number of epistemological debates have been active in Western philosophy and have been expressed from a variety of positions. These include the Rationalist perspective (advanced by philosophers such as Descartes in the seventeenth century), the Empiricist perspective (advanced by Locke and others in the nineteenth century), and relatively recently, the Interactionist perspective (advanced by Kant and others in the nineteenth century) (Alavi and Leidner, 1999).

Since this is a practical, organisationally focused study that endeavours to better understand how organisational knowledge is exchanged (rather than a theoretical or philosophical orientation), the nature of knowledge itself is not debated. Rather, the following working definition of knowledge developed by Alavi and Leidner (1999), based on the work of Nonaka (1994) and Huber (1991) has been adopted for this study:

Knowledge is a justified personal belief that increases an individual’s ability to take effective action.

(Alavi and Leidner, 1999; p.9 electronic version)

Action in this context requires physical skills (For example, playing tennis, or carpentry), cognitive/intellectual activity (For example, Problem solving) or both (For example, Surgery that involves an application of manual skills with cognitive elements in the form of knowledge of human anatomy and medicine) (Alavi and Leidner, 1999).
Although this definition of knowledge is fit for the purposes of studying professionals at work, the information systems view of knowledge often raises the distinction between knowledge, information and data.

2.2.2 KNOWLEDGE, INFORMATION AND DATA

In any discussion on knowledge, the information system based question arises regarding ‘What is the differentiation between knowledge, information and data?’ As with many knowledge related concepts, there is no generally agreed definition clarifying the distinction between these terms.

The generally accepted view sees data as simple facts that become information when combined into meaningful structures, which subsequently becomes knowledge when combined with context and experience (Ponelis and Fairer-Wessels, 1998). Harris (1996) explains this view as follows:

The lowest level of known facts is data. Data has no intrinsic meaning. It must be sorted, grouped, analysed, and interpreted. When data is processed in this manner, it becomes information. Information has substance and a purpose. However, information does not have meaning. When information is combined with context and experience, it becomes knowledge.

(Harris 1996, p.1)

This view assumes that data is a prerequisite for information, with information being a prerequisite for knowledge. Nonaka and Takeuchi (1995) see information as a flow of messages, and knowledge as being what is created by that flow of messages when anchored in the belief and commitment of its holder.
Tuomi (1999) however, asserts what could be framed as an opposing viewpoint in a reverse knowledge hierarchy model, where data is seen to emerge as a result of adding value to information by putting it into a form that can be modelled, processed and represented separately. This only emerges, according to Tuomi (1999) after we have information and that information emerges only after we have knowledge. Therefore, creating a ‘piece’ of data such that it can be recontextualised by another person requires a great amount of skill, information and knowledge.

Tuomi, making the arguable assumption of a linear conversion process, asserts that knowledge is used by people to create information, which can, in turn, be used to create data. This data can then be stored and retrieved by other people and recontextualised to recreate the original meaning only because of the amount of effort, and because of the existing information and knowledge, used in the data creation process. In effect, Tuomi is defining ‘data’ as what is commonly accepted to be ‘knowledge’. This approach can also be seen as viewing the same model from the decontextualising versus the recontextualising side of the process as illustrated in the following Figure 2-1.
The deconstruction and reconstruction of data, information and knowledge is an ongoing process, with people providing effort to create data from knowledge (Tuomi’s model), and to then create knowledge from data (traditional view).

Furthermore, as Brown and Duguid (2000) submit, the terms ‘knowledge’ and ‘information’ are frequently interchangeable in the management literature, and this is often the case in relation to the way consultants use knowledge, information and data. Rather than spend time defining which is which, the consultant needs ‘something’ to solve an existing problem, or to deliver value to a client, regardless of its title. This view was reinforced in the research interviews with consultants. Consequently, no distinction will be strictly enforced and the term ‘knowledge’ may sometimes infringe upon some...
definitions of information, and vice-versa. A more important distinction for the purposes of this research was the boundaries that exist between tacit and explicit knowledge.

2.2.3 KNOWLEDGE TYPES

Knowledge can be viewed as both an organisation asset and as a resource (Conner and Prahalad, 1996; Foss, 1996), and several differentiations have been made between the ‘types’ of knowledge that exist. Hærem, et al (1996) present knowledge dimensions found in management literature as ‘articulated’ or ‘non-articulated’ (Itami, 1987), according to the degree of embeddedness and migratory knowledge (Badaracco, 1991), tacit and explicit knowledge (Polanyi, 1962; 1966; Nelson and Winter, 1982; Nonaka and Takeuchi, 1995), transferable knowledge (Winter, 1987) and thematised or non-thematised knowledge (von Krogh and Roos, 1993). In addition, von Hippel (1994) and Szulanski (1996; 1999) classify knowledge as ‘sticky’ or ‘slippery’ in relation to how easily it can be transferred.

Quinn, et al (1996) provide a further categorisation of types of knowledge that exists in organisations: the know-what, the know-how, the know-why and the care-why.

The know-what is cognitive knowledge and the basic mastery of a discipline that professionals achieve through extensive training and certification. This knowledge is essential, but usually far from sufficient, for commercial success. The know-how demands the advanced skills that translate ‘book
learning’ into effective execution and the ability to apply the rules of a discipline to complex real-world problems. *Know-why* refers to systems understanding, which is a deep knowledge of the web of cause and effect relationships underlying a discipline that allows professionals to move beyond execution of a task to solve larger and more complex problems. *Care-why*, or self-motivated creativity consists of the will, motivation and adaptability, allowing professionals to adapt to changing external conditions and innovations that may supersede their existing skills.

A further dimension of the above categorisation proposed by Rich and Duchessi (2001) introduces the *know-who* categorisation. *Know-who* refers to the social networks for locating individuals who can develop and complete projects, and for identifying potential clients. They state that, for a consulting company, this knowledge is especially important for making valuable connections with clients and peers outside the firm.

The types of knowledge are not clear-cut, and few are mutually exclusive in relation to their categorisation. The most useful and widely discussed distinction in the management literature, and one that is central to this dissertation, has been made by Polanyi (1962; 1966) between tacit and explicit knowledge, and the extension of this categorisation by Cook and Brown (1999) to include individual and group knowledge.
Polanyi (1966) distinguished between two forms of knowledge that can be found in organisations, namely tacit and explicit knowledge. Tacit knowledge, also known as informal knowledge, is knowledge that is context specific and difficult to articulate or communicate. It is personal knowledge, rooted in individual experience and personal beliefs, perspectives and values. Polanyi (1966) explored tacit knowledge with an opening assumption that we know more than we can tell and that much of what is most precious remains inaccessible and incommunicable. Tacit knowing accounts for

… a valid knowledge of the problem, for the individual’s capacity to pursue it, guided by his sense of approaching its solution, and for a valid anticipation of the yet indeterminate implications of the discovery arrived at in the end.

(Polanyi, 1966, p. 24)

Explicit knowledge, known also as coded or formal knowledge, is consciously identifiable and describable. It is transferable through verbal or written forms, and is easily coded and stored in the form of artefacts, documents and electronic data.

Tacit knowledge is often poorly defined and treated as any knowledge that cannot be made explicit. Alternatively, tacit knowledge is defined by Quinn, et al (1996) as the know-how of executing individual skills, whilst explicit knowledge is seen as the know-what that can be spelled out or formalised in procedure manuals and databases. This expands upon Nonaka and Takeuchi’s (1995) view that knowledge of experience tends to be tacit,
physical and subjective, whilst knowledge of rationality tends to be explicit, metaphysical and objective.

Three broad features of tacit knowledge were identified by Horvath, *et al*, (1994a, 1994b). Firstly, tacit knowledge is procedural in structure and related to action and committed to particular uses. Secondly, tacit knowledge is relevant to goal attainment. And thirdly, tacit knowledge is acquired with minimal help from others. Sternberg (1985) and Wagner and Sternberg (1985) found the following four kinds of tacit knowledge were particularly important for managerial success: (a) managing people - knowing how to work with and direct the work of others; (b) managing tasks - knowing how to manage and prioritise day-to-day tasks; (c) managing self - knowing how to maximize one's performance and productivity; and (d) managing career - knowing how to establish and enhance one's reputation.

Expert performance depends in large part on a large accumulated tacit knowledge base, which allows intuitive perceptual orientation to the task at hand (Perkins, 1996). In addition to a stored accumulation of facts, this knowledge base contains tacit elements such as remembered impressions, emotions, and mental pictures, all of which are part of knowledge structures and may be utilised in decision-making processes (Leithwood & Steinbach, 1995)

One common notion underlying much management literature is the assumption that tacit knowledge remains implicit because it cannot be articulated. This implies that knowledge that cannot be transferred is the only
tacit knowledge. Whether a particular piece of knowledge is in principle
articulable or necessarily tacit is not the relevant question in most behavioural
situations. Rather, the question is whether the costs of conversion are
sufficiently high so that the knowledge in fact remains tacit (Nelson and
Winter, 1982).

In addition to the cost of articulating knowledge, knowledge does not travel
freely. The non-transferable and tacit dimension of knowledge that has a high
transmission cost has been referred to as ‘sticky’, whilst the codified
knowledge with a low transmission cost is described as ‘slippery’ (von Hippel,
1994; Szulanski 1996; 1999). The inherent ‘stickiness’ of certain types of
knowledge enables an organisation to maximise the value of their knowledge
creation investment by controlling access to the repositories of uncodified
knowledge. Hence, the strategic advantage of organisations may, in fact, lie
with keeping knowledge tacit as opposed to capturing and codifying
knowledge explicitly. It can be argued that this is the case at consulting firms,
whereby the tacit dimension of knowledge is the component from which the
client extracts specific value (including the tacit knowledge embedded in
explicit objects such as reports), and this is rooted in the experience of the
consultants and the firm.

However, this raises an interesting question – Is the knowledge, either tacit or
explicit, held by the group or the individual? The growing body of
management literature appears to indicate an expressed or implied tendency
to treat knowledge as a single entity by favouring the explicit over the tacit
dimension, and the individual over the group aspect (Cook and Brown, 1999).
Indeed, this is highlighted in a continuously evolving body of literature that urges and describes a process for converting tacit into explicit knowledge, highlighting the assumption that the former is favoured and that two types of knowledge exist as ends of an opposing continuum.

Knowledge has been referred to as either an individual or group phenomenon. Cook and Brown (1999) provide a framework for classifying knowledge in organisations into four distinct types: Individual/Explicit, Individual/Implicit, Group/Explicit, Group/Implicit. This categorisation is summarised in the following figure.

![Figure 2-2: Four forms of knowledge (Cook and Brown, 1999)](image-url)

Cook and Brown (1999) assert that these four forms of knowledge are distinct and coequal, each doing the work that others cannot. The explicit/individual quadrant (top left in Figure 2-2) contains things that an individual can know,
learn and express explicitly. Examples of this type of knowledge include concepts, rules, and equations that are typically presented explicitly and are typically known and used by individuals. In the explicit/group quadrant (top right in Figure 2-2), the knowledge referred to includes things that are expressed explicitly, and are typically used, expressed or transferred in a group. This includes such things as 'war stories', about how work is done, or about famous successes or failures (Orr, 1990), as well as the use of metaphors or phrases that have useful meaning in a specific group.

The implicit/individual quadrant (bottom left in Figure 2-2) includes tacit knowledge that is possessed by the individual, such as the skill in making use of concepts, rules and equations, or the 'feel' for the skilful use of a tool or instrument. A much-cited example of this type of knowledge is explained by Polanyi (1966) in regard to the *know-how* of riding a bicycle. No matter how many books and manuals an individual reads about riding a bicycle, the skill of riding the bicycle will remain non-existent unless practice and experience allows these concepts to be applied. Finally, the implicit/group dimension of knowledge (bottom right in Figure 2-2) includes knowledge that is tacit knowledge possessed by a group. This type of knowledge is explained by Cook and Brown (1999) in terms of 'organisational genre', in which useful and distinctive meaning is attached to literary artefacts, social artefacts and to different types of activities.

Cook and Brown acknowledge the difficult nature of understanding 'organisational genre', and further explain its application as follows:
These genres are not explicitly learned or known (although they can have an explicit counterpart such as a label or name). Their meanings emerge and undergo constant confirmation and modification through a kind of ‘negotiation in practice’ as they are used in the context of the groups ongoing ‘real work’. What an organisation genre means at any one time is, in a sense, the accreditation or product of the history of its use: it is meaning laid down in past use, and tapped into or ‘re-evoked’ each time the members of the group use it in subsequent work.

(Cook and Brown 1999, p. 10)

These genres are held in common by the group, and are only useful in terms of the group's practices. In this sense they are unique to the group. However the group does not state the genre explicitly; the genre is only learned through participation in the group, and exists within the confines of the group. This description holds a lot in common with the group knowledge exchange processes described in research on communities of practice, and is important in understanding how tacit knowledge is exchanged between consultants. The role of groups and individuals is fundamental to the process by which consultants exchange tacit knowledge; hence this aspect is discussed in greater detail in Section 2.4 Social Knowledge Exchange in Communities of Practice.

Regardless of the type of knowledge, tacit or explicit, group or individual, organisations are increasingly recognising the strategic value of effectively utilising this resource. Driven by the rapid advances in information and communication technology, organisations and scholars have turned their attention to developing systems and processes to manage their knowledge effectively.
2.2.5 A MORE RECENT QUESTION – WHAT IS KNOWLEDGE MANAGEMENT?

Kogut and Zander (1996) have proposed that, ‘a firm be understood as a social community specialising in speed and efficiency in the creation and transfer of knowledge’ (p. 503). In order to achieve this end, the firm must encourage or engage in practices and processes that allow the right knowledge to get to the right place at the right time. In other words, it must develop and maintain a knowledge management system.

The precise definition of knowledge management has been much debated, and no agreed definition exists. It is a process by which firms create and use their institutional and collective knowledge and comprises sub-processes suggested by Sarvary (1999) that are summarised in the following table:

<table>
<thead>
<tr>
<th>Organisational Learning</th>
<th>The process through which the firm acquires information and/or knowledge.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Production</td>
<td>The process that transforms and integrates raw information into knowledge, which in turn is used to solve business problems</td>
</tr>
<tr>
<td>Knowledge Distribution</td>
<td>The process that allows members of the organisation to access and use the collective knowledge of the firm</td>
</tr>
</tbody>
</table>

*Table 2-1: Knowledge management sub-processes (Sarvary, 1999)*

Ruggles (1998) states that knowledge management is comprised of knowledge focused activities that can be categorised into the following eight major categories:
LITERATURE REVIEW

1. Generating new knowledge;
2. Accessing valuable knowledge from outside sources;
3. Using accessible knowledge in decision making;
4. Embedding knowledge in processes, products and/or services;
5. Representing knowledge in documents, databases and software;
6. Facilitating knowledge growth cultures and incentives;
7. Transferring existing knowledge into other parts of the organisation; and
8. Measuring the value of knowledge assets and/or the impact of knowledge management.

(Ruggles, 1998; p. 9 electronic version)

More holistically, Hibbard (1997) echoes Quinn’s, et al (1996) know-what and know-how, in seeing knowledge management as the process of capturing and collecting the expertise of the organisation, no matter where this experience resides (in the heads of its people, on paper, in databases) and distributing it to wherever it can help deliver the biggest payoff.

For the purpose of clarity in this dissertation, when the term knowledge management is referred to, a modified form of the definition put forward by Rastogi (2000) is used. Rastogi defines knowledge management as a systematic and integrative process of coordinating organisation-wide activities of acquiring, creating, storing, sharing, diffusing, developing, and deploying knowledge by individuals and groups in pursuit of major organisational goals.

Each of the aspects of knowledge management highlighted in Rastogi’s definition can be seen as an exchange process. However, it can be argued
that much of the knowledge management activity carried out in organisations is neither systematic, integrative nor organisation-wide, especially in relation to the exchange of tacit knowledge.

Therefore, the definition used throughout this dissertation of knowledge management is

The process of exchanging knowledge by individuals in pursuit of major organisational goals.

This definition was adopted because it is broad enough to allow the study to focus on both the tacit and explicit dimensions of knowledge, although a significant focus of the dissertation is focused on tacit knowledge exchange through the examination of the interpersonal knowledge exchange process. This deliberate choice of definition aimed to balance the knowledge management literature, wherein the explicit dimensions of knowledge tend to be favoured (Cook and Brown, 1999) through a codification and storage focus driven from an IT viewpoint. Recently, this perspective has diminished in prominence as researchers increasingly recognise the social nature of knowledge exchange within communities. However, little empirical research in this area has been carried out to date. The definition also limits the study to the specific area of knowledge exchange processes that are directly related to achieving the goals of the organisation, as opposed to more general knowledge exchange processes that are undertaken in everyday work life for personal or non-business related reasons.
Rather than focus upon how consultants should codify, store and retrieve their explicit knowledge, which in itself is a substantial area for research, this dissertation examines the process by which consultants exchange knowledge in their consulting practice. The key focus is the interpersonal knowledge exchange process, identifying unwritten and tacit knowledge as a fundamental area of interest.

2.3 UNDERSTANDING KNOWLEDGE EXCHANGE

2.3.1 WHAT IS KNOWLEDGE EXCHANGE?

Knowledge transfer or exchange is a concept closely aligned with knowledge management processes and systems. Argote (1999) asserts that the transfer of knowledge occurs when knowledge acquired in one organisation or organisational unit affects another, either positively or negatively.

Fleck (1979) argues that the exchange and development of knowledge is a social phenomenon, and knowing, thinking, and knowledge creation are not something that an individual does, or can do. It occurs in social units called ‘thought collectives’ that are created when a relatively stable structure of meaning is established. Such a community reproduces itself through a continuous regeneration of meaning. All facts are understood against this backdrop of meaning, and the social activity may lead to artefacts that articulate collective knowledge. Organisation knowledge in the form that Tuomi (1999) refers to as 'data' emerges as plans, experiences, language,
habits, models, practices, tools and institutions that guide actions within the organisation.

In this dissertation, the term ‘exchange’ is used in preference to transfer, as exchange implies a two-way relationship, with each party having an effect on the other. The term ‘transfer’ implies that knowledge is passed from one unit to another, with the unit passing the knowledge losing what knowledge they once had without gaining or learning from the transfer. The term exchange, in contrast, emphasises the non-diminishing nature of knowledge. When an exchange takes place, the total sum of knowledge is not constant (as implied by the term ‘transfer’ with one party taking what the other had). It is greater after the exchange as the originator of the knowledge still holds their original stock, and has probably also gained some degree of increased knowledge from the exchange process.

Encouraging exchange between an organisation’s group members will provide an increasing supply of current information, and allow the group to discard what is no longer needed or relevant. It is these group processes, carried out both by individuals and groups, that are the focus of this dissertation.

### 2.3.2 EXCHANGE BETWEEN GROUP MEMBERS

Exchange between individual or organisational units in the consulting context is the fundamental goal of knowledge management. Exchange implies more than one party, and an interaction of some form between them. In Rastogi’s
(2000) definition of knowledge management, the components of acquiring, creating, storing, sharing, diffusing, developing and deploying knowledge are all actions or processes of exchange in one way or another. In relation to groups, and in particular communities of practice, exchange can occur between members, between members and non-members (such as clients) or between members and ex-members. This research focused only upon intra-firm exchange processes that allow consultants to exchange knowledge.

Lave and Wenger (1991) argue that the exchange of knowledge has a further dimension in that it relies on the passing of tacit knowledge from one generation of practitioners to the next. Polanyi (1962) asserts that an art can only be passed on by example from master to apprentice and implies submission to authority.

You follow your master because you trust his manner of doing things even when you cannot analyse and account in detail for its effectiveness. By watching the master and emulating his efforts, the apprentice unconsciously picks the rules of the art, including those which are not explicitly known to the master himself. These hidden rules can be assimilated only by a person who surrenders himself to that extent uncritically to the imitation of another.

(Polanyi, 1962, p. 53)

In consulting firms, this may be particularly important because of high turnover typically experienced in the industry. An 'old-timer' in a consulting firm may be someone with more than five years experience in the one consulting firm.

Szulanski (1996), using the Shannon and Weaver (1949) communications metaphor, analysed intra-firm transfer of best practice in a manner analogous
to the transmission of a message from a source to a recipient within a given media or context. Szulanski argues however that while knowledge transfer is a distinct experience rather than diffusion, best practice transfer should be regarded primarily as a process, rather than a transaction or event.

Best practice transfer thus unfolds over four stages through which organisational routines are replicated (Szulanski, 1996). \textit{Initiation} is defined as comprising ‘…all events that lead to the decision to transfer’; \textit{Implementation} ‘…begins with the decision to proceed’; \textit{Ramp-up} ‘…begins when the recipient starts using transferred knowledge’; and \textit{Integration} ‘…begins after the recipient achieves satisfactory results with the transferred knowledge’ (Szulanski, 1996, pp.28-29).

Inkpen and Dinur (1998) extensively analysed this approach in an international context, agreeing that the knowledge exchange process follows four stages. Their slightly modified four stages of knowledge transfer are:

- \textit{Initiation}, where transferred knowledge is recognised;

- \textit{Adaptation}, where knowledge is changed at the source location to the perceived needs of the recipient;

- \textit{Translation}, where more alterations occur at the recipient unit as part of the general problem solving process of adaptation to a new context; and
• **Implementation**, where knowledge is institutionalised to become an integral part of the recipient unit.

This model is illustrated in the following Figure 2-3:

![Figure 2-3: Communication model of knowledge transfer (Dinur and Inkpen, 1996)](image)

Dinur and Inkpen’s approach is consistent with many knowledge management researchers who also view knowledge exchange as a process consisting of different stages, starting with initiation and ending with implementation (Argote and Ingram, 2000; Breshman, *et al*, 1999, Szulanski, 1996; 1999, Husman, 2001). These basic elements of the knowledge transfer process, including those described by Dinur and Inkpen (1996) can be traced
back to communications theory, which in turn parallels Shannon and Weaver's (1949) signalling metaphor.

This signalling metaphor, a foundation for most knowledge transfer research (Szulanski, et al., 2000) has endured decades of criticism (Attewell, 1993; Putnam, Phillips and Chapman, 1996) and may have outlived its usefulness (Szulanski, et al., 2000). Consisting of easily understandable specifications of the communication act: source, message, channel and receiver (Rogers, 1994), the main shortcoming of the model is its portrayal of knowledge exchange as an instantaneous, simple and costless act. Receivers are seen as having no problems in reconstructing the message that was sent by the sender, regardless of its content or context. It assumes that the knowledge can be turned into an explicit form to be sent, and ignores the process nature of the knowledge exchange and the ‘sticky’ nature of knowledge in relation to transfer (Szulanski, 2000).

Dinur and Inkpen’s (1996) four knowledge transfer stages (as shown earlier in Figure 2-3) were used in this dissertation as the starting point in the development of an interpersonal knowledge exchange process model. It became apparent in the process of carrying out the research interviews that, as well as sharing some of the shortcomings of all communication based models described above, their model requires expansion to incorporate the role of communities and the social exchange processes that have been discussed so far in this chapter. Furthermore, the model assumes that the source unit is able to change the knowledge from tacit to explicit in order to
pass it over to the recipient unit. This assumption of knowledge exchange between different knowledge types requires further examination.

2.3.3 EXCHANGE BETWEEN KNOWLEDGE TYPES

Nonaka and Takeuchi (1995) have proposed an extensive model and theory for the creation and transfer of knowledge from the individual to the organisational level. They propose that knowledge is created and exchanged through a social process between individuals and through the interaction between tacit knowledge and explicit knowledge. Their model describes the knowledge creation process as a never-ending spiral of tacit and explicit knowledge through four modes of knowledge conversion:

- Socialisation (tacit to tacit);
- Externalisation (tacit to explicit);
- Combination (explicit to explicit); and,
- Internalisation (explicit to tacit).

In the model, tacit knowledge can be transferred through two processes: socialisation, which maintains knowledge in its tacit form, and externalisation, which articulates tacit knowledge into explicit concepts via such means as metaphor, analogy, hypothesis, or models. Explicit knowledge is transferred either through internalisation, which is the process of embodying explicit
knowledge into tacit knowledge through socialisation, or combination, which retains the explicit nature of the knowledge (Nonaka and Takeuchi, 1995).

According to Snowden (2000a), the deficiencies in Nonaka and Takeuchi’s (1995) model in practice have become evident. In particular, organisations are increasingly realising that there is a body of knowledge that cannot be made explicit, and that much of what can be made explicit shouldn’t be on the grounds of either cost or flexibility (Snowden, 1997). Additionally, there is an increasing realisation that much knowledge is held collectively within communities, and cannot be represented as the aggregation of individual knowledge (Snowden, 2000b; Cook and Brown, 1999). Regardless, Nonaka and Takeuchi’s (1995) model has been seized to date, regardless of its original Business Process Reengineering specific context, as providing a means by which tacit knowledge may be rendered explicit (Snowden, 2000b; 2002b).

In order to build up a process-based model for the interpersonal exchange of knowledge, the role of socialisation in Nonaka and Takeuchi’s (1995) model is of interest, as it covers the tacit-to-tacit transfer. However, the conversion of tacit knowledge to explicit knowledge (externalisation) and vice-versa (internalisation) is also of interest in this research, as this is the process by which, it is presumed, tacit knowledge is embedded in artefacts, documents and templates within the consulting firm. It is the process by which novice members of the community may learn from the collective knowledge of the community as they participate in knowledge exchange activities. In this
manner, the knowledge exchange between consultants is one of learning both the content as well as the *know-how* component of the knowledge.

### 2.3.4 KNOWLEDGE EXCHANGE AND LEARNING

Learning and knowledge exchange go hand in hand. Learning implies the creation of new knowledge through new experience or through social or educational exchanges. The goal of organisational learning is useful outcomes (Dogson, 1993) that help the firm improve its products, services, or internal efficiency.

In a review of literature, Fiol and Lyles (1985) determined that ‘although there exists widespread acceptance of the notion of organisational learning … no theory or model of organisational learning is widely accepted’ (p. 803). Several years later, Cohen and Sproull (1991) similarly noted that ‘research in organisational learning suffered from conceptions that were excessively broad, encompassing nearly all organisational change… and from various other maladies that arise from insufficient agreement amongst the area on key concepts and problems’ (p. i).

The purpose of this research was not to revisit organisational learning as a key area of focus. However, any study of knowledge exchange must add to the concepts found in this body of knowledge. Despite the disagreement on definitions, several authors note that new knowledge can only be generated as a result of learning (Argyris and Schön, 1996; Nonaka and Takeuchi, 1995; Senge, 1990). Nonaka and Takeuchi (1995) allude to the nature of exchange
inherent in learning when they suggest that the most critical organisational function is not the management of existing knowledge as such, but the generation of new knowledge.

To create knowledge, the learning that takes place from others [exchange] and the skills shared [exchange] need to be internalised, reformed, enriched and translated into the company’s self image and identity.

(Nonaka and Takeuchi, 1995, p. 11)

This research specifically focuses upon this issue to determine how consultants create new knowledge through learning. Through an examination of the interpersonal knowledge exchange processes, the research delves into the difficult to define area of the knowledge creation process that takes place inside people's minds through the interpersonal knowledge exchange process. There are no textbooks for consultants to learn from in this area, nor are there any written reports or evaluation at the end of the learning process. It involves consultants 'thinking on their feet', looking at their past experiences and applying these to new and novel situations.

The practitioner allows himself (sic) to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He reflects on the phenomenon before him, and on the prior understandings which have been implicit in his behaviour. He carries out experiments which serve to generate both a new understanding of the phenomenon and a change in the situation.

(Schön 1983, p. 68)

It is on experiencing this surprise, puzzlement and confusion that the consultant will often look to a fellow consultant for their opinions, views and experiences relating to this context specific problem (Putman, 1999; Schön 1983). When master practitioners act deftly in difficult situations, they display
knowledge that they are not consciously thinking of and often would be unable to state (Putman, 1999). This is central to our ability to act in unique, ambiguous or divergent situations (Schön, 1983). This tacit knowledge that is learned by consultants through participating in the practice can be viewed as the ‘professional artistry’ of the profession (Schön, 1983).

Learning professional artistry involves initiating reflective practitioners into the ‘traditions of the calling’ and coaching them in paying attention to important aspects of problems, framing problems, experimenting, and reflecting on outcomes in order to improve future practice (Schön, 1983). Fundamental to professional artistry is design: as designers, practitioners ‘juggle variables, reconcile conflicting values, and maneuver around constraints’ to make indeterminate situations determinate (Schön, 1983, p. 41). Their attention ‘oscillates between whole and part, global and local’ (Schön, 1983, p. 56).

Prospective professionals no longer view their practice as a predetermined set of rules or ‘bag of tricks’ to apply to any given classroom situation, but as a practice which is grounded in a system of values, theories, and practices (Schön, 1983). A ‘professional artistry’ approach stresses understanding, rather than technical skills; and it stresses moral, rather than purely technical, accountability (Fish, 1991). It ‘focuses upon individual insight, staff development and gradualism ... [and] ... it expects management to provide a framework in which professional enterprise can flourish’ (Fish, 1991). In other words this approach provides professionals with certain autonomy in recognition of their specialist knowledge and moral responsibility.
Schön (1983) made the distinction between a ‘technical rational approach’ and a ‘professional artistry view’ (summarised in the following Table 2-2), the latter being learned through a process of reflective learning as opposed to formal education processes.

<table>
<thead>
<tr>
<th>Technical Rational Approach:</th>
<th>Professional Artistry View:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follows rules, laws and prescriptions.</td>
<td>Uses patterns and frameworks.</td>
</tr>
<tr>
<td>Uses diagnosis and analysis.</td>
<td>Uses interpretation and appreciation.</td>
</tr>
<tr>
<td>Views knowledge as obtainable and permanent.</td>
<td>Views knowledge as temporary and dynamic.</td>
</tr>
<tr>
<td>Focuses on technical expertise.</td>
<td>Focuses on professional judgement.</td>
</tr>
<tr>
<td>Implies theory applies to practice.</td>
<td>Implies theory emerges from practice.</td>
</tr>
</tbody>
</table>

Table 2-2: ‘Technical-rational’ versus ‘professional artistry’ approach (Schön, 1983)

This form of reflective learning, originally recognised by Professor Reg Revans in the 1940’s (Revans 1945; 1991), embodies an approach to learning based on comrades in adversity learning from and with each other through discriminating questioning, fresh experience and reflective insights. This form of learning, labelled action learning, offers the opportunity to integrate ‘rule based knowledge' with ‘experiential knowledge’ through personal and collaborative reflection (Smith, 2001).

Often this learning will occur away from the worksite, taking place in coffee shops, or over a glass of ale after hours, or over a lunchtime meeting away from the client site. Often the metaphors of water-cooler meetings or tea break product breakthroughs are used to describe this artistic process where practitioners engage in conversations about work and reflect upon what it is
that works well, and what does not. It is essentially a mentoring process, whereby professionals within the community learn from each other through working and interacting with each other.

Although organisational learning occurs through individuals, there has been much attention devoted to whether organisations can learn in their own right. Similar to the conclusions drawn by Cook and Brown (1999) regarding Genres (Section 2.2.4), Hedberg (1981) states that

… it would be a mistake to conclude that organisation learning is nothing but the cumulative result of their members’ learning. Organisations do not have brains, but they have cognitive systems and memories … Members come and go, and leadership changes, but organisations’ memories preserve certain behaviours, mental maps, norms, and values over time.

(Hedberg 1981, p. 3)

In this research, it is accepted that organisations learn, and hold knowledge in their own right in conjunction with the individuals within the organisation. These two forms of knowledge, as highlighted by Cook and Brown (1999), are different forms of knowledge, each doing work that the other cannot. It is beyond the scope of this research to fully cover the organisational learning literature, as this is an extensive body of research and knowledge in its own right, with debates still unresolved by scholars on many aspects of the construct. The important point to note is that interpersonal knowledge exchange between individuals and groups within a consulting firm is an important form of learning, providing the know-how for the consulting company to evolve into solving new problems for their clients, or to solve existing problems in better ways. However, knowledge exchange is not without its difficulties in any organisation, let alone a consulting firm.
2.3.5 BARRIERS TO KNOWLEDGE EXCHANGE

There are several barriers to knowledge exchange that are highlighted in the literature. The 'sticky' nature of tacit knowledge, and the 'slippery' nature of codified knowledge have already been discussed in section 2.2.4 on page 34. A major impediment to knowledge exchange is the assumption that all people in the firm have the tacit knowledge to recontextualise any knowledge, information or data from its codified state. This assumption is illustrated by Tuomi's (1999) assertion that the commonly discussed data, information and knowledge hierarchy that is assumed as the basis of knowledge is inverted, and hence a large amount of tacit knowledge is needed by individuals to understand and recontextualise one unit of data (see section 2.2.2 on page 27).

Problems exist also in sharing explicit knowledge. For instance, a shared language is necessary, as is some degree of shared experience. Polanyi (1966) asserts that:

... while tacit knowledge can be possessed by itself, explicit knowledge must rely on being tacitly understood and applied. Hence, all knowledge is tacit or rooted in tacit knowledge.

(Polanyi 1966, p. 144)

With different mental models of the world, and imprecise instruments such as language and text, the ability to reconstruct the original meaning of the originator of knowledge is extremely difficult (Davenport and Prusak, 1998). Different people will have different interpretations and different meanings of the same event or information. This is reduced by shared experience, but it is also context sensitive, and it is affected by the differing values and attitudes of
different people. Furthermore, it is an essential part of knowledge sharing if one is to have confidence in the source and accuracy of the knowledge (Davenport and Prusak, 1998).

The exchange and sharing processes in an organisation includes elements of communication and conflict. As a result, different parts of the organisation may come to a different conclusion about the same events – they have learned different things from that same event. For instance, a single event such as the failure of a new product may be interpreted by the marketing department as an engineering fault in the design, and by the engineering department as a poor marketing campaign. In addition, information that threatens the organisation's collective self concept is ignored, rejected, reinterpreted, hidden, or lost, and the process by which organisations preserve their identities are, in many ways, analogous to the methods that individuals employ in the defence of their own self concept (Brown 2000).

Szulanski (1996) carried out a study that describes why best practices did not transfer well between sections within the same organisation. It found that a successful method of performing a certain procedure would go unnoticed or would not be shared for many years. Once the best practice was identified, however, it would still take an average of two years before the method migrated to other sections for use within the company. The four main barriers causing the delay in identifying and sharing best practices in the firm were summarised by O'Dell and Grayson (1998) in the following Table 2-3:
### Table 2-3: Four barriers to knowledge exchange (O'Dell and Grayson, 1998)

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Ignorance'</td>
<td>This means the person with the information didn't think anyone could use it and others in the company did not know that anyone had the information.</td>
</tr>
<tr>
<td>'No Absorptive Capacity'</td>
<td>Once the method was recognised, the firm had no processes or resources to capture best practice.</td>
</tr>
<tr>
<td>'The Lack of Pre-Existing Relationships'</td>
<td>The separate sections of the organisation have no interaction with each other. Normally people acquire knowledge from someone they admire, know, or interact with. Seldom will one person adapt another person's new process if that person does not have a relationship already established.</td>
</tr>
<tr>
<td>'Lack of Motivation'</td>
<td>The benefit of using the new method and how it can help a department may not be fully understood.</td>
</tr>
</tbody>
</table>

Although this research encountered these and other barriers to knowledge exchange, it was not the intention to specifically identify and discuss all barriers. In discussions relating to the participation of consultants in the knowledge exchange process, these and other barriers will have a bearing upon why and how consultants engage in the exchange process. Where identified, these barriers will be discussed in the context of answering the research questions, as opposed to being separately addressed. In relation to the literature review for the purposes of this research, it is sufficient to recognise that there are several barriers to knowledge exchange, and that these will have an impact on the exchange process preferred by the consultants.

Although the barriers discussed by Szulanski (1996) relate specifically to departmental knowledge transfer, the underlying effect on knowledge exchange applies to individuals such as consultants. For instance, the 'lack of pre-existing relationships' barrier shows the importance of relationships and the definition of who is who in the consulting community. Through the formation of identities within communities, consultants build reputations for
areas of expertise, thereby breaking down this barrier in a community way. Therefore, the role of communities in the knowledge exchange process appears to be significant in reducing barriers to tacit knowledge exchange.

2.4 SOCIAL KNOWLEDGE EXCHANGE IN COMMUNITIES OF PRACTICE

2.4.1 KNOWLEDGE EXCHANGE IN COMMUNITIES

The concept of interpersonal knowledge exchange within communities is not new. Since ancient times as hunters and gatherers, communities relied on the transfer of tacit knowledge in order to survive (Berreby, 1999). Through the move from subsistence living, the cottage industry era and into the industrialisation of society, knowledge exchange has remained a fundamental function of communities. Rather than using the definition of communities as people living and working in cities and towns, the term in relation to work in this dissertation is used in its philosophical sense. This concept of community

... expresses our vague yearnings for a commonality of desire, a communion with those around us, and extension of the bonds of kin and friendship to all those that share a common fate with us.

(Minar and Greer 1969, p.179)

Poplin (1979) builds on this concept as a 'moral' phenomenon that seems to involve a sense of identity and unity with one's group and a feeling of involvement and wholeness on the part of the individual. This 'sense of community' refers to a condition in which human beings find themselves enmeshed in a tight-knit web of meaningful relationships with their fellow human beings and is contrasted by the conclusions drawn from literature that
people in twentieth century urban communities are alienated, frustrated and alone (Poplin, 1979). Indeed, the continued alienation of people in modern society may fuel the emergence of informal communities at the workplace. According to Nisbet (1960), the only alternative to the continued spread of alienation in the twentieth century is communities which are small in scale but solid in structure because they respond, at the grass roots, to fundamental human desires; living together, working together, experiencing together and being together.

The concept of communities at the workplace, and the exchange of knowledge within them, has gained increasing attention from knowledge management scholars in recent years. Lave and Wenger (1991) have labelled these informal groups of workers that exist separate from formal hierarchies as communities of practice, and much attention has been given to their study over the past decade.

2.4.2 WHAT ARE COMMUNITIES OF PRACTICE?

Communities of practice have been of great interest to knowledge management scholars due to the ability they appear to have for transferring tacit knowledge within a group of workers through social processes. Lave (1988) and Lave and Wenger (1991) first introduced the community of practice concept, describing them
... as a set of relationships among persons, activity and world, over time, in relation with other tangential and overlapping communities of practice.

(Lave and Wenger 1991, p. 98)

This definition suggests that a community of practice involves the participation of a collection of individuals sharing mutually defined practices, beliefs and understandings over an extended timeframe in the pursuit of a shared enterprise (Wenger, 1998a). They have a shape and membership that emerges in the process of activity, as opposed to being created to carry out a task (Brown and Duguid, 1991).

Through conceptualising organisation knowledge as a social and collective phenomenon embodied in the actions of practice of its members, Lave and Wenger (1991) explored the process by which new members to various professions became full members of the community of practice over time. This process, called Legitimate Peripheral Participation (LPP) involves ‘learning by doing’ through both formal mechanisms, as well as informal groups. LPP is
.... the progressive involvement of new arrivals in the new community as they acquire growing competence in its practice. The adjective ‘peripheral’ denotes the existence of a route that the new member must follow to gain the esteem of the communities established members. At the same time, the idea of legitimate participation emphasises that the route through the various stages of learning connects with the community’s actual practices (i.e. It is situated). Because knowledge is integrated and distributed in the life of the community, and because learning is an act of belonging, learning necessarily requires involvement in and contribution to the community’s activity and development. In other words, learning cannot take place if participation is not possible.

(Gherardi, 2000; p. 13 electronic version)

In communities of practice, newcomers learn from ‘old-timers’ (that is, more experienced long-term members) by being allowed to participate in certain tasks relating to the practice of the community and gradually move from peripheral to full membership in that community. Lave and Wenger (1991) suggest that LPP is complex and composite in character and state that each of its three components of legitimation, peripherality and participation are indispensable.

The terms peripheral and full engagement are used by Lave and Wenger (1991) to denote the degree of engagement with, and participation in the community, but they note that peripherality

... must be connected to issues of legitimacy of the social organisation, and control over it, if it is to gain full analytical attention.

(Lave and Wenger 1991, p. 17)

As time passes, the new group member’s identity transforms both individually, and in the eyes of the other practice members, to one of full participation. Hence, learning can be seen as ‘the historical production, transformation and change of persons’ (Lave and Wenger, 1991, p. 51). It is through this
process that tacit knowledge is exchanged, and by which the community's explicit knowledge can be recontextualised with the community's embedded meaning.

This view of personal and group knowledge as integrated and distributed in the life of the community with learning as an act of belonging infers that learning necessarily requires involvement in and contribution to the community's activity and development. In other words, learning cannot take place if participation is not possible (Gherardi, 2000). It is participation that provides the key to understanding communities of practice. Communities of practice imply participation in an activity about which all participants have a common understanding of what it is, and what it means to the community. The community and the degree of participation in it are in some senses inseparable from the practice (Hildreth, 2000). Although participation is undoubtedly important, very little research attention has been focused upon the question of why community members do choose to participate.

2.4.3 PARTICIPATION

Participation appears to be a key factor in the interpersonal knowledge exchange process in consulting firms, as knowledge exchange can only occur if consultants are prepared to engage with each other. However, the reasons that consultants participate are not clear.

For instance, frequent studies in diverse settings indicate that employees frequently resist sharing their knowledge with the rest of the organisation
(Ciborra and Patriota, 1998) or with others (Constant, et al, 1994). In addition (and as already discussed on page 34), knowledge is ‘sticky’ and does not flow easily though an organisation even when the knowledge is made available (Szulanski, 1996). With the focus on technology solutions to overcome this ‘stickiness’, it is important to note that organisation culture, rather than technology, has a greater impact on whether people exchange knowledge (Orlikowski, 1996). The critical issue then is to understand the social, cultural and technical attributes of the knowledge management system that encourage knowledge exchange (Holsthouse, 1998; Wasko and Faraj, 2000).

Social etiquette appears to play an important role in determining the nature or participation in the community of practice. Social etiquette relates to the behaviour, manners and protocol established by convention as acceptable or required in the specific organisation or community. It comprises ongoing social processes involving socially shared values and cognitive assumptions that bind together and shape human behaviour (Parsons 1996). The structural properties of these social systems do not exist in isolation from human action. Rather, social structures are better seen as socially recurring patterns of action (Parsons, 1996).

According to Wenger (1998a), participation in the community of practice is contingent upon knowing the accepted social etiquette and practices established by the group over time. Through the community history tied to their own particular time and place, people engage in practices that are guided by their level of understanding and knowledge of that situation. This
local and specific knowledge that has developed in the mind of the individual over time can be conceived of as local cultural knowledge, and is that which people know about their present circumstances (Parsons, 1996). This knowledge of community practice allows consultants to engage in an invisible interpersonal knowledge exchange process according to rules that allow the process to function efficiently.

In and through their own activities, agents reproduce the conditions that make these activities possible.

(Giddens 1984, p.2)

The concept of cultural knowledge, and more broadly organisational culture, is a popular but elusive concept which has been variously defined as: a system of publicly and collectively accepted 'meanings' which operate for a group at a particular time (Trice and Beyer, 1984) and more simply as ‘the way we do things around here' (Deal and Kennedy, 1982). Culture is seen from a community’s social perspective as the product of a dynamic and collective process of 'sense-making' undertaken by members of a group or organisation (Silvester, et al, 1999). For Schein (1985), culture is a learned product of group experience. He defines it as:

... basic assumptions and beliefs that are shared by members of an organisation, that operate unconsciously, and that define a basic ‘taken for granted’ fashion of an organisation's view of itself and its environment. These assumptions and beliefs are learned responses to a group’s problems of survival in its external environment and its problems of integration.

(Schein, 1985, p. 6)

Organisational culture is uncovered by looking at indicators of sense-making such as facts, practices, vocabulary, metaphors, stories, rites, and rituals
(Pacanowsky and O'Donnell-Trujillo, 1982). Often referred to as ‘cultural norms’, it is made up of its members shared attitudes and values, management style, and problem-solving behaviour (Schwartz and Davis, 1981). Schein (1983) thinks that organisational culture is ‘the assumptions that underlie the values and determine not only behaviour patterns, but also such visible artefacts as architecture, office layout, dress codes, and so on’ (p. 14). D'Andrade (1984) concludes that organisational culture may be construed as

... consisting of learned systems of meaning, communicated by means of natural language and other symbol systems, having representational, directive (task) and affective (socioemotional) functions, and capable of creating cultural entities and particular senses of reality. Through these systems of meaning, groups of people adapt to their environment and structure interpersonal activities. Cultural meaning systems affect and are affected by the various systems of material flow of goods and services, and an interpersonal network of commands and requests.... Various aspects of cultural meaning systems are differentially distributed across persons and statuses, creating institutions such as family, market, nation, [community], and so on, which constitute social structure.

(D'Andrade 1984, p. 116)

Davenport and Prusak (1998) discuss several cultural factors that may inhibit knowledge transfer, such as lack of trust; different cultures, vocabularies and frames of reference; lack of time and meeting places; a narrow idea of productive work; status and rewards accruing to knowledge ‘owners’; ‘not-invented-here’ syndrome; and, intolerance of mistakes or need for help. For instance, the effort involved for an ‘outsider’ to learn the full meaning of a single word used by the group may involve,
… carefully unravelling multiple meanings built into that simple word, and especially of working out the logic of what was being told to us, finding the major premises on which [consultants] activities are based.

(Becker 1998, p.157)

Above all else, Davenport and Prusak (1998) emphasise the importance of trust and common ground in facilitating knowledge transfer.

The closer people are to the culture of the knowledge being transferred, the easier it is to share and exchange.

(Davenport and Prusak, 1998, p. 100)

Szulanski’s (1996) research found that ‘laborious and distant’ (p.32) relationships between source and recipient increase difficulty during the implementation phase of knowledge transfer, when interaction is at its most intense. This has notable implications for tacit knowledge transfer, which may necessitate numerous individual exchanges (Nonaka, 1994).

Social etiquette and cultural aspects of the community such as shared language and ‘norms’ may either encourage or discourage individuals from participating in the community of practice. Further, it appears that the reasons for participation are bound up in both the reciprocal nature of belonging to the community of practice, and in the notion of seeing the social exchange as individually beneficial in the long term when weighed against the amount of effort required in the short term.

2.4.3.1 Motivation to Participate - Individuals

If knowledge is viewed as an individual object held explicitly or embedded within the minds of people or the organisation, then it can be argued that
LITERATURE REVIEW

people will exchange their knowledge through market mechanisms in order to receive commensurate benefits (Wasko and Faraj, 2000).

They are motivated by self interest and are less likely to exchange knowledge unless provided with tangible rewards such as promotions, raises, and/or bonuses, or intangible rewards such as reputation, status and direct obligation from the knowledge seeker.

(Wasko and Faraj 2000, p.161)

Research demonstrates that when knowledge is perceived to be 'owned' by the individual, people are more likely to exchange their knowledge for 'intangible' returns such as reputation and self esteem (Constant, et al, 1994; Jarvenpaa and Staples, 2000). In addition, social exchange theory suggests that expertise is exchanged for status, respect, compliance, and obligation (Blau, 1964). Originally developed by Homans (1961, 1974) and Blau (1964), social exchange theory seeks to explain human action by a calculus of exchange of material or information resources. Although there are several schools of social exchange theory focusing on different areas (Sprecher, 1998), most social exchange models share the following basic assumptions (LaGaipa, 1977; Nye, 1979):

1. Social behaviour is a series of exchanges;
2. Individuals attempt to maximise their rewards and minimise their costs; and
3. When individuals receive rewards, they feel obligated to reciprocate.

Rewards, costs and reciprocity are key concepts that apply to all interpersonal transactions, and as such they can also be applied to the interpersonal nature of tacit knowledge exchange by consultants. Rewards are defined as exchanged resources that are pleasurable or gratifying, whilst
costs are defined as exchanged resources that result in loss or punishment (Thibaut and Kelley, 1959). Rewards minus costs equals the outcome, although the difference, when it is positive, has also been referred to as benefits and profits. Reciprocity is also important in relation to consultants and tacit knowledge exchange, since this is bound up in the nature of being within a community of practice. Reciprocity refers to the notion that we give something back to (and do not hurt) those who have given to us (Gouldner, 1960).

Much like operant conditioning (Skinner 1950, 1953), social exchange theory proposes that human behaviour will recur through positive reinforcement, and will be discouraged through increased cost. The assumptions are made that humans are profit seeking, behave rationally and will review the cost-benefit ratio of any social exchange. The fairness or equity of the social exchange process has been considered by Walster, et al (1978), who consider that individuals will try to maximise their outcomes (where outcomes equals rewards minus punishments). However, consultants in communities of practice also participate in exchanges within the group context for rewards that appear to be motivated by forces other than self-interest.

2.4.3.2 Motivation to Participate - Groups

The motivation to maximise self-interest does not adequately explain why consultants exchange knowledge as a contribution to their communities of practice. If individuals were motivated only by self-interest as suggested by social exchange theory, then the economically rational behaviour would be to ‘free-ride’ (Wasko and Faraj, 2000). In other words, individuals would be
motivated to consume the community knowledge asset, termed the public good by Wasko and Faraj (2000), without contributing to its creation or establishment. Hence the motivation must go beyond self-interest. Schwartz (1970) suggests that individuals forego their tendency to ‘free ride’ out of a sense of fairness, public duty, and concern for their community. People often behave altruistically and pro-socially, contributing to the welfare of others without apparent compensation (Wasko and Faraj, 2000).

Social exchange theory, in relation to groups (or rather individuals comprising these groups), predicts that the collective rewards can be maximised by evolving accepted systems for equitably apportioning resources among members. These groups will evolve such systems of equity and will attempt to induce members to accept and adhere to these systems. Groups will generally reward members who treat others equitably, and generally punish members who treat others inequitably (Walster, et al, 1978). This bears striking similarity to the notion of participating in communities where the norms and rules of behaviour evolve as a function of the community, and members are expected to adopt these behaviours as they move from the periphery of the community to becoming a full member (Lave and Wenger, 1991).

Therefore it can be argued that for consultants to engage in the interpersonal knowledge exchange process, the benefit to them must be positive over the short or long term, or else they act from the sense of contributing to the public good of the community through gifting their knowledge to their colleagues. Wasko and Faraj, (2000) conducted research relating to participation in
electronic groups, and highlighted several factors that relate to why people contribute to virtual communities. These factors were labelled as indicated in the following Table 2-4:

<table>
<thead>
<tr>
<th>Tangible Returns</th>
<th>Intangible Returns</th>
<th>Interaction with a community</th>
<th>Barriers to Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful information available</td>
<td>Enjoyment/entertaining</td>
<td>Multiple viewpoints</td>
<td>Group related barriers</td>
</tr>
<tr>
<td>Answer to specific questions</td>
<td>Learn</td>
<td>Peer group</td>
<td>Obstacless to participation</td>
</tr>
<tr>
<td>Personal gain</td>
<td></td>
<td>Altruism/pro-social behaviour</td>
<td>Unhelpful</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reciprocity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advance the community</td>
<td></td>
</tr>
</tbody>
</table>

- **Useful information available**
  - Includes access to useful information and knowledge. Access to expertise. Receiving help when seeking advice. Up-to-date and not available elsewhere.

- **Answer to specific questions**
  - Receiving answers to specific questions. Receiving answers in a timely manner. Motivated by self-interest - specific need.

- **Personal gain**
  - Personal gain or status related to profession. Establish a reputation that may translate to a job or generate consulting clients.

- **Enjoyment/entertaining**
  - Participation in the community is fun in general.

- **Learn**

- **Multiple viewpoints**
  - Provides access to multiple viewpoints within the community of practice.

- **Peer group**
  - Rich source of interaction through communicating on the same level with peers.

- **Altruism/pro-social behaviour**
  - A moral obligation to help others even at own expense. 'It's the right thing to do'.

- **Reciprocity**
  - If help is received from the community, it is only fair to provide help in return.

- **Advance the community**
  - Interested in maintaining the community or the profession as a whole.

- **Group related barriers**
  - Frustration at other members. Feeling of others free-riding (shouldn't have to do other's work for them).

- **Obstacles to participation**
  - Time consuming. Size constraint (too large). Too much information to deal with.

- **Unhelpful**
  - Community found to be unhelpful.

*Table 2-4: Motivation for participation in virtual communities (Wasko and Faraj, 2000)*

These categories, although related to virtual online communities, appear to echo issues discussed in much of the literature on participation in communities. However, Wasko and Faraj’s (2000) research dealt with electronic participation in virtual communities, rather than with the interpersonal knowledge exchange of face-to-face communities found at
many workplaces, including consulting companies. The focus was on explaining knowledge exchange via community participation from an information systems perspective. The categories summarised above were considered useful to this research project and were utilised in the content analysis as the initial categories for coding interview transcripts for the second research question relating to the preference for participation in the interpersonal knowledge exchange process.

These aspects of motivation and participation were seen as an essential element of making the interpersonal knowledge exchange process function. Snowden (2000) emphasises this point as follows:

[Individuals with expert knowledge] can choose to volunteer or withhold that expertise, depending on a complex set of factors, ranging from the reputation of the searching individual to the level of fear and abuse or time factors … Individuals who are worthy of trust are more likely to gain access to non-public expertise than those who play the political game for their own advantage at the expense of others, reversing the normal balance of power in large organisations.

(Snowden, 2000, p. 54)

For this reason, the second research question was included within the scope of this study to explore this gap in the literature, specifically questioning why consultants participate in the interpersonal knowledge exchange process within their respective community of practice, in preference to using the written knowledge stored in electronic databases.
Goodman (1998) submits that communities of practice in a consulting firm facilitate the exchange of tacit knowledge and recommends that firms develop mechanisms to encourage personal networks and communities of practice. Communities of practice fulfil a number of functions with respect to the creation, accumulation and exchange of knowledge in an organisation. For instance, they act as nodes for exchange and interpretation (Wenger, 1998b).

This is because members have a shared understanding of what is important, and as such know what is important to communicate and how to present information in useful ways. As a consequence, a community of practice that spreads throughout an organisation is an ideal channel for moving information and knowledge, such as best practices, tips or feedback, across organisational boundaries. Often this knowledge remains tacit because all in the community knows it, and hence the cost to convert this to explicit knowledge (if possible at all) is not considered by community members as necessary.

This notion of learning the professional practice was described by Schön (1983) as an artistic process, which sees knowledge inherent in practice being understood as ‘artful doing’. Through a process of reflective action, practitioners follow up the process of thinking on their feet with reflection-on-action. This is done later, after the encounter, and enables consultants to explore why they acted as they did, what is happening in a group, and so on. Through this process, practitioners build up a collection of images, ideas,
examples and actions that they can draw upon, and can share with their colleagues within the community.

Alternatively, the consultant can act out of an initial self-understanding that this situation is unique and, either unlike any previously encountered, or similar yet different in many respects (Schön, 1983). Using the past repertoire of experiences as a resource, the consultant can find and participate in knowledge exchange with consultants in the community with similar or relevant experiences. The community therefore defines the boundary of what experiences and knowledge is important and held communally, and the knowledge of what is important and who has the knowledge becomes the art of participating inside the consulting community (Wenger, 1998a).

Communities of practice also can retain knowledge (Wenger, 1998b) in a living way, unlike databases and codified repositories, which allows it to be applied to local problems and issues. Competencies of the group are also stewarded (Wenger, 1998b) as members discuss novel ideas, work together on problems, and keep up with developments inside and outside the firm. They also provide a home for identities (Wenger, 1998b), which is important to knowledge exchange as it allows members to filter the sea of information, helping to sort out what they pay attention to, what they participate in, and what they stay away from.

Accepting the notion that communities of practice exist within organisations allows researchers to focus on important aspects of the processes by which
organisation knowledge, and especially tacit and informal knowledge, can be perpetuated and modified to give rise to learning. The community has its own shared stock of explicit and tacit knowledge, and is instrumental in the interchange of group and individual forms of knowledge. Polanyi (1962) discussed this shared stock of knowledge in relation to industry, highlighting that practical knowledge exists within the group itself.

Great industries, like the tanneries, the potteries or steel mills, like the breweries and the whole range of textile manufacturers, as well as agriculture in its numberless branches, have realised these days that they were carrying on their activities in the manner of an art without any clear knowledge of the constituents’ detailed operations. When modern scientific research was applied to these industries it was faced in the first place with discovering what was actually going on there and how it was that it produced goods. .... The attempt to analyse scientifically the established industrial arts has everywhere led to similar results.... [That the practice of producing products is scarcely related to physical knowledge at all]. Indeed, in the modern industries the indefinable knowledge is still an essential part of technology.

(Polanyi 1962, p. 52)

Hence industries and practices will continue to survive and be modified over time, so long as there is a continuous link between the old-timers, newcomers and those members in transit between these two extremes. The community itself perpetuates modes of knowing that do not require explication since new members are socialised to its distinctive practices and knowledge, acquiring a stock of expertise that they leave as a legacy, with some modification, to their successors. The community of practice thus perpetuates not only the community, but also its stock of practical knowledge (Gherardi, 2000). By implication, an art that has fallen into disuse for the period of an entire generation is altogether lost and this loss is irretrievable.
... it is pathetic to watch the endless efforts - equipped with microscopy and chemistry, with mathematics and electronics - to reproduce a single violin of the kind the half-literate Stradivarius turned out as a matter of routine more than 200 years ago

(Polanyi 1962, p. 58)

A central pillar in regard to the transfer of tacit knowledge in communities is the notion of the creation, and the ongoing development, of shared mental models within the practice through periods of lengthy and elaborate action and dialogue.

Stories about ideas that were tried and failed, or new products that sold better than expected, become part of the organisational memory. When a similar problem or opportunity arises, it is perceived in terms of the previous experience of the organisation. The actual memory of these events resides in the many individuals, who make up the group of course, but it is a shared memory and it results in decisions taken jointly to affect organisational purpose and goals. Thus, individuals and groups act as agents for the organisation in the process.'

(Lane and Swanson, 1993; p. 8 electronic version)

Mental models have been described as the semi-permanent tacit ‘maps’ of the world which people hold in their long term memory, as well as the short term perceptions which people build up as part of their everyday reasoning processes (Senge, et al, 1994). They are hypothesized knowledge structures embodying people’s assumptions, beliefs, ‘facts’, and misconceptions about the world (Kearney and Kaplan, 1997). They provide a framework for interpreting new information and for determining appropriate responses to new situations, as well as for guiding people’s perceptions, decisions, and behaviour (Kearney and Kaplan, 1997).

Mental models allow people to interpret and communicate their meaning of the world based upon ascribing meaning to events that they experience. An
example of the application of mental models involves the use and interpretation of language, which plays a role for the listener in the active generation of meaning, rather than providing a translation between objective reality and cognition (Day, 1999). Different people can interpret identical statements or written language in totally different ways based upon the meaning they ascribe to the objective words based upon their individual mental model.

The extent to which the mental models of the different members of an organisation overlap will have a significant impact on that organisation’s ability to accomplish coordinated group activity and learning (Senge, et al, 1994). Weick (1990) states that, ‘the world becomes stable only as people ignore differences and attend to similarities’ (p. 2) in their mental models, as occurs in communities of practice.

In communities of practice, members use each other as one of their most critical resources.

In the course of socialising, members develop a collective pool of practical knowledge that any one of them can draw upon. That pool transcends any individual member’s knowledge, and it certainly transcends the corporation’s documentation. Each member contributes to the pool, drawing from his or her own particular strengths, which the others recognise and rely on.

(Brown and Duguid, 2000; p. 14 electronic version)

Sense making appears to be increasingly important when examining the process by which knowledge is exchanged by consultants. Drawing upon their collective pools of practical knowledge, and engaging in exchange processes, appears to allow consultants to effectively and efficiently transfer
the context specific knowledge required to solve client problems. Wenger (1998a) observes that,

… a well functioning community of practice is a privileged locus for knowledge acquisition for new members, but is also an enabling context for knowledge creation.

(Wenger 1998a, p. 214)

Sharp (1997) draws attention to the specific focus of knowledge exchange by defining the social nature of learning the important aspects of one’s work.

… the group concentrates on learning that emerges only through working, or actually practising one’s craft. Communities of practice supplement the book and classroom learning of many trade and professional workers. To learn how one does work in this organisation, or in this area, that goes beyond the official ‘canonical’ training for that activity implies that a key part of learning how to work is learning how to communicate and share information within the community of practice. In this sense, learning is about work, and work is about learning, and both are social.

(Sharp 1997, p. 1)

The tacit nature of this exchange process, and the difficulty in researching the process, is highlighted by Wenger (1998a) when discussing what constitutes a community's practice. It is identified as always being social, and includes both the explicit and tacit dimensions.
It includes what is said and what is left unsaid; what is represented and what is assumed. It includes language, tools, documents, images, symbols, well-defined roles, specified criteria, codified procedures, regulations, and contracts that various practices make explicit for a variety of purposes. But it also includes the implicit relations, tacit conventions, subtle clues, untold rules of thumb, recognisable intuitions, specific perceptions, well-tuned sensitivities, embodied understandings, underlying assumptions and shared worldviews. Most of these may never be articulated, yet they are unmistakable signs of membership in communities of practice and are crucial to the success of their enterprises.

(Wenger 1998a; p. 194)

The tacit nature of the practice described by Wenger (1998a) recognises that this aspect of knowledge management theory and practice is still poorly understood. However, in recent years the research agenda has turned its attention to communities of practice, and the nature of tacit knowledge exchange.

2.4.5 COMMUNITY OF PRACTICE RESEARCH

Researchers in the field of management have begun to observe and describe communities of practice in various contexts. Lave and Wenger (1991) researched several professions using apprenticeship as the focus of how communities of practice accept and transform new members toward full participation in the community. Gherardi (2000) examined how organisational safety knowledge and organisational safety learning are enacted in the European construction industry through communities of practice. In addition, Orr (1990) examined Xerox copier technicians and their interactions within a community of practice as they pass on explicit and tacit knowledge regarding fixing copiers.
Difficult problems faced by Xerox customer service representatives are discussed over regular breakfasts. The reps share and even generate new insights about the difficult machines that they work on. While eating, playing cribbage and gossiping, the reps talked work and talked it continually. They posed questions, raised problems, offered solutions, constructed answers, laughed at mistakes and discussed changes in their work, the machines and customer relations. Both directly and indirectly, they kept one another up-to-date about what they knew, what they'd learned, and what they were doing.

(Brown and Duguid, 2000, p. 16 electronic version)

A further study by Cook and Yanow (1993) described how tacit knowledge is employed at three small workshops in the Boston area to produce some of the finest flutes in the world. Since the physical dimensions and tolerances of the flutes have never been explicitly spelled out, craftsmen rely on imprecise statements like 'It doesn’t look right’ or ‘It doesn’t feel right’. Yet the extremely precise standards of the instruments, on which the flutes ultimate style and quality depend, have been maintained through these sorts of individual and mutual judgements of hand and eye.


Although the findings of these studies have been generalised to white collar practical work, there are few studies to date focusing specifically on how office-working professionals pass on knowledge within their practice. The focus appears to be upon craft professions and technical personnel, or distributed working arrangements in international settings, rather than on tertiary qualified professionals. In addition, no studies delve into a micro
examination of the actual interpersonal knowledge exchange processes that take place within the community of practice. The means by which the initial need to exchange knowledge is satisfied in the exchange process is assumed to take place as an outcome of the membership of a community of practice. However the stages and nature of each stage of this process have not been the focus of this research agenda.

Hence, this research aims to add to the body of knowledge in this area by focusing upon describing the interpersonal process by which consultants, as professional knowledge workers, exchange tacit and explicit knowledge within their communities of practice.

2.5 WHY STUDY CONSULTANTS?

An aim of this study was to focus on the tacit exchange of knowledge within the work context. In order to achieve this aim, knowledge intensive workers who rely heavily on tacit knowledge needed to be identified. Consultants and consulting firms have a strong reliance on knowledge, and often on the tacit dimension of knowledge. More importantly, consultants and their firms provide a rich source of data in relation to interpersonal and tacit exchange processes. This section reviews the literature on consulting and consulting firms in relation to knowledge management practices.
2.5.1 CONSULTANTS AS KNOWLEDGE WORKERS

In an investigation of knowledge exchange processes, it is seen to be important to identify the specific group of knowledge workers informing the research. In this study, the respondents were professional consultants. The term 'consultant' is often loosely used to cover a range of roles in different industries (For example; sales consultant, customer service consultant, account enquiry consultant). For the purposes of this study, the term 'consultant' is used with specific focus on management consultants and professional IT consultants who directly sell their knowledge and experience to clients for fees. The professional consultants informing this study all worked for ABC Consulting at the time of this study.

Management consultants, and consultants in general, are among the most important carriers of new knowledge (Clark, 1995) as their prime function is to help their clients improve their businesses. In a rapidly changing world, the individual consultant's knowledge can easily become outdated. Therefore the consulting industry must have processes, both formal and informal, by which their members are able to exchange knowledge.

However consulting, and specifically management consulting, has been characterised as an industry of mystery, where secrecy and client privilege have been dominant issues (O’Shea and Madigan, 1997). This can be said especially of the apparently mysterious way in which invisible tacit knowledge appears to pass from one consultant to another via seemingly secret rituals only known to the consulting community. It is the knowledge within consulting
firms, and specifically the interpersonal knowledge exchange process, that is the focus of this research.

2.5.2 KNOWLEDGE IN PROFESSIONAL CONSULTING FIRMS

Professional consulting firms sell consulting services and solutions to their clients. As such, consulting firms are professional service companies that can be viewed as having a primary knowledge product embedded in their consultants, their knowledge systems, their processes, and their clients. Two features define professional service organisations:

First, knowledge is their core resource, and it is both the input and output in their production process. Second, their clients are other firms or institutions, and their output is used as input into the production processes of other businesses.

(Nachum 1998, p.37)

In a review by Alverson (1992) the characteristics of professional service firms discussed by Gummerson (1990), Hedberg (1990), Starbuck (1990) and Sveiby and Risling (1986) are summarised into six key criteria. These are:
LITERATURE REVIEW

1. Essential features of problem solving and non-standard production;
2. Creativity of the individuals as well as from within the organisation environment;
3. Strong individualism and independence of the individual;
4. Most employees are highly educated professionals;
5. Traditional assets are not central (the critical elements are in the heads of the employees, in networks, customer relations, manuals and service delivery systems); and
6. Strong dependence on employee loyalty and therefore vulnerability to exits.

(Alverson, 1992; p.15 electronic version)

Although this characterisation focuses on the employees and their characteristics rather than on the organisation, it should not be forgotten that employees work in creative teams and networks together with the customer, using the organisation’s service delivery system. Consequently, the employees may be seen as a central pillar in the knowledge activities of the professional service firm. The importance of the individual is emphasised by Cooper and Argyris (1998), who highlight the requirement for employees who can use their own knowledge base, acquire new information, combine and process information to produce and communicate new information and knowledge outputs, and learn continuously from their experience.

Producing and selling knowledge constitutes a consulting firm’s core resource or asset. The firm’s knowledge management system constitutes the basic ‘production technology’ that consultants rely on (Sarvary, 1999). In consulting, the most valuable part of knowledge originates almost entirely from client assignments. Companies in other industries generally acquire their
knowledge through internal experience (such as unique manufacturing processes) or outside sources (such as joint ventures, consultants or patents). Sarvary (1999) emphasises that in consulting, especially management consulting, the input factors of the knowledge production process directly originate from customers or sales, which has important implications for competition in the industry. The size and configuration of a consulting firm (considered by Savary (1999) as a subset of the wider category of ‘professional service firms’) will be directly influenced by the size, dynamic, and configuration of its clients.

Originally, the consulting firm’s proposition is to provide smart people as a resource to solve the client's problem. Maister (1982) states that professional services usually involve a high degree of interaction with the client and a high degree of customisation, which demands that firms attract and retain highly skilled individuals. However, finding smart people from top MBA schools is not an ongoing source of competitive advantage since all consulting firms have access to the same pool. Rather, clients want to benefit from the consulting firms’ broad experience, and more importantly, have access to the knowledge that emerges from this experience (Sarvary, 1999).
For the consulting firm, it is no longer enough to show that it has engagement teams working for hundreds of large organisations in tens of different industries on multiple continents. The firm must show that it is capable of synthesising this experience and bringing the result to the client. In other words, the firm must demonstrate the power of its collective knowledge base. This requires experience (exposure to many real life problems); synthesis (ability to adapt known solutions to new problems); and availability (ability to distribute the firm's knowledge).

(Sarvary 1999, p.98)

The particular capabilities of organisations for creating and sharing knowledge derive from a range of factors, as discussed by Nahapiet and Ghoshal (1998). These include the special facility that organisations have for the creation and transfer of tacit knowledge, the nature of organisations as social communities, and the organising principles by which individual and functional expertise is structured, coordinated and communicated, and through which individuals cooperate.

Hargadon and Sutton (1996) provide a framework for thinking about how consultants and consulting firms become valuable to clients from a knowledge perspective. The consultant is seen as a technology broker, matching solutions and problems experienced from their many assignments in different industries to the current client problem. Through a process called analogy connection, the consultant identifies a problem, recognises the analogy of the problem with a class of other problems, and adapts it as a solution to the current problem.

Sarvary (1999) highlights that the consultant's services can be distinguished by who does the task of analogy connection. On one side of a continuum, generalist strategy consultants tend to do the analogy connection themselves.
and bring highly customised and context specific solutions to the client. On the other side, the functional or specialist consultants (large IT consultants, the former 'Big-6' and niche or benefit consultants) only facilitate the analogy connection by making the set of problems and solutions available to the client's managers, who can then perform the matching process more easily.

It can be been argued anecdotally that consulting firms without a knowledge management system are necessarily very inefficient because their consultants must spend a considerable amount of time replicating their colleagues' work (Sarvary, 1999). In addition, and more importantly, the quality of the firm's services suffers substantially and decisions are based on insights (anecdotes) rather than a thorough understanding of the underlying business situation. The organisation may lose a few clients as a result, however this may start a spiralling problem unique to consulting as Sarvary explains:
LITERATURE REVIEW

... losing clients means losing the capability to learn. Remember, the most important source of information for the [consulting firm] is its clients. Even if the [firm] later implements a good KM system, it might not be able to remedy the quality gap because the system will be fed by fewer clients. If a client base is not large enough, even a good KM system is unable to generate deep understanding. As a result the firm has even less chance to attract new clients and has an even harder time learning. A small initial disadvantage may quickly turn to a long-term disadvantage. Implementing a good KM system faster than the competition has exactly the opposite effects. It leads to higher quality knowledge that attracts more customers, which in turn provides more experience to the firm. Just as disadvantage at the beginning may turn to disaster, a small initial advantage may lead to a sustainable competitive advantage.

(Savary 1999, p. 100)

The importance of knowledge in a professional consulting firm has been discussed above. It has been argued that knowledge and knowledge management within consulting firms is a source of strategic competitive advantage. Indeed, De Geus (1988) states that the ability to learn faster than your competitor may be the only sustainable competitive advantage. Based upon a knowledge perspective, Dawson (2000) proposes three sources of sustainable differentiation for service firms.

- Firstly, a firm can focus on greater specialist knowledge and expertise embedded into products and services.
- Secondly, the firm can focus on deeper and closer client relationships, including better understanding of what generates value to the customer.
- Finally, the firm can aim to achieve a greater knowledge transfer to the client, resulting in improved performance within the client organisation.

Knowledge exchange within communities of practice arguably has implications for all three sources of competitive advantage when integrated into the consulting firm’s overall knowledge management strategy.
2.5.3 KNOWLEDGE EXCHANGE AT CONSULTING FIRMS

Generally, firms use a combination of formal and informal practices and activities to capture and exchange knowledge. Rich and Duchessi (2001) summarise these processes that have been described in case study research. Formal practices include documenting the firm's best practices, developing seminars, and structuring project information into searchable formats. Informal activities include contributing to online discussions and providing advice over the telephone and through email. These activities were summarised by Rich and Duchessi (2001) in the following table:

<table>
<thead>
<tr>
<th>Formal Activities</th>
<th>From Personal Knowledge to Organisational Knowledge</th>
<th>From Organisational Knowledge to Personal Knowledge</th>
<th>From Personal Knowledge to Personal Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Documenting best practices</td>
<td>Reading and using best practices.</td>
<td>Project mentoring</td>
</tr>
<tr>
<td></td>
<td>Delivering seminars</td>
<td>Attending seminars</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Codifying data</td>
<td>Searching databases</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Making telephone calls</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sending questions via electronic mail</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading discussion databases</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Informal Activities</th>
<th>From Personal Knowledge to Organisational Knowledge</th>
<th>From Organisational Knowledge to Personal Knowledge</th>
<th>From Personal Knowledge to Personal Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Participating in discussion databases</td>
<td>Reading and using best practices.</td>
<td>Project mentoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attending seminars</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading discussion databases</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Answering telephone calls</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Responding to electronic mail.</td>
<td></td>
</tr>
</tbody>
</table>

Table 2-5: Typical KM activities in consulting firms (Rich and Duchessi, 2001, p.2)

The case studies reviewed (For example, March and Garvin, 1997; Sensiper, 1998) by Rich and Duchessi (2001) reveal the importance of having consultants contribute non-billable time to KM activities. Their original research, based upon interviews with managers and consultants in consulting firms, noted significant factors affecting knowledge exchange within knowledge management systems. These factors include:
LITERATURE REVIEW

- The nature and volume of the tasks performed by the firm;
- The available staff and their personal knowledge;
- Corporate policies and procedures for collecting, storing and disseminating knowledge;
- Time allocation devoted to organisational knowledge activities; and
- The corporate knowledge management practices.

Goodman’s (1998) research reports on factors that facilitate or inhibit the way people contribute, access or adopt knowledge management systems in distributed consulting firms. He found that most consultants interviewed do not (original researcher emphasis) make contributions at offices of the firm other than the local office. The major reasons cited by respondents to explain why they do not make a contribution included: it takes too much time to share solutions; the organisation does not reward this activity; it’s difficult to know whether solutions would help others; and it’s not clear how and where to make a contribution.

Goodman (1998) also reports that when solving problems, managers and consultants rely more heavily on personal networks than on computer-based systems to obtain information. There is a wide variation in skills in navigating the information environment by consultants and managers. Some rely on personal networks exclusively, whilst some rely on computer-based information tools. Others rely on a combination of both. Hence there are issues of motivation and skill that act as barriers to consultants exchanging knowledge.
The second research question relating to participation in the interpersonal knowledge exchange process focuses upon these issues of consultant motivation and skill, along with the issues of community and social exchange. Through investigating the interpersonal knowledge exchange process used by consultants at consulting firms, and questioning why consultants agree to participate in this process in preference to using the explicit knowledge store, a contribution to the knowledge management literature will be made by this dissertation.

2.6 CHAPTER OVERVIEW

Chapter Two has established the nature of knowledge exchange, as it is currently understood in relation to knowledge exchange within consulting firms. Drawing on established literature and commentary, the research questions were identified and refined in preparation for the data collection phase of the research.

Literature was reviewed in the fields of knowledge and knowledge management, and from the perspective of knowledge exchange theory. Rather than only focus on the explicit dimension of knowledge, the literature was reviewed to increase understanding of how tacit knowledge is exchanged in community and social settings. This socially constructed view of knowledge was applied to the literature of consulting firms in order to understand the nature of the units to be analysed in the research.

This review was used to establish the initial research question,
What is the interpersonal process by which knowledge is exchanged between consultants?

Through the data gathering stage of the research, a second research question emerged. The initial research question was not utilising a large quantity of the gathered data as respondents focused upon why they participate (or do not as the case may be) in the interpersonal knowledge exchange process. As a consequence, the second question was included, and relevant literature reviewed to define this question as,

Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

The method by which these research questions were answered is covered in the following chapter, which discusses the research design and methodological issues related to carrying out the research investigation.
3.1 INTRODUCTION TO THE METHODOLOGY

The previous chapters have described the background to this research and the relationship of the study to existing management literature. This chapter discusses the research design and methodology used in the study to answer the following two research questions:

1. What is the interpersonal process by which knowledge is exchanged between consultants?
2. Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

A top down approach to the research design is presented, starting at the high level decision of choosing qualitative or quantitative research methods, and moving to specific aspects of the research design as the chapter progresses. The chapter describes the design of a qualitative single case study approach used to examine a consulting firm's communities of practice, and its associated knowledge exchange processes. Through carrying out in-depth interviews with sixteen consultants, and utilising content analysis to analyse the data obtained, the methodology designed and described in this chapter enabled the presentation of the findings in later chapters from the data gathered.
3.2 QUALITATIVE METHODOLOGY

In developing the research strategy, the overall goal was to ensure that the research design completely addressed the research questions (Black 1993), and that the data collected was suitable for achieving this aim.

This study was concerned with research to develop a deeper understanding of the interpersonal knowledge exchange processes used by consultants. The emphasis was consequently on exploratory research. Marshall and Rossman (1995) suggest that exploratory and descriptive research, particularly in cases of ‘contemporary’ research where the phenomenon is unfolding at the time of the study, is best suited to qualitative methods. In contrast, quantitative methods are better for testing hypotheses, examining the frequency of social phenomena (van Maanen, 1979), and so on.

Scholars and researchers have debated the relative merit of using quantitative and qualitative inquiry for some time (Patton, 1990). However, to best answer the research question, this study used qualitative methods due to its inductive, descriptive and exploratory nature.

Qualitative research, broadly defined, means ‘any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification’ (Strauss and Corbin, 1990, p. 17).
Bogdan and Biklen (1998) describe qualitative methods as:

... an umbrella term to refer to several research strategies that share certain characteristics. The data collected have been termed, soft, that is, rich in description of people, places and conversations, and not easily handled by statistical procedures. Research questions are not framed by operationalising variables; rather, they are formulated to investigate topics in all their complexity, in context.

(Bogdan and Biklen 1998, p. 2)

McClure and Lopata (1996) also identifies a strong link between exploratory research and qualitative methods:

Qualitative techniques are especially appropriate for use in situations where the research problem and the research setting are not well understood...When it is not clear what questions should be asked or what should be measured, a qualitative approach will be more useful.

(McLure and Lopata 1996, p. 11)

As the most appropriate research paradigm to achieve the aims of this study was determined to be qualitative research, the next step of the research design involved determining the research methodology and data collection strategies.

3.3 RESEARCH DESIGN

The most important aim when determining the research design was to ensure that the method chosen supported the research questions being investigated. The research design is the logical sequence that connects the empirical data produced by research to the study's initial research questions and ultimately to its conclusions (Yin 1994). One of the principal purposes of the design is
to help avoid the situation in which the collected data does not address the initial research questions.

3.3.1 DESIGN OPTIONS

This research studied professional consultants at work in their organisational contexts using qualitative methods. Such qualitative research design in the social sciences typically consists of a survey, experiment or case study (Robson 1993). This section will discuss the logic that was used to choose the most appropriate strategy to achieve the aims of the study.

Surveys collect data from a sample of a population in a standardised form and allow the researcher to carry out statistical inferences on the data (Norusis 1990). This statistical inference, moving from the particular observations of the sample to the wider generalisations of entire populations, is a major reason why surveys are popular with researchers (Oppenheim 1992). However, using surveys allows only standardised data to be collected, regardless of the depth of responses that the recipient wishes to offer. The interactions between consultants within a community of practice are so diverse that it was considered necessary to make enquiries of individuals directly. A standardised and codified form of data collection would not offer the rich and in-depth data required to answer the research questions. This could only be achieved by using either an experiment or case study approach. It is for these reason that the use of a survey was rejected.

Experiments are undertaken to measure the effects of manipulating one variable upon another variable and for finding causal relationships between
variables (Robson 1993). To carry out an experiment, the researcher selects samples of individuals from known populations and allocates them to different experimental conditions. Controlling and changing one or more variables can allow the researcher to measure the effects on the sample. It was thought that an experiment to investigate the nature of knowledge exchange could not be achieved with the resources and time frame available.

Consultants are busy people required to deliver specific deliverables to their clients and to their firm, and these deliverables cannot be jeopardised by a researcher conducting experiments that may result in sub-optimal consultant output. An approach was required where individuals could explain their diverse experiences within a community of practice as a member of a consulting firm.

3.3.2 CASE STUDY STRATEGY

The case study strategy stood out as being particularly appropriate for this research. The tasks and processes performed by consultants in the exchange of knowledge are principally linked to a particular consulting project or problem, and will occur in the context of the relevant communities of practice within the single consulting company. Therefore, it is possible to concentrate on one particular consultant's experiences and use this to link all of the consultants' experiences together. The consulting company and its communities of practice act as the focal point for the consulting professionals and the tasks they perform. Case study research as presented by Yin (1994) is an accepted research method (Klein and Myers 1998).
3.3.3 CASE STUDY

Stake (1995) recommended that the selection of the case to be researched offers the opportunity to maximise what can be learned, knowing that time is limited. Therefore the cases that are selected should be with easy to access and willing subjects. Yin (1994) provides guidance in the area of case study selection, as well as offering comprehensive suggestions for a general approach to designing case studies.

Yin (1994) specifically discusses exploratory, explanatory, and descriptive case studies. Explanatory cases are suitable for carrying out causal studies, whilst descriptive cases require that the investigator begin with a descriptive theory. Exploratory cases are used to find out what is happening, to seek new insights, to ask questions, and to assess phenomena in a new light (Robson, 1993). This is seen as the most purely hypothesis- or theory-building form of case study. An exploratory study normally focuses on current events and concerns and seeks to answer questions of how and why (Robson, 1993). In exploratory case studies, fieldwork, and data collection may be undertaken prior to definition of the research questions and hypotheses. However, the framework of the study must be created ahead of time. Pilot projects may be utilised and survey questions may be dropped or added based on the outcome of the pilot study.

Case studies can be either single-case or multiple-case designs. Single-case designs are used to confirm or challenge a theory, or to represent a unique or extreme case (Yin, 1994). Yin (1994) also states that single-case studies are ideal for revelatory cases where an observer may have access to a
phenomenon that was previously inaccessible. Single-case designs require careful investigation to avoid misrepresentation and to maximise the investigator's access to the evidence. Multiple-case study designs follow replication logic as opposed to a sampling logic as a sample selection is improper in a case study (Yin, 1994).

In carrying out the case study, Yin (1994) suggests that there are several issues to consider. A key aim for the researcher is to maintain a balance between flexibility and selectivity. Flexibility allows issues to be explored as they develop in the data collection phase. This could mean that more time is spent on a case study than was originally envisaged at the research design stage. Selectivity is concerned with deciding at the research design stage which features will be covered. A strong research design may, nevertheless, lead to important features being ignored because they are outside the research design or data may be misinterpreted due to a lack of understanding at the research design stage.

A frequent criticism of case study methodology is that its dependence on a single case renders it incapable of providing a generalisable conclusion. Tellis (1997) summarises this argument as follows:

Yin (1994) presented ... [the] view that considered case methodology ‘microscopic’ because it ‘lacked a sufficient number’ of cases. Hamel, et al (1993) and Yin (1994) forcefully argued that the relative size of the sample whether 2, 10, or 100 cases are used, does not transform a multiple case into a macroscopic study.

(Tellis 1997, p.3)

Yin (1994) stated that general applicability results from the set of methodological qualities of the case, and the rigour with which the case is
constructed. He detailed the procedures that would satisfy the required methodological rigour. Case study can be seen to satisfy the three tenets of the qualitative method: describing, understanding, and explaining. The goal of the study should establish the parameters, and then should be applied to all research. In this way, even a single case can be considered acceptable, provided it has met the established objective.

Robson (1993) suggests that the research design of case studies has traditionally been very loose, the design often only emerging after a prolonged involvement in the field collecting data. Robson favours Yin’s (1994) approach in suggesting that a case study research design should be drawn up explicitly at the commencement of the research. The research design can be tailored during the research to take account of any changing circumstances that the fieldwork throws up.

An important issue for a case study researcher is the amount of initial structure used to guide the research (Miles and Huberman 1994). An effective research method allows learning or theory to emerge from the data, so theory is truly induced from the data collected. This view, argued by proponents of grounded theory (for example, Strauss and Corbin 1990), implies little initial structure. By contrast, an efficient research method maximises the benefits of scarce resources (such as time, money, research assistants and access to cases), reducing potentially excessive time in the field collecting vast amounts of data. This implies a tighter initial structure.
Yin (1994) clearly identified five components of research design that are important for case studies. These five components are:

- A study's questions
- Its propositions, if any
- Its unit(s) of analysis
- The logic linking the data to the propositions
- The criteria for interpreting the findings

(Yin, 1994, p. 20).

Each of these components will be explained in relation to this study.

3.3.3.1 The Research Questions

This study set out to answer the following two questions:

What is the interpersonal process by which knowledge is exchanged between consultants?

Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

3.3.3.2 The Research Propositions

The study's propositions sometimes derive from the research questions, and are helpful in focusing the study's goals. Not all studies need to have propositions. An exploratory study is unlikely to have propositions. Instead, it has a stated purpose or criteria on which the success will be judged.

This study had the stated purpose of exploring the nature of the interpersonal knowledge exchange process in consulting firms. It aimed to integrate theory and practice through a rigorous research process in order to fully address the
research questions. The research was considered successful if the data collected allowed the findings to explain the complex nature of the interpersonal knowledge exchange process in a consulting community of practice.

3.3.3.3 The Unit of Analysis

The unit of analysis is a critical factor in the case study with each case study providing many potential units of analysis. The definition of the case and the unit of analysis should be related to the way that the initial research questions and propositions have been defined. McClintock, Brannon and Maynard-Moody (1979) explain that units of analysis may differ on dimensions of scope of activities, duration, number of participants, and so on. However, they will be tied together by the fact that they have identifiable boundaries, they are within the same case, and that a common set of questions or codes is applied to them.

In determining what constitutes a unit of analysis, McClintock, Brannon and Maynard-Moody (1979) go on to explain that although units of analysis are typically defined as individuals, groups or organisations, they could almost be any activity, process, feature or dimension of organisational behaviour. Hussey and Hussey (1997) argue that a case study approach implies a single unit of analysis, such as an event, a worker, or an organisation. The case study involves gathering detailed information about the unit of analysis with a view to obtaining in-depth knowledge over time.
The unit of analysis in this research project was defined as the consulting community of practice, focusing upon the interpersonal knowledge exchange process used by the members of the community. As such, this was a single case study gathering data from individual consultants in order to describe the interpersonal knowledge exchange process used by the community of practice within the firm.

An alternative approach could have defined the same study as a multiple-case design, with each individual being the unit of analysis, and the number of cases being equal to the number of consultants interviewed (Hussey and Hussey, 1997). Using this approach, the focus shifts from studying the overall interpersonal knowledge exchange process within the firm as a single case study, to a focus upon the processes used by individuals to transfer their personal knowledge. Rather than focusing upon the interaction of consultants upon a common and shared exchange process, the interviews shift in emphasis to focusing on the isolated individual experiences of the consultants when exchanging knowledge in the firm.

Hence, in order to best address the research question relating to the shared consulting exchange process, a single case study approach was chosen in favour of a multiple case study design.

3.3.3.4 The Logic Linking the Data to the Aims of the Study
The knowledge experiences of consultants inside a consulting firm are diverse and complex. In order to understand the nature of these complex experiences, and to develop and report an understanding of the knowledge
management processes within the consulting firm, rich sources of data from the actors involved in the knowledge exchanges are required. Rich data in this context refers to data filled with words that reveal the respondents’ perspectives, details and examples whilst also communicating their personal interests and attention to subjects (Bogdan and Biklen, 1998). Consequently, to achieve the aims of the research, data was collected from consultants, and from secondary sources, to explain the process by which consultants exchange knowledge within a consulting firm.

3.3.3.5 The Criteria for Interpreting the Findings
The findings were analysed and interpreted using content analysis after transcription of the interviews (For a detailed explanation of this process, see Section 3.6 Data Analysis beginning on page 114). The findings were also compared with, and interpreted against the backdrop of past research, theoretical literature (see Chapter Two), and the researcher’s own experiences.

3.4 DATA COLLECTION METHOD

3.4.1 DATA COLLECTION OPTIONS CONSIDERED
Having chosen to undertake a qualitative research project utilising case study research methodology, several primary data collection processes were considered. Four ‘fundamental methods’ of qualitative research have been identified by Marshall and Rossman (1995) and Yin (1994) as participant observation, direct (non-participant) observation, document analysis and
interviews. Each of these was evaluated against the fundamental objective of answering the research questions.

Participant observation within a setting is a longitudinal approach requiring extensive time in observation. The aim is to provide the means of obtaining a detailed understanding of the values, motives and practices over time of those being observed (Hussey and Hussey, 1997). This method was not appropriate in this study as the primary data collection method because participation and observation of the interpersonal knowledge exchange process would not necessarily yield the rich, hidden data generated during the consultant/researcher discussion that the study seeks to make explicit. The nature of the consultant’s role working with clients away from their company’s work-site, and participating in the interpersonal knowledge exchange process as opportunities arise, would require the researcher to stay with the consultant for extended times. Apart from the extensive resources required to carry out participant observation in these circumstances, it is improbable that a consulting firm would have allowed a researcher to interact directly with a consultant on a client site due to confidentiality and customer perception issues.

Direct, or non-participant observation of the organisation is both inefficient and potentially misleading for the purposes of this study. It involves observing and recording what people do in terms of activities or behaviours without the direct participation of the researcher (Hussey and Hussey, 1997). The aim of this study was not to gather an ‘outsider’s’ view of consultant knowledge exchange (the outsider here being the observer). Rather, the
research aimed to construct an insider’s view of how knowledge is exchanged using interpersonal processes. The tacit knowledge, motives and beliefs of the consultant would most probably remain unobserved using a direct observation method, since they reside in the minds of the consultants. Therefore this method of data collection was not chosen as the primary data collection method.

Document analysis and review was used to support the views of consultants and managers where possible, but did not seem to be able to represent the richness needed to create descriptions of an interpersonal knowledge exchange process. Since one of the aims for this study was to explore the tacit, undocumented aspects of interpersonal knowledge exchange between consultants, the search for a description and explanation of this process within documented sources was unlikely to be found.

3.4.2 PRIMARY DATA COLLECTION METHOD - IN-DEPTH INTERVIEW

The method for primary data collection for this study was in-depth interviewing.

The exploration of knowledge exchange in consulting firms is essentially an endeavour of making the tacit explicit. Consultants know how to transfer knowledge - they do it every day. This research aimed to uncover the routines and processes in-depth in order to gain better understanding of this complex process. The respondents were encouraged to explain thoroughly examples of interpersonal knowledge exchange they had experienced during their consulting careers.
Different types of interviews offer different benefits (Hussey and Hussey, 1997). Structured interviews allow between-case comparisons but are not responsive to changes in researchers’ understanding; researchers cannot add new questions, pursue unexpected comments or seek explanatory information. Unstructured interviews may be overly adaptive and opportunistic: researchers’ initial plans may be constantly revised and adjusted with a constant threat to construct validity. Semi-structured interviews offer a mixture of both, with some set questions to structure the interview as well as allowing flexibility to explore new issues or surprising responses.

There are several problems associated with conducting interviews (Hussey and Hussey, 1997). Importantly, they are resource intensive, costly and time consuming (Hussey and Hussey, 1997). In addition, the physical presence of the researcher means that they pose a greater intervention than do questionnaires, which may impact on the data collected. However, when compared to mail and telephone surveys, personal in-depth interviews had many advantages in achieving the aims of this study. For instance, follow up questions were able to be asked in order to focus the attention of the respondent on the subtle and ambiguous data that may possibly be lost in a questionnaire. Hence complex and important issues were focused on, rather than sticking to a pre-prepared script (Hussey and Hussey, 1997).

3.4.3 SECONDARY DATA SOURCES

In this study, secondary sources supplemented the primary interview data. Interviews were expected to produce the largest, richest and most important
data set. However organisation procedures, documentation of systems and chat room transcripts were used to build a better understanding of knowledge management practices within this consulting firm.

It is important to keep in mind that not all sources are relevant for all case studies (Yin, 1994) and the researcher should be capable of dealing with all of them, should it be necessary, but each case will present different opportunities for data collection. Hence, in this study, the opportunity to observe, participate or review documents was used in conjunction with interviews in order to triangulate the findings and to increase the validity of the research.

3.4.4 INTERVIEW CONSIDERATIONS

Interviews are a powerful source of rich data if carried out effectively and efficiently. Otherwise they can produce useless and worthless data. The interview has to be used with a degree of dexterity and care, which not all researchers can achieve or be comfortable with (Douglas 1985). Bouchard (1976) suggests that interviews are a special form of social interaction that depend heavily on mutual trust and the goodwill of respondents. There is an element of personal interaction between the researcher and the respondent not present in other forms of data collection.

The format of questions asked in interviews is considered by Bouchard (1976) and he proposes that questions can be categorised in four ways; totally structured, structured questions with open responses, open questions with structured answers, and totally unstructured. The categories are used
depending on the type and depth of data being collected. It is also possible to use several categories within the same interview and this is the approach that was used for this research project.

The interviews carried out in this study were ‘focused’ (Bouchard 1976), moving from general to specific topics. The general topics had previously been identified by the researcher prior to the main interviews taking place through a literature review and general discussions with practising consultants. Follow-up interviews were carried out where considered necessary.

In order to guide the interviewer, an interview guide was used (Yin, 1994). Using Patton's (1990) recommendation, the interview guide or ‘schedule’ included a list of questions and general topics that the researcher wanted to explore during each interview (See Appendix B and Appendix C). This guide was prepared to ensure that essentially similar questions were asked at each of the interviews and that similar information was obtained from each person. This left the interviewer free to probe and explore the respondent's response within these predetermined inquiry areas.

To allow the strengths of the qualitative methodology to emerge and evolve as more interviews were carried out, Lofland and Lofland's (1984) process of modifying the interview guides over time was used to focus attention on areas of particular importance, and/or to exclude questions that the researcher had found to be unproductive for the goals of the research.
It is important to note that the interview guide functioned as a starting point for the interviews with further questions often posed to encourage the respondents to go deeper or to clarify their responses. This was attempted when 'simple,' 'unclear' and/or 'standard' answers were received. In some cases the wording of questions was slightly changed if a question was not understood, or if it seemed natural to use words or formulations that were put forward by the respondent. Some of the questions that seem general in the guide were also asked with a more direct focus in light of the respondents' own activities and previous answers.

A typical interview began with questions about the respondent’s role as a consultant, views on knowledge and knowledge exchange in the company, and a discussion about communities of practice within the company. This information was then used to identify points that the respondent suggested were important or different from other considerations already identified using unstructured questions with open responses. The final stage involved very specific questioning to cover points that the researcher considered important but which had not yet been discussed.

By asking the participant to focus specifically upon a time that they had chosen to participate, or not participate, in a knowledge management exchange, and using this example as an in-depth exploration as to the nature of the interpersonal knowledge exchange process, a rich source of data was gathered from many respondents. This approach to interviews allowed the respondent freedom of expression, yet still produced data that the researcher considered essential.
METHODOLOGY

All interviews were tape recorded and transcribed at a later date. There has been some debate as to the appropriateness of this recording methodology, as Lincoln and Guba ‘do not recommend recording except for unusual reasons’ (1985, p. 241). However, an experiment carried out by Roberts and Renzaglia (1965) suggests that the respondent will elicit the same responses if recorded or not recorded. The overriding consideration for this research was to obtain high quality and rich data to support the research aims and to answer the research question. In one hour, the volume of information given by a respondent is impossible to record from memory, or by written methods. As a result, all interviews were recorded, with the express consent of the participants (see Appendix A on page 299).

All interviews were carried out and transcribed by the researcher, yielding a common understanding and interpretation of respondent responses and meaning.

Three test interviews were carried out in order to determine whether any modifications were required to the initial interview guide (see Appendix B on page 302 for a copy of the initial interview guide). These test interviews led to changes in the guide (see Appendix C on page 304 for a copy of the modified interview guide). Interviewing started in February 2001 and was completed in August 2001. There was continuous transcription and discussion regarding results, with transcripts being fed back to participants to confirm and validate their responses. The participants were interviewed in random order since the consultants involved had heavy client and organisational commitment. Availability of the respondent was the critical determinant.
3.5 DESCRIPTION OF RESEARCH IMPLEMENTATION

3.5.1 DATA COLLECTION SITES

The case study is based upon data collected from the fictionalised firm ABC Consulting. ABC Consulting is an Australian professional consulting firm, specialising in IT strategy and implementation consulting.

ABC Consulting has approximately 700 full time employees working from Australian base offices in Melbourne, Sydney, Brisbane, Canberra and Perth, and from fully owned subsidiaries in London and Singapore. The research was carried out predominantly at the Melbourne office, although email and telephone interviews were utilised to talk to key staff in other geographic sites. The Melbourne office had 161 full time consultants, working in blue-chip clients in the telecommunications, finance, utility, government and industry sectors. These consultants were typically tertiary qualified with several years of previous industry experience. ABC Consulting undertakes a rigorous employee selection process, involving four interview stages, in an attempt to identify talented high achievers that have the ability to operate in demanding client situations. This selection process also seeks to identify candidates with a strong fit to the collegiate culture that exists within the company, whereby consultants have well developed interpersonal skills that allow them to become a part of the consulting community, and to provide assistance to, and receive support from, their fellow consultants.
3.5.2 SAMPLE SIZE

Glaser and Strauss (1967) argue that the number of cases obtained should be such that data saturation is reached. This means continuing to carry out further interviews until no new categories of data are found. Prior to the beginning of data collection, the researcher did not predetermine the number of interviews. Interviews were continued until no significant new data was discovered, and all latter research interviews were found to be confirming the data found in previous interviews. The total number of interviews carried out in this research project was sixteen (16).

A summary table showing all interviews carried out, including details of duration and timing, is presented in Appendix H on page 357.

Apart from one, all interviews took place at the respondent’s work site or base office. The shortest interview lasted for about one hour, while the longest progressed for three and a half hours. The mean interview time was approximately one and a half hours and seemed to vary mainly as a result of characteristics of the individual respondent. Some talked continuously and often diverged with stories or tangents, or otherwise spent much time answering the questions. Other respondents only had a limited amount of time for the interview due to client or work commitments, or gave quick and/or concise answers.

3.5.3 SAMPLE SELECTION

The total potential sample of ABC consultants available for interview in the Melbourne office was identified though manipulation of the internal company
phone listing in a spreadsheet software program (MS Excel) to exclude interstate, international and non-consulting staff such as administration and account management support employees. The total number of available respondents totalled 161. To each of these consultants was sent an initial email utilising the company email system, which explained the research project and requested their assistance in data gathering through volunteering their time to be interviewed. Of the 161 emails sent, 13 immediate responses were received within a one-week timeframe. These 13 consultants were sent further information on the research process and provided with an informed consent letter for completion. Of the 13 consultants that initially responded, 11 were interviewed [11 of 161 = 6.8%] and 2 declined due to work pressures unrelated to the research process.

Once the 11 respondents were identified, an email was sent out to the ABC Consulting Knowledge Management Centre of Excellence email distribution list of 12 consultants to identify interstate consultants who may wish to participate but who had been excluded due to their location remote from Melbourne. The Knowledge Management Centre of Excellence was chosen as a subset of the entire organisation’s interstate capability since it was envisaged that this group would yield the richest data on the knowledge exchange process within the company. From this email, 2 further participants volunteered and subsequently participated in the research study remotely via telephone interviews and email [2 of 12 = 16.6%].

This sample selection process described thus far has an underlying possibility of self-selection, since it can be argued that consultants who know the
researcher well may share similar knowledge management constructs and ideas so that they may be more inclined to respond positively to a request for assistance. To counter this to some extent, a final request for assistance was undertaken by asking previously interviewed consultants to identify other consultants who may be available for interviews.

More specifically, as the study progressed, and the research data was solidifying into concepts and preliminary findings, further consultants were required to verify the findings to date. To achieve this, the 11 consultants that had previously volunteered and been interviewed from the Melbourne office were directly emailed or telephoned and asked to identify other consultants with an interest or recognised specialisation in knowledge management that may be able to assist with the research study. It was recognised that some consultants may have missed the opportunity to participate as they may not have yet read the initial email, since most consultants worked away from the office and required internet access for remote email login. It was also recognised that some consultants who may be apprehensive about participating may be more interested if they were personally contacted to explain the research process and directly asked for assistance. Through this process, 5 further consultants were identified, of whom 3 agreed to participate in the study.

Through this sample selection process, sixteen consultants were ultimately interviewed [16 of 178 consultants contacted = 9%], their data included for consideration in the data analysis and incorporated into the findings of the thesis.
3.6 DATA ANALYSIS

Yin (1994) encouraged researchers to make every effort to produce an analysis of the highest quality. In order to accomplish this, he presented four principles that should attract the researcher’s attention:

1. Show that the analysis relied on all the relevant evidence
2. Include all major rival interpretations in the analysis
3. Address the most significant aspect of the case study
4. Use the researcher’s prior, expert knowledge to further the analysis

The method chosen to analyse the interview transcript data was content analysis.

3.6.1 CONTENT ANALYSIS

Content analysis, in its simplest form, is the extraction and categorisation of information from text where each interview is analysed and broken down into discrete categories. Each section contains an abstract element and is assigned a code in the form of a keyword that links the analysed portion of text to the abstract element being investigated. The analysis of these categories will then, it is argued, give some indication as to what the text means.

Krippendorf (1980) emphasises that these inferences can only be drawn if the relationships are maintained between the content of texts or speeches and their institutional, societal or cultural contexts. In content analysis, the term 'text' means any form of communication whether oral, gestural or written.
This is because content analysis is more readily performed on text and necessitates oral and gestural communication being transcribed into a textual format.

In this study, the categories selected to analyse the interview content for each of the research questions are discussed fully in Chapter 4 and Chapter 5. The analysis of content for all data was summarised in table form for both the interpersonal knowledge exchange process, and the preference for participation by consultants in this process. Using colour coding, each of these categories was first identified in each interview transcript, and then copied into the relevant section of the table. The tables identified the category attributed to the text, the code name of the respondent, and the actual transcribed text. This process was carried out independently for each of the questions.

Using this format allowed data manipulation using Microsoft Excel to group data by category, or by respondent. A sample of the table used is shown below in Table 3-1:

<table>
<thead>
<tr>
<th>Category</th>
<th>Who</th>
<th>Quote from evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 3-1: Sample of content analysis capture table*
A sample fully coded interview transcript relating to the first research question for the interpersonal knowledge exchange process is shown in Appendix D (see page 305), followed in Appendix E (see page 325) by the summary table relating to that coding process. The same interview transcript coded for the question of why consultants prefer to participate in the interpersonal knowledge exchange process is shown in Appendix F (see page 331), followed in Appendix G (see page 351) by the summary table relating to this coding process.

3.7 ROLE OF THE RESEARCHER

The role of the researcher in carrying out a qualitative research investigation is that of a detective looking for trends and patterns that occur across the various groups or within individuals (Krueger, 1994). In the analysis process, it covers a continuum beginning with the definition of the research question and research design, and moving to a process with assembly of raw data on one extreme, and interpretive comment on the other.

The analysis process requires consideration of words, tone, context, non-verbals, internal consistency, frequency, extensiveness, intensity, specificity of responses and big ideas (Krueger, 1994). Such demands on the researcher are not without dangers of bias and conflict. Since all researchers bring some kind of framework to the research process, it would be unrealistic to argue that researchers enter the field devoid of a framework or ideas about the important concepts in their area of interest (Krueger, 1994).
In order to avoid reinventing the wheel, researchers typically carry out a review of the relevant literature. This process further colours their views of the research area as they are exposed to a range of ideas, concepts and theories. In addition, all researchers interpret the world through some kind of conceptual lens that determines, among other things, which data are noticed, collected and therefore included in analysis. An important aspect of rigorous research is making such frameworks explicit rather than allowing them to remain implicit: this is achieved by stating what is brought into the research process by the researcher.

This study is no exception and, in consequence, this section makes clear the researcher’s orientation to the reader. The researcher’s experience in the creation and exchange of knowledge as a practising professional consultant has led to a view of the world that explains knowledge exchange as a socially constructed process carried out in communities. This conclusion is partly the result of the researcher’s professional background, education, exposure to the literature on the topic, and the accumulated experiences that have compelled the researcher to this dissertation topic.

The researcher has had considerable experience in consulting companies, having worked for the management consulting company studied in this research project for over three years. It could be argued that this experience within the research site is a considerable disadvantage since objectivity is lost and interacting with the individuals as a participant may affect the research (Hussey and Hussey, 1997). However, in this research investigation, experience was seen to be a considerable advantage since the researcher
was ‘better able to understand and interpret the phenomenon being studied, and participation in events may [have] led participants to reveal matters that would otherwise be left unsaid’ (Hussey and Hussey, 1997, p.68). To investigate the often invisible interpersonal exchange of knowledge within consulting communities would be extremely difficult to an outsider. The rapport developed in the interviews was possible because the respondents regarded the researcher as an equal, and one with whom they could freely discuss concepts that to an outsider may appear strange or foreign. Being seen to belong, and speaking the same professional language as the community with whom one interacts, is important when collecting research data (Bulmer, 1988; Crompton and Jones, 1988).

As such, it is not the intention of the researcher to pretend to be independent, or objective, but rather to rigorously analyse and interpret the data gathered through the reality constructed by practising consultants (Hussey and Hussey, 1997; Crompton and Jones, 1988). It is through rigour and strong research design that high standards of research were maintained (Yin, 1994).

### 3.8 Standards of Research

As in all research, consideration must be given to construct validity, internal validity, external validity, and reliability (Yin, 1994). Lincoln and Guba (1985) use the terms credibility, transferability, dependability and confirmability to explain similar attributes of the research, highlighting that rigour comparable to quantitative research is often maintained through imposing these standards
METHODOLOGY

on qualitative research. This section deals with each aspect of the standards of research in turn.

3.8.1 CONSTRUCT VALIDITY (CREDIBILITY)

Construct validity refers to the degree to which inferences can legitimately be made from the operationalisations in one's study to the theoretical constructs on which those operationalisations were based (Trochim, 2001). In this study, a variety of techniques were employed to ensure credibility of data and data analysis. The researcher maintained credibility through on-going dialogue with participants, numerous observations, peer debriefing and by the use of feedback loops in relation to the emerging findings. Data and their interpretations were constantly scrutinised by the researcher, and the findings were tested in subsequent interviews with consultants from other organisations, as well as with specialist knowledge management consultants.

In order to establish credibility, the researcher must be able to show rigour in representing multiple constructions adequately. In short, reconstructions should be arrived at via inquiry that is credible to the constructors of the original multiple realities (Lincoln, and Guba, 1985). Yin (1994) suggested using multiple sources of evidence as the way to ensure construct validity, and this was done in this study at all available opportunities.

3.8.2 INTERNAL VALIDITY

Internal validity is the approximate truth about inferences regarding cause-effect or causal relationships. Thus, internal validity is only relevant in studies
that try to establish a causal relationship (Trochim, 2001). It is not relevant in most observational or descriptive studies, for instance. No such causal relationship was being sought in this research, as the research was exploratory in nature, seeking to describe and explain the nature of interpersonal knowledge exchange. Hence internal validity was not considered in this research investigation.

3.8.3 EXTERNAL VALIDITY (TRANSFERABILITY)

External validity is the degree to which the conclusions in one’s study would hold for other persons in other places and at other times (Trochim, 2001). It is measured by the degree of transferability of the research. Lincoln and Guba (1985) posit that the burden of proof of transferability lies both with the original investigators as well as with the person seeking to generalise the findings of the research. External validity is more difficult to attain in a single-case study. Yin (1994) asserted that external validity could be achieved from theoretical relationships, and from these generalisations could be made. It is the development of a formal case study protocol that provides the reliability that is required of all research.

In line with recommendations by Lincoln and Guba (1985), transferability for this study was established through use of multiple data sources and rich descriptions, which took into account time, and context of the inquiry. Documents relating to the knowledge management strategy of the company, minutes of meetings, email transcripts and other knowledge related company documentation were obtained and examined to confirm the findings obtained from the interview data. In addition, the knowledge management Centre of
Excellence at ABC was consulted and the findings discussed in relation to the exchange of knowledge in the company. Email distribution lists containing the email addresses of all consultants interested in knowledge management issues at the company were also used to request clarification or confirmation of data.

3.8.4 RELIABILITY (DEPENDABILITY)

In its everyday sense, reliability is the ‘consistency’ or ‘repeatability’ of your measures (Trochim, 2001). It is dependent upon stability, consistency and predicability (Lincoln, and Guba, 1985). Reliability is a part of a larger set of factors that are naturally associated with change, and the researcher seeks a means for taking into account both factors of instability and factors of phenomenal or design induced change.

Dependability in interpretive research is often accomplished using an audit trail (Lincoln, and Guba, 1985) in which the researcher maintains a log containing personal notes, which allow for reflection upon what happens in relationship to personal values or perceptions. The logbook for this study was in the form of a hardbound notebook that was used to record all observations, interactions, thoughts and discussions that were carried out through the research project. It also recorded the source of non-interview data and its location so that it could be found again if required. Reliability was further enhanced in this study as only one researcher carried out, transcribed and analysed all of the interviews. The interviews do not differ to any considerable extent with regard to length, probing and focus.
3.8.5 OBJECTIVITY AND CONFIRMABILITY

Objectivity exists when appropriate methods are employed that maintain an adequate distance between the observer and the observed (Lincoln and Guba, 1985). In this research project, the issue of the researcher’s involvement in the professional consulting firm under study is discussed in Section 3.7 (see page 116). Notwithstanding this, Scriven (1971) posits that what a number of individuals experience is objective and what a single individual experiences is subjective. In this study, confirmability was maintained by providing raw data that could be traced to original sources and by describing how the data is to be interpreted and placed into categories (Lincoln and Guba, 1985) as described in Section 3.6 and further discussed in both Chapter Four and Chapter Five.

3.9 ETHICAL CONSIDERATIONS

In carrying out any form of research, formal consideration must be given to ethical considerations that will, or may potentially, arise throughout the investigation. Unlike medical experiments or animal testing, the ethical considerations may not be initially obvious unless the researcher makes a formal evaluation.

In this research investigation, the formal ethical evaluation process was initiated via the university’s ethical approval form, which involved filling out a comprehensive survey to uncover any issues that may arise. Having identified any ethical issues, the process ensured that mitigating or elimination strategies were instigated.
Meeting generally accepted academic research requirements, the informed consent of each respondent was gained via a formal informed consent letter. This letter contained a description of the project being carried out, detailed what participation in the project involved, and explicitly nominated the audience for which the research findings would be available (see Appendix A on page 299 for a copy of the informed consent letter used). It was only after receiving a signed written response to the invitation to participate did any further activity progress. Prior to each interview beginning, the requirement for tape recording the interview was also explained, and transcription methods were noted. At the beginning of each interview, prior to focusing upon the research topic, each respondent was asked again if they would be happy to participate. No respondent declined to continue.

To meet privacy and confidentiality requirements for the research, all participants and the data created from their involvement were treated with respect, and no individual or organisation is identified in the dissertation. The tape recordings of the interviews were available only to the researcher and directly involved academic staff, and remain securely stored until they can be erased.

No participant was coerced or encouraged to continue their involvement. Each was free to withdraw at any time. Although no respondent chose to withdraw, had they done so then all data collected up until that point would have been destroyed. Participants also had the opportunity to edit their transcripts of the interviews before any textual analysis was done, and once analysis was complete, comments and feedback were invited. In addition, the
participants were invited to read the final draft of the dissertation to provide the opportunity to remove any content that provided personal ethical dilemmas. This offer was accepted by ten of the sixteen respondents to the study.

3.10 CHAPTER OVERVIEW

This chapter provided a detailed description of the research design by which the two research questions were examined. The research was qualitative in nature and was carried out using a single case study design with the unit of analysis defined as the consulting community of practice in the consulting firm, with specific attention on the interpersonal knowledge exchange processes carried out.

Data was collected using sixteen semi-structured in-depth interviews as the primary data collection method. These interviews were recorded on audiotape and then transcribed. The transcripts were then analysed using content analysis techniques.

The role of the researcher, the methods used to ensure high quality research standards, and the role of the respondents in the research project were each described in this chapter. An assessment of the research method as it was applied is provided in the concluding chapter (Chapter Six) in section 6.6 on page 262.
The research design decision tree summarising decisions made amongst available research alternatives is shown in the following Figure 3-1.

![Research Design Decision Tree]

*Figure 3-1: Research design decision tree*

The following chapters will establish the findings and analysis obtained from the data resulting from implementation of the research design described in this chapter. The findings of this research have been separated into two chapters addressing each of the research questions in turn. Chapter Four addresses the findings in relation to the process by which interpersonal knowledge is exchanged between consultants. Chapter Five addresses the
findings in relation to why consultants prefer to participate in the interpersonal knowledge exchange process. The chapters are interrelated, essentially answering the how and why components of the exploratory case study.
CHAPTER 4 - THE INTERPERSONAL KNOWLEDGE EXCHANGE PROCESS

4.1 INTRODUCTION TO THE INTERPERSONAL KNOWLEDGE EXCHANGE PROCESS

This chapter addresses the research question:

What is the interpersonal process by which knowledge is exchanged between consultants?

To answer this question, the chapter begins with a discussion of the enhancement to Dinur and Inkpen's (1996) knowledge transfer model (see next section 4.2) and introduces the concept of payload knowledge used to focus respondents on similar knowledge exchange types. The chapter then develops and describes the interpersonal knowledge exchange process used by consultants (section 4.3) describing each individual stage of the eight-stage process in detail. The chapter concludes by highlighting the artistic and non-predictable nature of the interpersonal knowledge exchange process, which has proven to be effective for consultants in sourcing, implementing and internalising payload knowledge to solve client problems.

4.2 EXTENDING THE ORIGINAL MODEL

In order to answer the research question, content analysis was utilised to analyse the data obtained from the interviews carried out (see Section 3.6 on
Initially an attempt was made to classify and code this data using the four stages of knowledge transfer proposed by Dinur and Inkpen (1996) (see Section 2.3.2 on page 42). However, these stages of initiation, adaptation, translation and implementation required modification and expansion to fully capture the perceptions and experiences of the consultants.

It became apparent that the Dinur and Inkpen model of exchange begins at a point considered by many consultants to be half way through the process. By assuming a *push perspective* on knowledge transfer (Zack, 1999b), this framework sees the knowledge exchange process as initiated by the unit with the knowledge to share. The recipient is conceptualised as a willing actor waiting for this knowledge to be passed over for use.

The respondents informing this study objected to this push perspective. Instead, they argued that in the majority of cases, knowledge exchange in the consulting environment is characterised by a *pull model* of knowledge exchange (Zack, 1999b).

No. Knowledge does not get pushed out that often here. Consultants don’t wait around for knowledge to fall into their laps. Consultants always pull the knowledge they need from where they think they can get it. Sometimes there might be some relevant knowledge sent out from time to time that I might need later on. But this is rare. Very rare. If I want something, I go out and find it. And this is the case everywhere at ABC.

Keith

Using this perspective, knowledge is viewed as being *pulled* from the source by the need for knowledge that arises from the consultant’s specific work context.
If I'm on site, and something comes up, then I will go find the context specific stuff I need from wherever that is and grab it. It's no good getting generic stuff that does me no good. I draw down the stuff that is immediately relevant to me, my client and to the situation I am faced with.

Owen

The data from all interviews indicated that consulting knowledge exchange, whether it be tacit or explicit, is predominantly pull by nature. The typical example cited was when working with a client; a specific problem arises where the consultant requires knowledge to solve a problem. The goal of the consultant is to maximise the value added to the client organisation by solving this problem quickly and effectively.

Clients pay the high daily rate for us to end their pain quickly. They want someone with knowledge, or someone who can get the knowledge quickly, to help them solve their problems.

Keith

Most respondents, when conceptualising an example of knowledge exchange, began their narrative with 'at the point the need for knowledge arose', as opposed to the point at which the knowledge was to be transferred from the source to the recipient, as suggested by Dinur and Inkpen (1996).

The experiences described by the respondents identify a limitation to this approach wherein the knowledge exchange within the consulting community appears to involve a stage before the initiation of the knowledge exchange. According to respondents, the process begins with the recognition of a need, which leads to initiating the knowledge exchange request. However, most communication-based models begin with a message sender or transmitter,
who then passes the message to a receiver through a linear communication channel (Rogers, 1994).

Dinur and Inkpen’s (1996) model also appeared to require enhancement to account for the community aspect of knowledge exchange that the literature on communities of practice identifies as essential in the interpersonal knowledge exchange process (Wenger, 1998a, Lave and Wenger, 1991). This community aspect involves the encoding and decoding of information using shared mental models and shared understanding of the meaning of the knowledge within the community’s context. Stages of negotiation, adaptation and translation occur at the request stage of the exchange, and again during the process of knowledge handover. This extension of Dinur and Inkpen’s (1996) knowledge exchange model adds to the body of knowledge on knowledge exchange processes, as well as to communication theory literature.

In view of these findings, the four-stage knowledge exchange process model was expanded and significantly altered in an iterative manner as the interviews progressed, and new categories for coding the data were added (see Figure 4-3 on page 139). This resulted in significant reworking for the researcher as earlier transcripts needed to be recoded for the new codes. For example, Stage Three ‘Pointers Sought’ did not appear as a category in the initial coding, because it was not anticipated from the literature. Successive interviews, however, rendered it increasingly clear that this category was required. Other categories to be added later (as summarised in the following Table 4-1) ultimately became the basis of the eight distinct
stages of the interpersonal knowledge exchange process as described later in this chapter in section 4.3.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Category used in study</th>
<th>Corresponding Dinur and Inkpen (1996) Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knowledge Need Identified</td>
<td>Pull Perspective Of Knowledge Exchange</td>
</tr>
<tr>
<td>2</td>
<td>Initial Self-Resourced Search</td>
<td>Pull Perspective Of Knowledge Exchange</td>
</tr>
<tr>
<td>3</td>
<td>Pointers Sought</td>
<td>Push Perspective Of Knowledge Exchange</td>
</tr>
<tr>
<td>4</td>
<td>Request Negotiation Process</td>
<td>Push Perspective Of Knowledge Exchange</td>
</tr>
<tr>
<td>5</td>
<td>Agreement to Participate</td>
<td>Initiation</td>
</tr>
<tr>
<td>6</td>
<td>Knowledge Handover Process</td>
<td>Adaptation</td>
</tr>
<tr>
<td>7</td>
<td>Recipient Translation to Current Context</td>
<td>Translation</td>
</tr>
<tr>
<td>8</td>
<td>Recipient Implementation</td>
<td>Implementation</td>
</tr>
</tbody>
</table>

Table 4-1: Comparison of categories used with Dinur and Inkpen's (1996) four stages

This recoding effort significantly added to the sense of content validity of the findings as it opened the analysis to inclusion of previously omitted transcript data that was ignored under initially identified categories (de Araugo, 2001).

4.2.1 PAYLOAD KNOWLEDGE

Developing and using a construct labelled *payload knowledge* assisted in this study by focusing respondents on similar knowledge exchange experiences, hence making the stages of the exchange process easier to identify and ultimately, to categorise for analysis. The majority of respondents placed little importance on the much-debated distinctions between data, information and
knowledge discussed in section 2.2.2 (page 27). Further, these practising consultants appeared to have little regard for the distinction between knowledge types discussed in detail in Sections 2.2.3 (page 30) and 2.2.4 (page 32). Indeed, the baggage associated with a lack of common understanding of these terms when raised in the interview questions caused confusion and often became problematic. Respondents struggled to understand these highly complex constructs, attempting to grasp whether they were in fact exchanging tacit knowledge over their coffee breaks, or whether this knowledge was explicit because spoken words were used as the mechanism for the exchange.

I’m not sure what you are asking. The knowledge I hand over is explicit in the form of words. But there is a lot of subtle and tacit stuff that comes along with these words. Maybe this isn’t tacit exchange at all … Actually, it has to be … I don’t know. Is it? Perhaps you can clarify this for me?

Thomas

The resounding focus of the respondent’s attention in relation to knowledge and their work was far more practically focused than such theoretical distinctions. To a consultant, knowledge is something required to solve a specific problem, or satisfy a client need. Embracingly, if not analytically, one respondent suggested that knowledge

... relates to everything that everyone experiences during their assignments and interaction with clients, and as a result of interactions with other consultants. Skills that they learn that can then be recontextualised when they are on assignment. The relationships that they develop.

Adam

In an attempt to remove the confusion respondents were experiencing regarding tacit and explicit knowledge, and to focus them on similar
experiences across all interviews, this experiential type of knowledge was labelled ‘payload knowledge’. It consisted of the knowledge required by a consultant to fulfil a client’s need, and hence bring in revenue for the firm – the payload (see definition developed on page 135).

Two distinct types of payload knowledge became apparent from the transcripts. The first type consisted of the technical or content-based knowledge required to solve the specific need or problem at hand. This type of knowledge covered things such as methodologies and frameworks, or domain knowledge such as IT facility or accounting know-how.

One thing I often hand over is the methodologies I use. I use my past experience in each of the consulting processes I have used so that I can help others in similar situations.

Owen

The second type of payload knowledge was more obviously tacit knowledge that experienced consultants recognised and identified as the artistry of the consulting process (see page 51).

I find there is a lot of [payload] knowledge that is artistic and indefinable. You need to know how to be a good consultant to deliver solutions. You find out this intangible knowledge from your peers [in the consulting community of practice] as they hand over knowledge to solve your problems. Along with the technical content comes their experience in how things actually get done to achieve results.

Keith

And,
Consulting involves a lot of subtle knowledge – knowledge of the type that I cannot explain unless you ask me how to solve a problem. I can then recall times I used consulting skills to solve these problems, and often I can allude to these subtle skills when explaining my methods to other consultants when I have been asked a question.

Adam

Included in this category were subtle, usually unspoken or unconscious forms of knowledge such as how to use tone of voice effectively, how to set up a room for a workshop, how to deal with difficult clients; in fact, how to use the interpersonal knowledge exchange process. It was seen as a factor ‘X’ that allows a consultant to intuit which information needs to be linked to solve the problem.

If you asked me what this [artistic and indefinable] component of the payload knowledge is, I couldn’t tell you. It’s the knowledge required to understand from the big picture point of view where you are trying to get to, and to use your intuition to get there.

Tara

It became apparent that payload knowledge was a melting pot of tacit and explicit knowledge, of know-how and know-what. It included the consulting artistry and subtle skills involved with the delivery of solutions to clients, as well as the shared communal knowledge existing as shared mental models and common language. This melting pot also contains the individual’s personal factors such as background education, country of birth, previous work history and previous experience with solving similar client problems. As the melting pot is extremely complex to unravel and explain to respondents, the practical definition of payload knowledge developed for this dissertation became:
Payload knowledge is that specific distillation of knowledge, both tacit and explicit, required to resolve an applied problem in context - for which the consultant (or the company they represent) receives fees for service from a client.

In order to build the concept of payload knowledge and to assist in explaining this definition, a simple graphical representation of payload knowledge was developed and shown to respondents. This representation is shown in the following Figure 4-1:

![Payload Knowledge Diagram](image)

*Figure 4-1: Representation of the 'payload knowledge' definition shown to respondents*

It became apparent that payload knowledge was not the only knowledge type exchanged by consultants at ABC, increasing the need to focus consultants on similar knowledge exchange experiences. As interviews progressed, two further distinct yet intertwined types of knowledge became apparent. The first was the *administrative knowledge* required to run the firm, such as accounting, marketing or procedural knowledge. The second was termed *prospect knowledge*, and involved the knowledge required to win new work and clients, whilst maintaining the needs of the existing client base. This
knowledge was more focused on personal networks and business opportunities external to the firm, yet related to the capabilities and internal networks of the firm, which were also required to win further and continuing work.

To clearly focus consultants on payload knowledge and its relationship to other possible knowledge exchange experiences, this representation of a consulting firm as three key knowledge types was presented back to respondents in the form of three intertwined circles representing each of the types of knowledge. The representation is shown in the following Figure 4-2:

![Payload, administrative and prospect knowledge representation](image)

*Figure 4-2: Payload, administrative and prospect knowledge representation*

It might have been anticipated that to place a new model in front of consultants would generate much discussion and debate, and this was definitely the case when the representation was presented. Debates focused on the relative size of the circles, what happened where the circles
intersected, what occurs in the centre where all three circles intersected, and how each circle is related to the adjoining circle. Although an interesting investigation of the model might be undertaken in its own right, this path diverged from the research goal of addressing the specific research questions.

In the earlier interviews, respondents often discussed prospect, administrative and payload knowledge exchanges that occurred in their work setting. Several respondents had carried out temporary roles in the account management and administration sides of the businesses, and hence often discussed knowledge exchanges that were not payload or consultant-to-consultant in nature. As a result, in a development from the originally proposed methodology, the model (as pictured in Figure 4-2) was shown to respondents to help them focus on a time when payload knowledge exchange, in particular, was required between consultants. The approach had the positive effect of focusing the respondents on similar experience types.

I’ll skip what I’ve been doing in the [ABC main] office for the past few months then. Prior to that, I had a client who needed to implement a system, and they had no idea. I mean – really no idea. I can use that as an example of payload knowledge, because we got paid a lot of money in the end to fully implement their system. And I needed help from others in ABC to get the job done.

Owen

And,
I exchange all types of knowledge with my colleagues. If you want an example of a time I exchanged knowledge, I'll talk about the job related stuff that I do to complete tasks for my client. This is probably the most important knowledge to ABC anyway. It pays the bills.

Tara

The payload knowledge distinction provided a more focused response to identifying and describing the distinct stages of the interpersonal knowledge exchange process, making them easier to identify and ultimately, to categorise for analysis. Each of these stages is described in the following section (4.3).

4.3 WHAT IS THE INTERPERSONAL EXCHANGE PROCESS?

Emerging from the interview process, Dinur and Inkpen’s (1996) model was expanded to include eight distinct stages, representing multiple simultaneous eddy currents of knowledge flow in time, related to interpersonal knowledge exchange. These eight stages (relevant discussion sections are shown in brackets) were identified as:
Stage 1: Need Identified (Section 4.3.1)
Stage 2: Self Resourced Search (Section 4.3.2)
Stage 3: Pointers Sought (Section 4.3.3)
Stage 4: Request Negotiation Process (Section 4.3.4)
Stage 5: Agreement to Exchange (Section 4.3.5)
Stage 6: Knowledge Handover Process (Section 4.3.6)
Stage 7: Recipient Translation to Current Context (Section 4.3.7)
Stage 8: Recipient Implementation (Section 4.3.8)

The relationship between these eight stages is shown diagrammatically in the following Figure 4-3:

Figure 4-3: The interpersonal knowledge exchange process
These eight stages of interpersonal knowledge exchange cover the end-to-end process by which payload knowledge is exchanged to transform the initial need for knowledge into a specific resolution for the appropriate problem in context. The eight stages are discussed in detail in the following sections.

4.3.1 STAGE 1: NEED IDENTIFIED

The process of exchanging payload knowledge usually began with the recognition that a need for new knowledge had arisen. This need for payload knowledge typically manifested itself in one of two broad situations:

1. When the consultant was sent out to a new client site to carry out a specific contract, or an existing client raised a new problem or request that was outside their immediate area of expertise.

   Often being sent to a client site for a contract stretches me. I know little in the area of expertise the client requires. This makes me run like hell to find the knowledge I need to get the job done.

   Anne

   And,
THE INTERPERSONAL KNOWLEDGE EXCHANGE PROCESS

Usually I need payload knowledge after being sent out on assignment. Being selected to carry out a job does not necessarily mean you have all of the knowledge. This for me is the most common way the need arises to find [payload] knowledge.

Keith

2. The need may also arise internally in the form of a request for help from a billing consultant on a particular client engagement.

When I am on the bench [not assigned to a client], my business manager sometimes asks me to help out some other consultant who is out on site with a client. They may need some research done, or a report written. Maybe they need something urgently because things are falling apart. I often do not know all of the answers, and I will try to find the knowledge required to help out that consultant, working behind the scene for a client.

Adam

And,

Often times I go and find [payload] knowledge for other consultants who need it. It is not for my client, or for my own needs. I know how to get this [payload] knowledge; so I chase it up for them as a favour to allow them to get their work done for their client.

Robyn

As briefly discussed earlier (see section 4.2), the respondents in this research all agreed that consultants at ABC predominantly use a pull model of knowledge exchange, where knowledge is pulled from wherever it can be sourced by the consultant who has a specific need for it.
They go into an organisation, they take in what's there, they bring with them their own knowledge, and then they call on their own networks to pull in the bits they need to get the job done.

Carl

Sasha discussed the exchange process in relation to a pull and push model of knowledge. In exploring this process, she added the idea that being a member of the community, in itself, allows her to 'absorb' through an 'osmosis process'. She concluded

I think the pull model is the dominant model at ABC, and I think that this is because there is more information than you need for any single job, and you want to get to it efficiently.

Sasha

The concept of ‘reactive triggers’ identified by Carl (for example, time pressures as discussed in section 5.5.2 on page 210) was common to many of the respondents focusing on project or client outcomes.

My experience is that it typically happens when you are out on a project. Actually at different stages of the project. You might be up for a project, or being interviewed for a project, and you might think, ‘I need to bolster up my knowledge on this aspect that the client may want.’

Or you might actually be out on a project, and you get to a certain bit and you think, there must be a better way of doing this. This is another trigger.

The other one that I’d say is a variation of this – you get stuck.

They are the reactive triggers.

Carl

Carl also identified consultants who sought additional payload knowledge as a strategic initiative to move into new areas of professional interest, or to keep their background expertise up-to-date.
There is evidence though that there are other people that are just thinking ‘Well strategically I’m interested in working in a particular field, so I’ll actively go suss out some information on it and position myself, you know, whether I want to pursue it, so that I can move into that area.’

Carl

The need for payload knowledge exchange often arose, however, in more subtle ways. The need for the artistic component of the payload knowledge (as discussed in section 4.2.1) to implement the solution also initiated the interpersonal knowledge exchange process. A recurrent theme among the respondents was the role that communities of practice play in this knowledge exchange process (see section 2.4). A central part of being a member of the community was to be able to communicate this artistry using the community’s language, shared concepts and commonly accepted methodologies.

I can’t get the real story of how to carry out the implementation of the method except through a discussion with the other ABC consultants. They know how to communicate this to me efficiently.

Hayden

Finally, the need for payload knowledge also arose from the need to keep professional knowledge current. Through the interaction and discussions that occur on a day-to-day basis, many consultants have a personal need to be seen as professional and sufficiently expert in their field to be endorsed by the consulting community as a member of that community.
Being a consultant means being a part of the profession. Knowing what's what and who's who. To not participate or to participate without anything to contribute would be the fastest way to lose face in the company. I don’t think you get too many chances.

Tara

Having recognised a need for payload knowledge, the consultant then moves to the self-resourced search stage of the interpersonal knowledge exchange process.

4.3.2 STAGE 2: SELF RESOURCED SEARCH

Once the need arises for payload knowledge, consultants immediately tackle the question ‘Where will I get this knowledge from?’ The first conscious process carried out is the self-resourced search. The consultant determines whether or not the specific problem can be solved, or the task carried out, using his or her own personal resources.

‘Resources’ include the consultant’s own knowledge gained from past experiences, personal professional libraries and electronic repositories of accumulated work to date. As this research was a study of knowledge exchange between consultants, the boundary for the knowledge exchange model tended to be intra-firm transfer. Consequently, IT options such as searching the internet, and searching commercially available databases
holding explicit knowledge in the form of professional journals and technical models, were also defined as a part of the self-resourced search.

I do use, not greatly, my own personal searches and knowledge. I have a professional library of books at home, built largely on recommendations of my colleagues internally, and others externally to the organisation that have worked in my field. They will tell me the big books that they have found useful. Which I find really useful. So that is my number one stop. That and the people.

Carl

The notion of efficiency and effectiveness in the knowledge exchange process recurred throughout the interviews as a prime consideration.

People will try to find the most efficient and effective method in order to minimise the economic cost to them. However, this is intangible and virtually impossible to measure, and the decision occurs at the subconscious level. I think the cost has several factors – one is time cost. This is probably the biggest one. The other one is, for example, if I am interested in something, and I only need to find out these bits, the benefit to me in exploring it further is that I gain more knowledge and I become more knowledgeable. That benefit is secondary to the time one always. Hence I am weighing up time against the benefit of exploring new knowledge in great detail, or using my own library and other stored resources. It’s always time.

Owen

Consultants make a judgement of whether it is more efficient to use their own resources, or to engage in the knowledge exchange process.
Depending upon your skill level of using different mediums, you will go to different exchange methods. It depends upon the notion of efficiency – from when. If it took you ten years to build up your internet search skills, then to you it would be very efficient over the short term to find something through this search process. However, someone new to the internet would avoid it like the plague, or find someone like the internet guru to do the search for him or her. This is the same with the knowledge sharing processes at this company. If you have a good network, and you have been here a while, you will use your network. If you are new, and also new to consulting as a role, you will probably use email broadcasts, or go through a personal and longer search process to find your own resources. If it takes too much effort, you will ignore it.

Keith

If the payload knowledge need is satisfied at Stage Two of the model, then the exchange process goes no further than this stage (see Figure 4-3). No specific interpersonal exchange process is carried out, nor is the explicit knowledge exchange process initiated within ABC.

Although the payload knowledge may have been sourced without a specific knowledge exchange process taking place, the selection of the solution will still be influenced by participation in the community of practice. The self-resourced search occurs against the backdrop of the consulting community of practice. Hence the validation of the consultant’s knowledge against that of the community is constantly occurring and the consultant’s knowledge of what is an acceptable solution is updated on a continuous basis. As a result, implementing a self-resourced solution will still occur within the context of the community’s expectations of what constitutes an acceptable solution to the client’s specific need.

When the initial self-resourced search fails to fulfil the need for payload knowledge, the consultant’s focus turns to the intra-company knowledge
exchange process. Based on efficiency and effectiveness as discussed, consultants use various methods to then seek out pointers to the knowledge.

### 4.3.3 STAGE 3: POINTERS SOUGHT

Pointers appear to be one of the most important parts of the payload knowledge exchange process as this is where the most time can potentially be saved by consultants relying on their past experience and personal networks.

Pointers are the most important factor and stage in knowledge transfer. I would put it at the top of the list. The reason for that is that it certainly is immediate. And secondly you can get the bits of information that you want. Whereas if you go into a database, you have to read through ten pages to find two bits of information. Whereas if I can ring, and ask somebody the two questions, I can get my information very quickly and efficiently.

Sasha

The use of personal networks to point them towards the most relevant knowledge is the consultant’s overwhelmingly preferred method.
I go to a person. My experience has always been face to face is the best. Go to somebody that knows something. Second is by phone. And absolutely last would be email direct to a person that I have a relationship with. I would also ring people who I had been recommended by my network as a knowledge carrier.

… I’m looking for information, and the context of how to use the information, which is why I find people useful. And they can either give it to me, or point me to other people who may have it.

I think people are really effective because they contextualise the information. If I was doing a global search on a dumb database, I might come up with an answer, but how do I interpret the answer, and ask all of these other questions that I hadn’t even thought to ask in the first place.

Carl

Sasha pointed out the difficulties for new consultants of heavy reliance on personal networks and identified what came in this study to be accepted as the pointer system for directing the consultant to the knowledge source …

A negative with the pointer system is that people new to the organisation don’t have the network for that process to operate.

Sasha

A further common pointer method used by consultants involves sending out a broadcast email to the company or a local division of the company to request help on a particular topic. Discussion of this method polarised the responses of the respondents – either you were fully in favour of the email broadcast, or you were totally against it as a source of finding pointers to the knowledge you need.

The perceived social etiquette of the community appeared to dictate the response that a consultant should make to such email requests, and determined whether in fact the consultant would participate at all.
I find it annoying that consultants use this email request as a first stop. Everyone knows that you should do your homework yourself, and only resort to others when you get stuck. Most of the emails I’ve seen recently do not have much evidence of any background work being done. So I hit the delete key and do not respond.

Hayden

And,

Some of them [emails] annoy me, but others explain their genuine need. I know what it feels like to be on site alone with nobody to turn to. If this is the case, and the consultant has done the right thing by giving it a go first, I’ll reply.

Tara

Those against the email described it as a ‘shotgun approach’ that indicated a degree of laziness and a lack of understanding of how the community should exchange knowledge via personal networks. This group would not send out an email, nor would they normally respond to one, regardless of whether or not they held the knowledge being sought. It is accepted that individual personal styles and preferences may bias respondents toward one form of exchange mechanism over another. Within the scope of this study, however, no personal style validation process was undertaken to more fully understand the preferences of individuals based on different style groups (see implications for further research, Section 6.6.6 on page 269).
I see people putting out global broadcast emails, requests for info. Personally I find them quite annoying, but the people that do that have found that it’s been quite effective. This is because it generated five or ten responses from people that they otherwise wouldn’t get if they had targeted a particular person. So I guess that behaviour is reinforcing.

I just find it annoying to get them. They have a nuisance factor. Especially when you are off site, and you might have fifty messages, and none of them are particularly relevant to you, and you have to make time to open the message and read it. It’s annoyance value.

… And I guess going back to those email ones – I’ve never sent a global email – I guess because I’ve never had to. And the thing that bugs me is that these email ask for the knowledge by close of business today. And I don’t have that time.

Carl

Those in favour of the broadcast email process saw it as an efficient means of getting what was needed given time and other constraints.

I find, that on three or four occasions I have sent out those (broadcast) emails because I needed the information, I was surprised at the amount of responses. I got far more responses back that I thought I would. And secondly, if you have ever been in that situation, you would always respond to other people. Because you realised how much value it is to you when you need that. Hence if you are someone who has sent out those emails before, you are more inclined to respond to other people.

Sometimes when a request goes out, I won’t know the knowledge myself, but I will know someone that does. So I will write back to the requester and say you should contact so and so, because they may not respond. They might not see the email, or might be busy. But if I write back to [Fred] and say call ‘Jo Blow’, then he can actually ring you directly and get the knowledge that ‘Jo’ has, but wouldn’t have responded to email.

Sasha

In addition to email and personal networks, consultants use a range of explicit artefacts as pointers to a knowledge source. A search on the explicit databases, case study or methodology documents will indicate to the consultant who the author was, or who worked on this particular project. However, the usefulness of these pointers was questioned since they were
often not up-to-date, the consultant involved in the case study had left, or the information was out of date in some other way, rendering it essentially useless to the consultants.

When I used the knowledge base to find someone with expertise in BCP [Business Continuity Planning], most of the consultants listed had left the company. [Joe] and [Bob] were named all over this stuff, but they left some time ago. So I gave up and asked someone instead.

Petra

Once the pointers to the knowledge have been sourced by the consultant, and the decision made as to which pointer will be used, a ‘hopping process’ then takes place, where the first pointers indicate that they are not the best person, and point to a second source. From this second source the consultant may be directed to several others, some of who may know almost nothing directly useful, but one is ‘the guru’.

You will look for some pointers, and you will try to identify a guru, or use an email to ask some people how do I find their knowledge. You will then take one or two hops before you go into what has been called the negotiation stage. So this doesn’t happen immediately. You have to call someone, and you have to sound them out – are they the person with the knowledge? If not, they will hop you to the next person. So, in this stage there is something about finding the knowledge or finding the right person. And this is partly a validation step.

Carl

Most respondents indicate that within two to three ‘hops’, they can locate a confirmed source of knowledge. ‘Confirmed’, in this context, means that the pointers along the way have given a firm judgement from within the community of practice as to who has up-to-date and expert knowledge in the specific area of interest. This acts as a quality control process allowing the inquiring consultant greater confidence that the end product will be highly
relevant and credible. In fact, the pathway leading through each of these hops was seen as the beginning of stage Four of the model, the Request Negotiation Process (see next section).

Often the process of finding the knowledge [using pointers] allows me to understand better what I am looking for, and to convince consultants along the way that they should help me out. You have to ask them for their time anyway at the initial [pointer] stage, so once you have their attention, you might as well gain full commitment for more time here.

Anne

Up to this point, three stages in the interpersonal knowledge exchange process have been identified and described. The first stage requires recognition by the requesting consultant that a need for payload knowledge exists, usually in relation to a specific client problem. The second stage of the process involves the requesting consultant carrying out a self-resourced search to determine from their own resources whether the specific need can be satisfied without engaging other consultants in an exchange. If at this point the need cannot be satisfied, the consultant moves to the third stage of the model to look for pointers to a credible knowledge source using personal contacts, databases or email requests. An unpredictable ‘hopping’ process then directs the requesting consultant toward the potential source of the required payload knowledge. These initial three stages of the interpersonal knowledge exchange process are shown following in Figure 4-4.
The next stage of the exchange model (Stage Four) involves explaining the knowledge need and negotiating agreement to participate from the source consultant through the translation, adaptation and negotiation stage as developed in the following section.
After finding a source for the required knowledge, the consultant engages in a process of adapting the request for knowledge into a form that the source consultant will understand. Drawing on their tacit knowledge of the shared mental models (see page 74 in section 2.4.4), shared community norms (see ‘culture’ discussion on page 63 in section 2.4.3), shared social etiquette (see page 62 section 2.4.3) and a shared language (see ‘culture’ discussion on page 63 in section 2.4.3), requesting consultants attempt to find an explicit means of explaining their complex knowledge need based upon their understanding and perception of the expertise of the source consultant, as well as suiting their unique personal interaction style.

If the requesting consultant believes that the source has expert knowledge and a shared language with which to engage in the exchange process, the request will be framed confidently. If the requesting consultant has no prior knowledge of the source consultant, then the request for knowledge may be framed more tentatively.
You then go through a translation process of contextualising the request so that someone else can understand it, based upon your perceptions of the people who are going to give you the knowledge; you modify your request to try to hit the target pretty much spot on.

Adam

The community’s shared language, mental models, social etiquette and cultural norms are seen to shape and funnel the complex of information defining payload knowledge, condensing it to a form that allows the source consultant to understand the request and the context within which it has arisen, and ultimately to agree to an exchange with the requesting consultant.

The whole package of [payload] knowledge is much bigger than what actually gets said in words [during the exchange process]. Somehow a process takes place where we use common ground to funnel the whole meaning such that we each are confident the full amount of content has been understood.

Francis

And,

You condense the full understanding of the problem, including your spin on what is really going on based on your years of experience, into a fifteen-minute exchange with the potential source of [payload] knowledge. The other [source] consultant can then contribute their ‘value-add’ from their own experiences of similar problems they have had.

Owen

This decontextualisation process is similar to the reverse knowledge hierarchy model of knowledge espoused by Tuomi (1999), where a piece of data that can be understood by others in the profession is created within the background knowledge and concepts learned in that professional community (see section 2.2.2). Using Tuomi as a base, and incorporating the data from
respondents, this process has been developed into a graphical representation as shown in the following Figure 4-5:

![Decontextualisation process for payload knowledge](image)

**Figure 4-5: Decontextualisation process for payload knowledge**

Although the diagrammatic representation suggests an artificial border between the community’s shared language, social etiquette, shared mental models and community norms, there was no evidence that any part of this process could be separated from another. In effect, the complexity of attributes applied to process payload knowledge appeared to be an essentially tacit response to any request initiated within the community of practice to a requesting fellow consultant.

Using this funnelling and condensing process, the requesting and source consultant are able to hand over their tacit knowledge in an efficient explicit form that can be recontextualised easily by the requesting consultant. This
process can only occur because of the contextual framing created by the shared language, norms, etiquette and mental models developed over time within the community. This recontextualisation process is represented in its simplest form in the following Figure 4-6.

![Diagram showing the process of decontextualisation and recontextualisation of payload knowledge]

Figure 4-6: Decontextualisation and recontextualisation of payload knowledge

This, and further illustrations presented in this dissertation based on the filtering and condensing process, were not fully investigated or confirmed as a
main focus of this study. Such a full investigation would have diverged from the goal of answering the existing research questions. The complexities and operation of these processes would be an interesting research project in its own right. However, for the purposes of this dissertation, the diagrams appear to explain the interpersonal knowledge exchange processes described by respondents. Further, when presented back to respondents at the end of the study, these diagrams were seen as a realistic representation of the processes they had described (see Section 3.8.1 – Construct Validity).

A negotiation process then follows, in which the meeting of two minds occurs, and common understandings of content, context and knowledge exchange requirements unfold. The requesting consultant adapts not only the framing of the request, but also their understanding of the whole knowledge requirement to satisfy the specific need.

I send out information, and if you have any questions, and if you are a good recipient, you replay it in your own words, reflecting the content and the feelings that I am expressing. This way you understand what you are asking. And then we can come back to the answer. But the first stage is making sure you understood the message as sent by sending it back. This negotiation allows you to very quickly hone down to the context specific knowledge that you are looking for.

Carl

And,
A negotiation process follows, where you talk about what it means. The meaning of the message is confirmed here as it evolves from the interactions with each other.

Adam

This process is not merely a once off communication exchange, but an ongoing exchange within the consulting community where shared understanding of the firm, the individual, the other consultants and the work tasks are being constantly refined.

People throw their hat into the ring, and people walk away affected by what each other has said.

Adam

And,

If for instance you ask a question as to what are the new technology trends in the client company. If there is a room full of people, you will have one person say one thing, and others challenging this saying, ‘No – not in my part of the company.’ So you can get different opinions that are both accurate, but it depends upon their experiences that they are basing their opinion on. It also depends what I want – I will filter this information to come up with this negotiated meaning, where when I feed it back to them, we all agree that my final interpretation is valid, given my context. In the end, it is always up to the receiver to make the decision as to what they choose to walk away with and use or implement.

Sasha

Indeed, the requesting consultant may not even know what knowledge is important, nor what question to ask to get the right knowledge to meet an unusual or novel client request.
Because I am an intelligent person on the other side, I can say, 'Yes I understand what you want, and I can give you this.' However, I can also say, 'You are much better off doing this, which is a quantum leap from what you've asked.' Which is where the intelligence comes in as opposed to a dumb database. Database you can't do that.

The opposite may be true – rather than needing War and Peace, I might only need two paragraphs to stick into a client report. I want someone I trust to give me those two paragraphs to ensure what goes in is the right stuff – that is what the community of practice thinks is important. It takes a whole lot of time and effort to work this out, and I don't have the experience to work it out anyway. I don't know which is good, and which is bad. Hence, by ringing up an expert, they will say, 'What do you want? What size project is it? What is this, what is that?' Based upon what you've told me, this is the number one choice, and I'll give you this other one as a backup and you can go to your client to see what they want. A whole lot of stuff that I may not have even asked for, or even thought to ask for, because I don't know enough – that's why I'm asking. I don't know the questions to ask. The expert will come back and ask me these important questions.

Carl

Because of the high degree of variation between individual mental models, this adaptation, translation and negotiation stage helps to frame a common understanding of the knowledge request within the confines of the community of practice. Inexperienced consultants have not determined their specific shared repertoire of community attributes, and the exchange process for them is less efficient (see Figure 4-7).
However, the negotiation process allows the consultant to understand quickly the shared repertoire of community factors that allow them to exchange tacit and context specific aspects of their payload knowledge. This negotiation process allows the consultant to invoke shared attributes held in common by both the requesting and source consultant, allowing an alignment of shared
mental models, language, social etiquette and norms. This process can be conceptualised as the alignment of spaces or ‘worm holes’ in the social fabric of the organisation, that once aligned facilitate the smooth and efficient exchange of knowledge, ensuring it is decontextualised and recontextualised to retain as close a practical its original meaning (see Figure 4-8).

![Figure 4-8: Aligned language, mental models, social etiquette and norms through negotiation](image-url)
This process occurs not only in specific instances of knowledge exchange, but as a background maintenance function for the knowledge exchange activity with the community. As an example, a company presentation by the CEO allows the community of consultants to explore their meaning of the presentation content within the context of their own situations.

After learning something from a company presentation (for example), you recontextualised this with your community. You will get together, and will have your opinions on what was said, and everyone has plenty to say. This is a case of recontextualising that ‘this was said, and I think this means …’ After taking into account your understanding of the present context of the original remark. This discussion puts all of the opinions into a melting pot, and a common understanding of what the original information means to the community is negotiated and confirmed in these small groups. This is the main way tacit knowledge is passed around – small groups carrying out these informal discussions - over coffee, in corridors, at company functions, over lunches.

Adam

This interpersonal maintenance function assists the consultants in building their shared language, etiquette, cultural norms and mental models such that these community attributes can be used when required to exchange payload knowledge. A common understanding between the source and requesting consultants is negotiated within the community’s boundaries, and an explicit form of the payload knowledge flows between the two consultants through language and gestures, arriving intact with close to its intended full meaning to the mind of the requesting consultant. It could be speculated that a danger of entrainment of thinking exists in this process, where only knowledge based on shared past experience contained within the acceptable boundaries of the organisation will be exchanged. This argument would suggest that new ways of implementing payload knowledge that have not yet been tried, tested and accepted by the organisation community members will be excluded from the
exchange process. Although this theoretical danger exists, no evidence was found in the research data to validate this argument.

In summary, during the request negotiation process, the requesting consultant uses the shared language, norms, social etiquette and mental models of the consulting community of practice to explain efficiently and fully the knowledge need within its context. The goal of this process is to fully explain the knowledge request, and negotiate its full meaning within the specific context with the source consultant. This allows the source consultant to determine whether they have the required knowledge to exchange and to diagnose the requesting consultant’s knowledge base. A further, usually unstated or unrecognised, goal of this process is to apply the community’s social etiquette and cultural norms to encourage the source consultant to handover the knowledge required. If this step is negotiated satisfactorily, the next stage of the model is initiated: the source consultant agrees to participate in the interpersonal knowledge exchange process.

4.3.5 STAGE 5: AGREEMENT TO EXCHANGE

At some usually undefined and unrecognised point in the request negotiation stage (see Stage Four in Figure 4-3), the source consultant agrees to exchange knowledge. In terms of process, this step is very small and at first
sight, appears to require little explanation. However, in relation to the overall knowledge exchange process, it is the fundamental point; when the source consultant agrees to engage in the knowledge exchange process, the complexity of the consulting exchange process is activated and the role of the source consultant as a member of the community of practice is defined. Should the source consultant choose to exercise their substantial power, through choosing not to exchange their knowledge, the entire interpersonal knowledge exchange process becomes ineffective and comes to a halt, and a new willing source of knowledge must be found by the requesting consultant.

It can be argued that the Stage Four and Stage Six adaptation, translation and negotiation stages of this model (see Figure 4-3) are artificially split, and that they are in fact one continuous process from which Stage Five is obvious. In many cases this may appear to be functionally correct, with consultants carrying out the whole process over the telephone, or over a cup of coffee.

Often the whole process from end to end takes place over a coffee. We sit in a coffee shop, I discuss my need, the consultant has the knowledge and agrees to give it to me, and I walk out fifteen minutes later with a solution to my problem. Other times, it takes a long time to find a consultant who is able to spend the time with me to give me what I need.

Elaine

This apparent fusion of the two stages, however, submerges the fact that a tacit agreement has been reached between the requesting and source consultants.
Consultants hold a lot of power. They are easily able to withhold agreement [to participate] in the knowledge exchange. Sometimes I know the consultant has the knowledge, but they bump me and give some nice reason why they are not able to help. It can take a lot of emails and phone calls to get someone to give you something – especially if you are new [to ABC].

Francis

In most responses, two distinct stages do appear to occur – firstly to confirm that a reliable source has been found and gain agreement, and secondly to engage in the actual interpersonal exchange process itself. Often the initial stage occurred through a telephone call, with a follow up meeting or site visit to carry out the detailed exchange process. Multiple simultaneous negotiations are put in motion, either directly or through the use of trusted proxies representing the requesting and source consultants, which ultimately aim to exchange the required knowledge and deliver it to the requesting consultant. However, the knowledge handover can only occur when agreement has been gained from the source consultant to participate in the process.

When the decision to exchange the knowledge is made by the source consultant, the consultants then engage in a second adaptation, translation and negotiation process in the Knowledge Handover Process.
Despite the apparent fusion of Stages Four, Five and Six as discussed in the previous section (4.3.5), once the source consultant agrees to participate in the exchange, a knowledge handover process is entered into where further adaptation, translation and negotiation of the requested knowledge is carried out. As the source consultant starts explaining what needs to be done, or coaching the recipient as they carry out the tasks, the recipient attempts to integrate the knowledge into their own mental model. Simultaneously, the source is translating experience based upon their perceived understanding of the recipient and his or her needs.

The need to transfer knowledge is recognised … and they then go through a similar thing with the mental model translation. They adapt the knowledge at the source, based upon the perceived need of the recipient. After the negotiation, they think, ‘I think Bob wants this’, so they change it at the source based upon the needs of the recipients.

Carl

And,
This then goes back into another negotiation stage. This gets put more into the local context of the recipients need. You say, ‘Well this is what I need, but I’m talking about telecommunications, you are talking about banking and finance industry. Is this relevant to me?’ It is then adapted to fit as closely as possible [to my specific payload knowledge need] as you go through the process of receiving this knowledge.

Caroline

The handover occurs within the context of participation in the community of practice as a whole, and once again the common language, norms and understanding developed over time as a member of the community helps the participants to carry out the exchange process more efficiently than if they were two strangers. The result is a negotiated understanding of the knowledge that both parties agree is valid for the task at hand.

For instance, the practice manager came along to a certain lunch with very firm views on some processes that were being carried out in the company at that time. Through the discussion, which was animated at times, he had to question this process and recontextualised it, asking whether it was appropriate if several of his peers did not agree with his evaluation of how things were currently done.

Adam

The unwritten and tacit knowledge of the source consultant, which has been explicitly exchanged in the form of words and gestures, has been tacitly understood by the requesting consultant based on concepts and mental models developed within the community of consultants. This tacit decontextualisation and recontextualisation process (as discussed fully in the earlier section 4.3.4 and represented in Figure 4-8) draws upon the tacit skill of consultants to draw out the underlying meaning in the words of the source consultant and extract a meaningful context for the knowledge being handed across. Rather than being an explicit exchange in the form of conversion of
unwritten knowledge into spoken words, this tacit knowledge handover process is the use of words by both the source and requesting consultants to build a common understanding of past experiences spanning a number of years that can be directly applied to the problem facing the requesting consultant. To fully explain the same knowledge to a non-community member in explicit words would probably take several volumes of text. However using the interpersonal knowledge exchange process within the shared context of the consulting community of practice, this exchange can occur over a cup of coffee in less than an hour.

I prefer the interpersonal [knowledge exchange] process because I can get what I need quickly and easily from people. They know what you are talking about, and I can easily understand the responses. The fact we both work as consultants for ABC means we can get stuck straight into the exchange - because we know how to talk to each other in consulting speak.

Owen

The decontextualisation and recontextualisation processes carried out at the request negotiation stage (Stage Four) and at the knowledge handover stage (Stage Six) is identified as a key advantage that the interpersonal knowledge exchange process has over the drawing of explicit knowledge from corporate IT databases.
I get a lot more pulling my knowledge from people than databases. I can get the full rich meaning of things handed over by word of mouth. I find the database stuff really shallow, unless all you need is something simple. If you need something simple – then fine. Use databases. For complex stuff, and specific [contextual] knowledge, people can give a lot more.

Keith

When the knowledge handover process is complete, the requesting consultant finally has sufficient information to distribute the payload knowledge required to deliver the client’s brief with confidence.

A summary of the interpersonal knowledge exchange process developed to this point starts with the consultant recognising the initial knowledge need (Stage One) and conducting a self-resourced search (Stage Two). The consultant then hops between pointers to the knowledge source (Stage Three) before engaging in the request negotiation process (Stage Four). The request negotiation stage allows the requesting consultant to decontextualise the knowledge request to a form that the potential source consultant can understand, negotiate both the meaning of the payload knowledge required, and request participation from of the identified source consultant. When the source consultant agrees to the knowledge hand over (Stage Five), the consultants enter into a second translation, adaptation and negotiation stage using the shared language, norms, social etiquette and mental models of the community to decontextualise and recontextualise knowledge and exchange it between them (Stage Six). The model to this point is shown in Figure 4-9 below:
This is not the end of the interpersonal knowledge exchange process, since the consultant’s initial need for payload knowledge has not yet been satisfied. At this point, the requesting consultant has the knowledge required to confidently solve the client’s specific problem. However, the requesting consultant must still adapt this knowledge into the specific client context to make it directly and specifically applicable. The knowledge must be distilled to create the payload.
STAGE 7: RECIPIENT TRANSLATION TO CURRENT CONTEXT

Regardless of the efficiency and effectiveness of the previous steps, the requesting consultant always accepts the condensed knowledge negotiated and agreed with the source consultant, and translates it yet again to meet the very specific needs of the client.

When you have got this [knowledge], the person that handed over the knowledge leaves the [knowledge handover] scene, unless there is further negotiation [to take place], and you then adapt it further to the specific context that you are trying to use it for. I need to modify it for my client and place it into this context.

Carl

This final distillation of previous knowledge experience with the newly acquired information to create payload knowledge may take a number of forms; it may involve adapting a methodology to meet the specific industry or client, or perhaps it will involve transferring the tacit knowledge into an explicit form for presentation to the client.
I then adapted this information to make it suit the purpose. [Source consultant name] gave me the information, and I changed it to suit my specific purpose – which was a major presentation. Once I had the basic information that I needed, I was able to build it up based on my fuller understanding of the end use. I had to use what knowledge I had been able to obtain in the timeframe, and adapt it based upon my own pre-existing knowledge.

Sasha

The distillation process results in specific knowledge being directly modified to fulfil the need that initiated the exchange process at Stage One.

4.3.8 STAGE 8: RECIPIENT IMPLEMENTATION

The final stage of the interpersonal knowledge exchange process begins when the consultant feels prepared to carry out the task.

Once you have done this, you then implement the knowledge. You use it. It then becomes a part of your own tacit knowledge base. You’ve done it. You’ve picked up that tacit knowledge. Fiddled with it somehow. Internalised it somehow. The premise here is that you are not going to go back through the same process if something similar comes up again.

Carl

The recipient now has the knowledge internalised and has consequently become a potential source as word spreads through the community’s network of a new source consultant for this type of knowledge.
It’s amazing the grapevine around here. I got a call once within two days of finishing with a client, asking me to help out on a similar problem. And I didn’t think many people knew what I’d been up to for the past six weeks. The request was for similar things I’d just finished, so the [requesting] consultant got off easy because I’d [already] done most of the ‘brain work’.

Thomas

And,

Word soon gets out [that you have done this kind of work], and before you know it your mobile [phone] begins ringing with people who need your help.

Sasha

The consultant, depending upon their individual learning styles and preferred learning processes, can then build on this initial base of knowledge over time, and improve and refine it through personal experience and through integrating the knowledge in further knowledge exchanges.

I reflect on things after the job is done to see if there was a better way of doing things. Quite often I can find a lot of things I could have done better, or I can see some potential areas for improvement next time. I’ll focus on these things for the next time I do something similar, or pass them on, where I can, to others if asked – so they don’t have to make my mistakes again.

Robyn

This stage is not to be underestimated. Although the majority of respondents made no distinction between what constitutes the difference between information and knowledge (discussed earlier in section 4.2.1), Carl expressed his strong view that implementation of the payload knowledge represents the key difference between the two constructs.
To me, there is a big difference between information and knowledge. And to me, it is being able to do something based upon information. The use of information is knowledge. So reading a book, listening to people tell me their experiences, and going through case studies, is not knowledge. I’m going to have to do it before it becomes something that I know. So, particularly with business transformation stuff, there are a lot of nuances. For instance, how you would set up a room, furniture, and tone of voice. I mean so much stuff that is useful to have actually another person in to help you reflect back on what worked and didn’t work.

Carl

It is through the process of action, with the support of the community of practice to guide individual actions, that the knowledge becomes internalised and allows the organisation to satisfy the needs of its clients on an ongoing basis. This action learning process (Schön 1983) also allows the consultant to reflect upon their actions and to gain feedback from the community in order to improve their knowledge over time (see section 2.3.4).

Once the recipient has implemented the payload knowledge received from the source consultant, and internalised it into his or her personal tacit knowledge base, the interpersonal tacit knowledge exchange process has been completed. In another respect, the process has only just begun, as the recipient of the payload knowledge becomes a source of knowledge for other consultants, and evolves and develops a more complete understanding of their own practice.

4.4 AN ARTISTIC PROCESS

As suggested by Figure 4-3 on page 139, the interpersonal knowledge exchange process presented to this point appears to be essentially linear.
The reality of the process is far more complex and dynamic (as becomes apparent in delineating Stage Five).

Although the respondents clearly identified and described each stage of the model presented in this chapter, they also expressed a clear discomfort with the concept that the process was predetermined.

I don't know how the process works, and I can't predict what I will get from who. You just trust that somehow things will work out. As long as you are a part of the consulting community you will get the answers you need somehow.

Thomas

Furthermore, they observed that decisions relating to the process often occurred at a non-conscious level.

I don't think about it. I suppose I do go through all these stages, but as far as I'm concerned, I'm just going for a coffee and a chat with a colleague to help them out.

Tara

And,

I didn't realise I do that much thinking about transferring knowledge. I just do what is asked and expected of me. I don't make forced decisions – it seems natural. And everyone else is doing the same thing.

Joanne

The process identified by the respondents was in effect an artful practice (see section 4.2.1 on page 131) where the consultant moved between, and through, each stage of the model by utilising tacit skills and emerging in a complex range of simultaneous decisions at an apparently unconscious level.
If you watch the experienced guys, you can pick up what they are doing. But they are similar to an artist painting a masterpiece – they confidently move into action using their artistic skill and begin painting a solution for their client, drawing on their full range of skills on their consulting palette. It takes them years to pick this up, and I really wish I could pluck it out of their heads sometimes. But it takes time to learn.

Caroline

The process is tacitly understood by the consultants and is learned only through participation in the consulting community of practice.

4.5 CHAPTER OVERVIEW

This chapter has addressed the research question,

**What is the interpersonal process by which knowledge is exchanged between consultants?**

The chapter began by explaining the reasons behind developing the interpersonal knowledge exchange process model through discussing the potential enhancements required to Dinur and Inkpen’s (1996) four-stage communication based model of knowledge exchange. These enhancements emerged necessarily through the early data gathering stages and required attention to include previously omitted data from respondents.

The chapter then developed a definition of the construct, *payload knowledge*, a tool used within the research process to focus respondents on tacit and explicit dimensions of knowledge required to solve a client's specific problem.

This definition was presented in section 4.2.1 on page 135 as:
Payload knowledge is that specific distillation of knowledge, both tacit and explicit, required to resolve an applied problem in context

In a major development for the understanding of practice, an eight-stage model was developed, describing the interpersonal knowledge exchange process used by consultants to exchange the payload knowledge that they ultimately integrate into their personal knowledge base as tacit knowledge.

In outline, the requesting consultants at ABC begin the process at Stage One when they identify the need for payload knowledge (section 4.3.1). They carry out a self-resourced search at Stage Two to confirm that an intra-firm exchange process is in fact required (section 4.3.2). Having not satisfied their payload knowledge need at this stage, requesting consultants move to Stage Three, looking for pointers to a potential credible source, and engage in a hopping process between pointers to eventually arrive at a consultant who has the information they require (section 4.3.3).

The consultant then enters Stage Four where a complex translation, adaptation and negotiation process is carried out to decontextualise the payload knowledge and relay it to the source consultant using the community’s shared language, norms, etiquette and mental models. This request is recontextualised by the source consultant, who confirms in their own mind that they have the required information to fulfil the requesting consultant’s need (section 4.3.4). This decontextualisation and recontextualisation process is summarised in Figure 4-6 on page 157.
The source consultant then exercises their discretion to agree to participate at Stage Five of the model (section 4.3.5). This agreement initiates the exchange of a complex of contextualised information during the Stage Six handover. Once again using the community’s shared language, norms, etiquette and mental models, the tacit and explicit dimensions of the source consultant’s experiential knowledge is condensed and funnelled to the requesting consultant in such a way that they can reconstruct the original meaning (section 4.3.6).

Having received this knowledge, the requesting consultant then distils the information received once again at Stage Seven to target the very specific context of the client site (4.3.7) and implements it as payload knowledge at Stage Eight, internalising it into their own tacit knowledge base (section 4.3.8).

Finally, the chapter establishes that the apparently simple interpersonal knowledge exchange process, in the eyes of the respondents, is an unpredictable and artistic process (section 4.4). Despite its apparent complexity in practice, however, the process appears to facilitate the creation of payload knowledge required by requesting consultants.

Throughout the data collection process, respondents indicated a clear preference for participation in the interpersonal knowledge exchange process as opposed to drawing on the company’s explicit knowledge store. No indication of this clear preference was anticipated from the initial literature review, except for Goodman’s (1998) assertion that when solving problems,
managers and consultants rely more heavily on personal networks than on computer based systems to obtain information (see Section 2.5.3 on page 87). Building on this theme, the research data gathered in this study provided an opportunity to explore this important observation further. Given that, in the view of the respondents, eighty to ninety percent of knowledge at ABC Consulting is exchanged using the interpersonal knowledge exchange process described in this chapter, an opportunity arose to address the question, ‘Why do the consultants prefer this process?’

Through building an understanding of why the consultants at ABC Consulting prefer to participate in the interpersonal knowledge exchange process, important implications for organisations, managers and practice in general can be drawn. An exploration of this clear preference also develops a deeper understanding of the eight-stage interpersonal knowledge exchange process described in this chapter. As such, the following chapter (Chapter Five) fully explores the question of why consultants prefer to participate in the interpersonal knowledge exchange process to exchange payload knowledge.
CHAPTER 5 - PREFERENCE FOR INTERPERSONAL PROCESS

5.1 INTRODUCTION TO THE QUESTION OF PREFERENCE

In Chapter Four, an eight-stage model was developed to describe the interpersonal knowledge exchange process used by consultants within their communities of practice. Although the question of ‘how’ this exchange occurs was addressed in Chapter Four, the question of ‘why’ still remains.

Research, is in effect, an opportunistic endeavour (Buchanan, et al, 1988). Seizing on the opportunity to study an established organisation with a clear preference for participating in the interpersonal knowledge exchange process, the original research design was modified as described in chapter Three through the inclusion of a second research question.

This chapter focuses on the ‘why’ of interpersonal knowledge exchange in addressing the second question:

Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

In response to this question, the chapter initially establishes that consultants at ABC prefer to use the interpersonal to the explicit knowledge exchange process (see section 5.2). An understanding of the alternative explicit knowledge exchange process is then developed in section 5.3.
Having established the essence of the two knowledge exchange alternatives available to consultants, the question of why consultants participate at all in either form of knowledge exchange, whether interpersonal or explicit is then addressed (section 5.4). The chapter builds on this foundation to focus directly on the second research question, identifying and discussing the reasons why consultants prefer to participate in the interpersonal knowledge exchange process in preference to using the explicit knowledge exchange process (section 5.5).

5.2 DO CONSULTANTS PREFER INTERPERSONAL EXCHANGE?

From early interview data, it became apparent that respondents had a clear preference for using the interpersonal knowledge exchange process described in Chapter Four. They indicated that consultants at ABC avoided using IT solutions when seeking payload knowledge in the vast majority of cases.

No one uses the [explicit knowledge] databases at ABC. Hardly anyone contributes, and even less consultants use the knowledge that is already stored there. I have tried before and found what is there to be essentially useless for solving my problems – so I haven’t been back. If I want something now, I find someone with the knowledge.

Owen

In order to confirm that the interpersonal knowledge exchange process was clearly preferred by the consultants in general, the respondents were asked to estimate how much payload knowledge is written down and stored in ABC’s databases as a percentage of the total payload knowledge available and required to keep the organisation competitive. The majority of the responses
indicated that between eighty to ninety percent of required knowledge was not stored in an explicit manner.

Most of the knowledge at ABC is in the heads of the consultants. I’d say ninety percent is in this form. Very little knowledge required in solving client problems is written down. Perhaps even ten percent is being generous. Because the stuff that is written down is out of date or of limited use. So ten percent [explicitly stored] would be pretty generous.

Phillip

Given that the majority of knowledge, in the opinion of respondents, is held in the minds of the individuals comprising the consulting community, it is inferred that the majority of payload knowledge exchange must take place through interpersonal processes. Respondents confirmed this when they were asked about how payload knowledge gets exchanged at ABC.

You’d go to your network first. It is more likely to give you a result.

Sasha

And,

Most people, including me, go to their immediate network first. This interpersonal system is the way the vast majority of consultants at ABC exchange knowledge. I’d say it accounts for 90 percent of the exchange activity.

Petra

And further,
Ninety percent [of payload knowledge exchange] occurs through knowing and using people. This involves building your networks, and knowing key people and what they can do and what background they have got.

Carl

All respondents continually confirmed this clear preference for personal networks and interpersonal processes.

So my preferred method of finding knowledge is using my personal contacts. And I think this is very common at ABC because the other options, like using the database option, are not easy. If that database option were easy, I would use it first. And use the pointers as required. But because the other option is difficult, I don't use it.

Sasha

The consultants at ABC clearly prefer the interpersonal to the explicit knowledge exchange process. To fully explore why this is so, a brief description of the alternative explicit knowledge transfer process is required.

5.3 THE ALTERNATIVE – EXCHANGE VIA THE EXPLICIT STORE

5.3.1 THE EXPLICIT KNOWLEDGE STORE

The explicit knowledge store at ABC Consulting comprises a mixture of intranet and shared directory structures accessible by consultants either from the head office or via a remote login process over the internet. The consultants are able to search the company’s databases either through browsing the directory or through logging onto the corporate intranet and navigating to the ‘knowledge base’ main web page.
The directory structures and categorisation method for storing the explicit
knowledge objects in the file system includes storing objects in ‘buckets’
sorted by industry group or industry specialisation.

When I have something to add, I find the big bucket in the file
structure and copy my document into that spot. If it can go into
more than one directory, I will either copy it to both, or choose the
most appropriate one that has more relevance.

Caroline

The objects stored in the intranet’s knowledgebase storage system include
the ability to add categorisations to the document or object, allowing future
search capabilities to be enhanced based on these entries. Such fields as
the author’s name, the client company described in the document, the date
the object was added, and any key search words, are added and stored with
the document in this system.

A representation of the ABC explicit knowledge storage system is shown in
the following Figure 5-1.
The objects are stored in the explicit knowledge store in several formats (including MS Powerpoint presentations, MS Word documents, images, Adobe Acrobat documents) and exist in several forms. For example, templates may hold the table of contents and headings of major reports that consultants require to complete their client projects. Past reports are also available, as are case studies of past projects carried out at the company. In some instances, databases created or presentations given are also stored in the knowledge base, together with spreadsheet models used for evaluation or modelling purposes.

These IT systems and access mechanisms are used by consultants to participate in the explicit knowledge exchange process.

5.3.2 THE EXPLICIT KNOWLEDGE TRANSFER PROCESS

The explicit knowledge exchange process exists as a separate, yet integrated process, to the interpersonal knowledge exchange process. Although respondents did not dismiss IT solutions and databases completely, they saw them as generally less effective than personal networks and much less useful than the interpersonal knowledge exchange process.

It is important to note, however, that some consultants both contribute to and draw from the explicit knowledge store from time to time. When consultants use the explicit store, they expect to short circuit the interpersonal knowledge
exchange process by finding exactly what they require to solve their need.

Nevertheless,

Even through the explicit knowledge store has the right information in it, it is usually difficult to find, it is categorised/stored in the wrong location, or contains incomplete work. It is much easier asking someone who uses the explicit knowledge base to locate what you want and email it to you. This is what I do to save time.

Owen

And,

I do put stuff into the knowledge base, and I take stuff from it when I think it can save me some time. Sometimes I have tight deadlines that do not allow me to chase up my network. It may not be as good [as the interpersonal process], but I have got results using it in the past.

Anne

To illustrate this limited usage, a modified version of the knowledge exchange process is shown in Figure 5-2, displaying only the stages applicable to explicit exchange. Although the request negotiation process (Stage Four), agreement to exchange (Stage Five) and knowledge handover (Stage Six) stages of the interpersonal knowledge exchange process have been removed from the figure, the original numbering of each stage has been retained for clarity.
In the explicit knowledge exchange process, the need for payload knowledge arises at Stage One, and an initial self-resourced search is carried out at Stage Two. If the self-resourced search cannot solve the requesting consultant's need for payload knowledge, pointers to the knowledge are still sought using either interpersonal processes, or information system processes such as search engines or email requests. Up to this point, the process is essentially the same as the interpersonal knowledge exchange process described in Chapter Four.

I still look for pointers to items stored on the knowledge base. This is similar to the process I use if I am going to use the face-to-face process. Pointers still get me to where I want to go faster, even in the databases.

Hayden

However, at the pointer stage, the consultant is directed to an explicit document or object that has been stored somewhere on the company's IT
system. Providing the skills to access the information system exist, the consultant will then download and access the item.

If you were a guru at using the intranet search process, then you would probably have no problems logging in, searching, finding and downloading what you want. It may not take too long. But not all consultants have those skills.

Phillip

And,

I've never logged into the system. I wouldn't know where to start. I don't know much about using the internet, so I'd probably just ask someone at the office to send me a file via email. This of course assumes I know where it is. If I don't know it exists, then I won't bother looking. I don't know how.

Thomas

If the item fulfils the need for payload knowledge, the consultant then effectively bypasses three stages of the interpersonal knowledge exchange process (i.e. the request negotiation, agreement to participate and knowledge handover stages), and re-enters the original knowledge exchange process at Stage Seven. The consultant then adapts the knowledge drawn down from the explicit store using their own tacit knowledge into a form that can be directly applied to the existing problem and client context (Stage Seven).

Let's say I download a presentation. I still change it, sometimes extensively, before using the item again to present it to my client.

Sasha

And,
Often I am only after the table of contents, or a skeleton of what needs to be done. Once I’ve got that I can get on with it, knowing roughly where I am going [because of the roadmap provided by the explicit object]. I don’t usually need the full text. And I will use this outline to create the final report for the client. So yes, I modify it [the explicit object]. Often you wouldn’t call it modify ... you’d say I’ve totally recreated the thing with the final items not resembling at all what I started with.

Caroline

The respondents indicated that they then implement the payload knowledge (Stage Eight), and in doing so, become a potential source of this payload knowledge for future knowledge requesting consultants as in the interpersonal process.

Word soon gets out [that you have done this kind of work], and before you know it your mobile [phone] begins ringing with people who need your help.

Sasha

(Previously quoted in Section 4.3.8)

And,

I have become known as a [IT System] security guru at the company now. I didn’t start out that way. I just did a few jobs using several reports as a guide sourced from the [explicit ABC] databases, and word got around. That’s the way it works around here. People seem to know what you have done from the grapevine, and call you if required.

Keith

The respondents indicated that the extracted explicit knowledge does not exist in isolation. Having been created by the community, it is still understood in terms of the community when being recontextualised by the requesting consultant.
The consultant can only search [the database] based upon the way they think knowledge would be stored in this community. You may need to fill out search engines with specific fields, and leave other fields blank. So that’s how you contextualise what you want and understand. No negotiation goes on, other than I got what I wanted – I’ll change it again to the specific context. This is recontextualisation – you just get an unmodified document, so the first stage negotiation process does not occur.

The explicit knowledge store short-circuits the interpersonal process. You choose your method, you reframe the thing, and if it’s not what you want, you look for something else. Once you get it, you translate it and it’s recontextualised.

Sasha

If the knowledge need is simple, then the database may hold that knowledge and can be recontextualised with ease. However, if the knowledge is complex, then consultants typically avoid the database and re-enter the interpersonal knowledge exchange process.

And the [explicit] database internally is really poor in terms of weakness of data and context. Really it’s full of basic stuff, and generally if they are simple problems, I can solve them myself. If they are complex problems, then I still need a person that can contextualise it for me. So either way, a database driven solution doesn’t really help me.

Carl

In discussing this explicit process, respondents highlighted several problems that formed one part of the reason they prefer the interpersonal process. These problems are discussed in the following section.

5.3.3 PROBLEMS WITH THE EXPLICIT KNOWLEDGE TRANSFER PROCESS

Generally, respondents did not see explicit database stores and IT solutions as the answer to efficient knowledge exchange at the consulting practice.
I think to a degree, it might actually lessen the degree of creativity in solutions. It would provide them with solutions up to a point, but I think it would also create reliance that there is a solution available.

There is room for IT, and there is a lot of stuff that can be translated into explicit knowledge. However, realistically, only ten percent of knowledge experienced in a case study can be translated to explicit form.

Sasha

And,

I don’t think people here would place much stock in codified information held in databases. They probably don’t think it’s rich enough, and the context is not there.

Carl

In fact, some respondents indicated that IT solutions have a negative impact on knowledge exchange and creation.

There is a certain pride that when you codify the knowledge, you remove a lot of the thinking that goes with it. And what I mean by that, ABC consultants to me … one of the things that they pride themselves on … is they are flexible and adaptable. And to a certain extent, they have to survive on their own. So they go into an organisation, they take in what's there, they bring with them their own knowledge, and then they call on their own networks to pull in the bits that they need to get the job done. And it's customised. And it seems to be relatively effective.

Carl

Carl went on to state,
Who knows? Let's say you made the switch now to the super dooper database thing. You build on it, get more methodologies, and how to go about things. You wonder whether subsequent generations of consultants would become dependant on it, and thinking goes out the door, and you would end up with the situation in ten years time where they don’t really understand what they are doing. And they follow something religiously because this is what you do, and we’ve been successful, and we have a track record using that methodology, and in fact we’ve even gone one step worse. We’ve sold that methodology. That is what we are doing to client X. And then they are locked in – everything is locked in. Even though it’s not the focus of that particular context, and how you would solve that problem. It’s beyond me really how this would work.

Carl

The respondents indicated that very few consultants contributed to, and extracted objects from, the explicit knowledge store. Several reasons for a lack of interest in this form of knowledge exchange were identified. They usually revolved around its inability to translate efficiently to the specific context required by the consultants.

Context is everything in this [consulting] business. If it [the payload knowledge] doesn’t suit the client organisations, its current ‘here and now’ focus, the politics on site, and then the personality and preferences of what the direct client wants to see, then forget it. That’s why the databases are no good to me. They are generic. People do a much better job of hitting the specific contextual stuff to provide me with what I need.

Adam

Many of the reasons why consultants do not use this explicit source relate to suspicion about its quality, its source and its reliability.

I don’t want to waste my time reading rubbish. At least in the face-to-face system, you get to validate via your knowledge of the person and their standing in the community as to the value of the information to you. You can take into account rigour and credentials in the person giving you the knowledge.

Hayden

And,
One of the big issues for all knowledge exchange, explicit or tacit, is the issue of not knowing how your knowledge is going to be used. This is a big problem for the explicit knowledge store. Whereas if someone sends me an email directly, I know how they will use the information. I could spend a couple of days writing up all of my stuff and putting it into a knowledge base, and no-one will look at it – so why waste my time. So I think with the explicit knowledge base, it is definitely the perception of what will happen to it. It is simply also not a rewarded behaviour.

Sasha

Sasha observes that not knowing how her valuable (to her) knowledge will be used in the explicit database is an impediment to her placing items within it, which is the same as stating that she participates in the interpersonal knowledge exchange process because she values knowing how her knowledge is going to be used. The depth and personal value of Sasha’s concerns with the misuse of information were elaborated in the following analogy:

You know what it is very much like … when I have clothes that I am not wearing anymore, but I know they are good. I have a lot of trouble putting good clothes into a bin at a charity. And I give to charity. But to think that these things that I think are good clothes are going to be treated badly stops me from putting them in there. But I’ll give those clothes away to any of my friends that want them, and I’m so happy when that happens.

So it’s about having something that is valuable to you, which may not be valuable to anyone else in the world – it’s about knowing how it is going to be treated. And I think knowledge is the same thing. So if someone sends an email that wants this knowledge, then good – I’ve got it and I can give it to him or her. Whereas I’m throwing it into the charity bin if I place it in the database. It’s how you feel about something you own. Something that is valuable to you is going to be used and is going to be respected. And I think that has a lot to do with it. It’s the value you place on your knowledge.

Sasha

This metaphorical description highlights the desire of consultants to protect their knowledge from unknown and nameless recipients who might misuse it.
PREFERENCE FOR INTERPERSONAL PROCESS

This need for interpersonal exchange to validate the worthiness of the potential knowledge recipient emphasises a key reason that IT solutions are problematic for the respondents in this study. Because they are impersonal, they are largely rejected from the social context of the consulting community of practice.

There is a place for searching databases – for professional articles and all the rest. So to ignore them is not the answer. I support the fact that you always need to have a face-to-face system, where you know who is who, and who to go for that specific information, and the value add that they can do. The database can’t do this. Having more money for more computers would not change this. IT would not help.

Carl

The problem of keeping IT systems up-to-date and relevant in this basically hostile environment was mentioned by a number of the respondents.

I think you need to write it down for certain types of knowledge, or depending upon how it is going to be used. I think, based upon the type of knowledge, and its use, will determine what needs to be written down. And I think the majority of it doesn’t need to be written down, simply because the cost involved in writing it down in time, and also in maintaining it, and the accessibility of it. The more knowledge you have - you know, it’s like a filing cabinet. The more you keep in it, the harder it is to find anything.

Sasha

And,

Nothing I have ever found in the databases is up-to-date or useful to me. The IT solution is a waste of time, so I don’t use it anymore.

Phillip

The IT systems appeared inadequate to consultants’ requirement for specific knowledge related to many different and varying contexts. Problems related
to validation of the knowledge, its currency in relation to being up-to-date, and its inability to efficiently meet the current client context discourages consultants from using this form of explicit exchange. The ever changing demands for knowledge are created by the nature of the consultant’s work; one week project managing a telecommunications rollout; the next week building a new business model for a banking product; the following week project managing an IT system rollout in a different company. These diverse work types force consultants to rely on highly adaptable payload knowledge exchange processes to get what they need when they need it. Respondents argue that knowledge is not amenable to codification and storage for retrieval at a later date.

I think it is a joke to think you can put this type of knowledge into a database. I don’t know why they bother trying. Because no one ever goes there to find an answer. And I can’t be bothered putting things in because I know if someone wants it, they will find me.

Joanne

At ABC Consulting, in the eyes of the respondents, the available IT knowledge sharing systems are unable to meet their knowledge sharing needs quickly and efficiently. With little or no confidence in the IT system, they are motivated by necessity (along with other important reasons discussed later in the chapter) to participate in the interpersonal knowledge exchange process.

So far, this chapter has confirmed that respondents to the study, and probably consultants in general at ABC, prefer an interpersonal knowledge exchange process to the alternative explicit knowledge exchange process (section 5.2). Section 5.3 presented the generally unappealing explicit knowledge exchange
process implemented at ABC Consulting. Starting with a functional description of the explicit knowledge storage and retrieval system (section 5.3.1), the section developed and presented the explicit knowledge exchange process as described by the respondents (section 5.3.2) and finished with a discussion of problems (section 5.3.3) related to confirmation of knowledge, its doubtful currency, and its inability to efficiently meet the current client context.

Having described the interpersonal knowledge exchange process (Chapter Four) and the alternative explicit knowledge exchange process, it is now possible to approach the question of why consultants prefer the interpersonal to the explicit process. Before doing this, however, an understanding of why consultants participate in any form of knowledge exchange activity, whether tacit or explicit, is discussed in the following section.

5.4 WHY DO CONSULTANTS PARTICIPATE IN ANY KNOWLEDGE EXCHANGE PROCESSES AT ALL?

Viewing the entire knowledge exchange process as an integrated activity through which all payload knowledge required by consultants is exchanged inside the firm, the motives for consultants to participate in general terms is likely to support a specific understanding of why they prefer the interpersonal knowledge exchange process.

Combining both the interpersonal and explicit exchange processes, the integrated knowledge exchange model that has been developed to this point is shown in the following Figure 5-3.
Respondents indicated that this integrated knowledge exchange process incorporates the processes by which all of the consulting community of practice’s payload knowledge is accessed and exchanged between members of the firm. As such, an exploration of why consultants participate in this integrated exchange process is essentially an investigation, in broader terms, of why they participate in the overall community of practice.

On the basis of respondents to this study, it can be argued that consultants only engage in knowledge exchange, whether it is tacit or explicit, out of self-interest. This argument is based on the point of view that all human
behaviour, no matter how seemingly benevolent and altruistic, can be seen as an individual desire to satisfy psychological or physical needs. This viewpoint was held as far back as Adam Smith:

> It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our necessities but of their advantages.

(Smith 1776 Book 1, Ch.2)

However, as previously identified (see Section 2.4.3.2), self-interest does not appear to be the only reason that consultants participate in knowledge exchange. Self-interest motives are contrasted with more altruistic factors related to giving to the community for reasons that do not directly benefit the consultant. These reasons for participation in knowledge exchange activities within the community of practice can be summarised into tangible rewards, intangible rewards and community related factors.

### 5.4.1 TANGIBLE RETURNS

Consultants clearly participated in the exchange process to obtain tangible returns. In a work environment characterised by demanding clients and rapidly changing circumstances, consultants participate to access up-to-date knowledge, knowledge that is confirmed as relevant to the practice, and knowledge that can provide them with a tangible payoff.
One of the advantages is that the knowledge that comes in [from consultants] is current. You don’t have problems with outdated knowledge.

Carl

Access to this source of up-to-date knowledge allows consultants to rapidly answer their specific questions or solve their problems in an efficient and effective manner, especially when the answer is beyond their own knowledge store.

If I know a lot about the area of interest anyway, I would assume I could find the knowledge through my own means. I go to the community when I want something specific that is beyond my area of knowledge.

Sasha

Knowledge exchange processes in the consulting community provide the means for moving into a new area of interest for the consultant, or expanding the firm’s opportunities to allow the consultant to carry out future work in that area.

In this company, the payoff of this network organisation, basically I can get on projects that I don’t have to have had demonstrated experience, so I can stretch a bit. I can call on these other people who also have a vested interest in me succeeding. If the company succeeds, they succeed. And I think this is a good model just in terms of thinking about the knowledge management and exchange stuff. This loose network of independent consultants that you share with more fully than you would if they were totally independent, because you have an interest in them succeeding.

Carl

Interview responses provided substantial support for the view that tangible reward motivated by self-interest was a prime reason for participating in knowledge exchange. The ability to gain personally from the knowledge exchange process inevitably compelled the consultants in the study into the
community and motivated them to learn the community’s rules and processes to maximise the value of the exchange process to them personally. However, tangible rewards alone were never the only explanation given by respondents for their participation.

5.4.2 INTANGIBLE RETURNS

Through participation in the knowledge exchange processes of the community of practice, consultants obtain intangible rewards. They are able to increase their sense of self-worth while gaining recognition as experts in their field.

Most people who you ask for advice or information also feels, not honoured … what’s the word … they feel their expertise is recognised. So most people like it. Most people like to be asked for their advice. It’s all in the way it’s asked.

Sasha

Consultants participated in the exchange process to learn the artistry (see section 2.3.4 on page 51) and tacit rules and processes that are applied on a day-to-day basis. This intangible and immeasurable benefit to the consultant was referred to repeatedly, and was considered an essential maintenance function in understanding the overall knowledge exchange process.
By participating in the community's knowledge exchange systems, you find out the unwritten rules of the game. Where do you go to find the good [payload] knowledge? What [payload knowledge] should you not go anywhere near? How do I get things in a hurry? You learn the subtle skills from the other consultants so that you can get what [payload knowledge] you want.

Keith

Respondents indicated that a consultant’s reputation and self-image were an important aspect of how they view themselves and their role within the community. Through their reputation, consultants define their identity and roles within the community of practice, moving from the periphery to the core of the group over time. The aim is often to be recognised as a ‘guru’ in a particular area, and this is achieved by participating in the knowledge exchange processes to demonstrate a high degree of competency.

I enjoy helping people in my specialist areas. Through doing this, I become more marketable since the consultants I help will probably bring my name up when asked if they know anyone who is a guru in this field or that.

Robyn

The enjoyment of participating in knowledge exchange activities is a key reason for consultants choosing to participate. Activities that are enjoyable and fun appear to assist knowledge exchange by motivating consultants to take the time required to successfully hand over knowledge. Similarly, although not often the case, respondents indicate that searching for knowledge on the internet or in professional journal databases is enjoyable to them, and so they used this process when appropriate.
I have access to a full range of professional journals online through my university enrolment. I enjoy searching through this comprehensive list of titles, and finding interesting and different articles. It is not much use for payload knowledge often times, as it is too generic. But I don't mind killing an hour or two of my time surfing through these articles, and printing a couple off to read when I get a chance.

Owen

The tangible and intangible rewards described in the previous sections are apparently not the only factors motivating consultants to participate in the knowledge exchange activities of the consulting community. Respondents indicated that consultants are also motivated to participate for community related reasons.

5.4.3 INTERACTION WITH THE COMMUNITY

Participation in the overall knowledge exchange process does not occur in isolation from the community in which it takes place. The community provides the context within which all knowledge exchange is understood and provides the social rules by which the exchange takes place. These processes have evolved over time for ABC Consulting.

I have been here for several years. Over that time, the size and nature of the company has changed. Many people have come and gone, and now I don't know all of the people at the company. However the foundations of the knowledge sharing system have remained fairly constant, although it has changed over time to cater for new challenges and problems.

Elaine

Consultants participate in knowledge exchange activities to contribute to the professional community, and to ensure the ongoing survival and relevance of their specific consulting community of practice.
[I contribute because] I do have a sense of community with ABC. I think that it is a very important part of why ABC is successful. Because people are prepared to share knowledge with each other as a part of the community.

Adam

And,

One [reason for participating] is because you want to have the same opportunity afforded to you. So you give because tomorrow you will probably receive something else.

Sasha

And further,

The other reason for participating is that it is in the company's interest. So on behalf of the company, and how the company operates, it is an important part of the dynamics of the company to do that. So I think you can participate for the benefit of the future and the benefit of the company.

Anne

A fundamental factor in the participation in the community is the concept of reciprocity (see Section 2.4.3.1). Respondents indicated that consultants would directly repay individuals for past efforts expended in creating payload knowledge when it was required.

Reciprocating is an important point. Psychologically there is an immediate payoff. Someone is grateful that you've done something for them. And they give it back to you, as opposed to dumping it in some database.

Carl

However, it is not only the promise of direct payback from the individual consultants that drives the participation in knowledge exchange activities.
I reciprocate and repay the favour when I can. Eventually it all works itself out and everyone pretty much feels they have got their fair share [of payload knowledge] from the [exchange] system in relation to how much they have put in.

Elaine

More often, it is the expectation that the community will reciprocate on an individual's behalf at some point that provides a potentially tangible benefit in the long term. As a member of the community it is therefore the duty of individual consultants to fulfil this expectation when called upon.

I'm not sure how it works, but I give [payload knowledge] where I can to the community because individuals within the group have given [payload knowledge] to me. I may not pay them back directly – but over time [Bob] does me a favour, I do [John] a favour and hand over some knowledge, and this chain continues until eventually [John] ends up helping [Bob]. This way, everyone stays happy.

Petra

Through this community-centred behaviour, the community is advanced and the knowledge exchange process, whether interpersonal or explicit in nature, is maintained.

Having discussed why consultants participate in either knowledge exchange process, it is now possible to focus directly on the question of why consultants at ABC prefer the interpersonal knowledge exchange process to its explicit alternative.

5.5 WHY DO CONSULTANTS PREFER THE INTERPERSONAL KNOWLEDGE EXCHANGE PROCESS?

Earlier in this chapter, the problems with the IT based explicit knowledge exchange process were highlighted from the respondent's viewpoint (see
section 5.3.3). In summary, these problems included poor confirmation of the knowledge, its dubious currency, and its inability to efficiently meet the specific client context. These problems acted as barriers to respondents using the explicit knowledge exchange process described in section 5.3.2, shifting their preferences for knowledge exchange toward the interpersonal process described in Chapter Four. The IT system, as they describe it, essentially has too many inherent problems to meet their needs; problems that the interpersonal process addresses.

However, the existence of these problems with the explicit knowledge exchange process is not the only reason why consultants prefer an interpersonal knowledge exchange process. The following section discusses aspects of context, time, artistry, confirmation of knowledge and social etiquette that directs consultants away from the explicit store toward the interpersonal process. The section finishes with the important human dimension of the interpersonal process – it is socially enjoyable and consultants like participating with other people in the community.

5.5.1 CONTEXT, CONTEXT AND CONTEXT AGAIN

The fundamental reason respondents gave for their preference of an interpersonal knowledge exchange process related to its ability to allow the exchange of context specific knowledge. Consultants are able to directly relate their payload knowledge request to a time and place, building the context in which a tailored response is delivered via the knowledge handover process (Stage Six of the model).
The answering of context specific questions is the most important factor and stage in knowledge transfer. I would put it at the top of the list. The reason for that is that it certainly is immediate. And secondly you can get the bits of information that you want. Whereas if you go into a database, you have to read through ten pages to find two bits of information. Whereas if I can ring, and ask somebody the two questions, I can get my information very quickly and efficiently.

Sasha

Time and time again, respondents referred to the importance of this context specific advantage, and the fact that it was unavailable when knowledge was exchanged via an explicit knowledge exchange process.

Even when referring to other reasons why consultants might prefer the interpersonal exchange process (such as time savings, the ability to exchange tacit forms of knowledge, efficiency), these benefits were valued as resulting from the decontextualisation and recontextualisation processes that occur at knowledge request (Stage Four) and knowledge handover (Stage Six) stages of the interpersonal knowledge exchange model (see Figure 4-8 on page 162).

Many authors have noted that knowledge does not travel freely, and often carries a high exchange transaction cost (Szulanski, 1996; 1999; Szulanski, et al, 2000; von Hippel, 1994). The sticky nature of knowledge in relation to knowledge exchange (Szulanski 1996; 1999; Szulanski, et al, 2000) means that it does not travel easily from source to recipient, nor from context to context as suggested by the communications model of knowledge exchange (see section 2.3.2).
The respondents in this study indicated that this *stickiness* is countered when the requesting and source consultants involved in the payload knowledge exchange share community-based attributes that allow an efficient condensation of the tacit dimension of the payload knowledge, which allows the full (or close to the full) message to be accepted by the requesting consultant.

Sometimes it’s hard to exchange the complex and subtle [payload] knowledge. However, it is far easier from within the consulting community at ABC than trying to do this with someone outside the company. It is definitely not a case of a simple and painless exchange – it takes effort and commitment.

Carl

This funnelling process, discussed more fully in section 4.3.4 (see page 154) relies on community factors such as shared language, mental models, social norms and a social etiquette, to allow tacit and intangible forms of knowledge to be exchanged. The graphical representation of this decontextualisation and recontextualisation process as presented in Chapter Four (see Figure 4-8 on page 162) is repeated here in the following Figure 5-4:
The IT systems, as implemented at ABC, do not appear to allow these forms of knowledge to be efficiently exchanged in relation to a specific context in the explicit knowledge exchange process.

Because of this process, all of the following benefits discussed in this section become available to consultants, making interpersonal sharing a far more attractive knowledge exchange process than accessing the explicit knowledge store.
5.5.2 TIME

An underlying and recurring theme among respondents was the frequent reference to time in relation to their preference for interpersonal knowledge exchange.

People will try to find the most efficient and effective method in order to minimise the economic cost to them. However, this is intangible and virtually impossible to measure, and the decision occurs at the subconscious level. I think the cost has several factors – one is time cost. This is probably the biggest one.

Sasha

Despite considerable use of, and sharing in, the social and knowledge exchange processes of the company as a community of consultants, their personal time was viewed as a precious and limited resource - not to be wasted by inefficient knowledge exchange processes,

It's very much a time factor. People who want knowledge generally want it immediately in the consulting field. They don't like to wait for knowledge. And that's another factor – the currency of knowledge. As soon as you start writing it down, it is very hard to keep it updated.

Sasha

It was frowned upon in the community when consultants requesting knowledge did not first expend a reasonable amount of personal effort in trying to gather the knowledge themselves.

You have to do your homework first. [Source] consultants expect that you have done a reasonable amount of work before you come to them [for payload knowledge].

Keith

Although constantly alluding to time as their enemy in knowledge exchange, provided the correct community practices and social rules were followed,
consultants appeared to be prepared to allocate extensive time to engage in a personal payload knowledge exchange process. Once agreement was obtained, in the view of respondents, time was saved because the community’s language and processes allowed the exchange to occur relatively quickly and efficiently when compared with the explicit exchange process. This may potentially be the outcome of participating in a natural interpersonal knowledge exchange process, rather than unwillingly participating in what appears in the eyes of the respondents to be an artificial and cumbersome explicit knowledge exchange process. In the unanimous view of the respondents, this time related advantage does not exist in the explicit knowledge exchange process unless you are lucky enough to find exactly what you are looking for, you can confirm quickly the explicit knowledge is up-to-date, and you have the necessary skills to access and modify the information to meet your specific needs.

Finding the time to exchange knowledge was a constant challenge, and only appeared to occur when the requesting consultant was highly motivated, or curious enough, to find the knowledge,

The projects are very demanding, and if you don’t have a very good reason then you would never, I don’t think, invest the amount of time and energy necessary to actually learn or give something.

Carl

And,
If I am interested in something, and I only need to find out these bits, the benefit to me in exploring it further is that I gain more knowledge and I become more knowledgeable. That benefit is secondary to the time one always. So I am weighing up time against the benefit of exploring new knowledge in great detail. It’s always time.

Sasha

In summary, if consultants do not believe the knowledge exchange will be time efficient, they will not participate in the process. If, on the other hand, they believe it is time efficient and suits their needs better than alternative knowledge sources, then they will take time out of their busy schedules to participate in the interpersonal knowledge exchange process. In the case of the respondents to this study, the interpersonal knowledge exchange process was clearly indicated as being time efficient in terms of meeting their payload knowledge needs.

5.5.3 ARTISTRY

The process of consulting within the firm’s community of practice involves considerable tacit knowledge and professional artistry (see section 2.3.4 on page 51). Subtle skills such as voice tone, big picture analysis and ‘gut feel’ are all used to draw on past experiences and relate them to the problem at hand. Indeed, the tacit art of skilfully navigating and effectively utilising the interpersonal knowledge exchange process is a case in point. Such processes are artistic in nature and arguably cannot be made explicit. It is only through participation in the community that the consultant can draw on the collective artistry of the firm, applying knowledge and skills developed through membership of the group overtime.
By working with this company I have learned to become a consultant. I didn’t set out necessarily with this as an outcome [goal], but after a few years of working with and around my co-workers, I’ve picked up the art of how to feel comfortable within stressful situations, how to make a client feel comfortable in stressful situations, and how to get on with the job of removing the stressful situations. If you ask me now what these skills are specifically, I couldn’t tell you. You’d just have to watch me and figure it out for yourself.

Tara

Consultants prefer to participate in the interpersonal knowledge exchange process to build on their existing consulting artistry through a process of reflective learning. By reflecting on the application of their new knowledge, they are able to modify and improve techniques that define them as a competent consultant in the eyes of the community.

It is through a reflective process, looking at what has worked and what has not worked in the past, and applying that to the present, that our consultants are able to add a lot of value to clients.

Petra

This reflection on action and outcomes, and application of the unique artistry of the consulting community’s practice, allows the firm to develop over time a tacit knowledge of how to do things for their clients. This artistry is integrated into the interpersonal knowledge exchange process, is not available to consultants in the explicit knowledge exchange alternative, and is definitely not explicitly recorded anywhere in the firm. It is to access this privileged and unique source of tacit knowledge that consultants prefer to participate in the interpersonal knowledge exchange process of the company’s community of practice.
5.5.4 CONFIRMATION

Consultants participate in the interpersonal knowledge exchange process to confirm their personal knowledge in relation to the community’s view of up-to-date and applicable knowledge. As discussed in Section 4.3.3 ‘confirmed’, in this context, means that the pointers along the way have given the consultant a judgement from within the community of practice of who has up-to-date and expert knowledge in the specific area of interest. Through seeking and completing interaction in the interpersonal knowledge exchange process, personal knowledge can be confirmed by comparison with possible experts within the community. This acts as a quality control process that allows the requesting consultant greater confidence that the end product will be immediately relevant and credible to the immediate task.

I guess my first recourse would be to try to answer the question myself. Work out an approach, and then maybe validate with other people, or ask them if they have a better approach. For this reason, this process can validate my own knowledge with peers. Going a little bit further, I go to network meetings, just to see what people put up. There is no specific agenda or question in my head. I just go in there trawling.

Carl

And,

Sometimes you receive information from someone, and you might check it with someone else. This is a validation process that the community makes easier, because if the community thinks it is OK, then you will probably feel comfortable.

Sasha

Also,
PREFERENCE FOR INTERPERSONAL PROCESS

To a certain extent, you narrow down your target, so I might ask a certain person about Business Process Reengineering, just because of an off-the-cuff type comments that you encompass – you might think, she might be worth listening to, whereas another person, when they talk, you might think 'well – they don’t seem to be terribly sophisticated in that field', so I won’t ask them. Based upon language and the way they talk about the topic, you make a judgement of where they sit.

Carl

This confirmation process appears to be far more efficient to the respondents than using the explicit knowledge exchange process. In the explicit process, the consultant starts from a blank slate, researching from scratch, trying to establish the relevance to the specific context of the knowledge found. For the more experienced consultants, however, the use of the interpersonal process allows them to confirm the sourced knowledge in a number of ways:

I don’t want to waste my time reading rubbish. At least in the face-to-face system, you get to validate via your knowledge of the person and their standing in the community as to the value of the information to you. You can take into account rigour and credentials in the person giving you the knowledge.

Hayden

Previously quoted (section 5.3.3).

Access to this confirmation resource within the community evolved as a further motivating factor as to why consultants prefer to participate in the interpersonal knowledge exchange process as opposed to the explicit knowledge exchange process.

5.5.5 SOCIAL ETIQUETTE

Social etiquette relates to the behaviour, manners and protocol established by convention as acceptable or required in the specific organisation or community (as discussed in section 2.4.3 on page 61). Each of the
respondents stressed the importance of knowing the rules of this social
etiquette in the community of consulting practice. Knowing who to ask, when
to ask them, and how to approach a person in particular circumstances to
obtain payload knowledge were seen to be imperative to the success of the
knowledge exchange process.

You have to know who is who. How to approach people. What
channels to use. What not to say is often more important than
knowing what to say.

Knowing that the CEO strongly believes in star signs and used
these to hire people in the past is something that is not written
down. But you know not to bring up star signs with any senior
consultants, because it make them uneasy talking about these
irrational quirks of the company. Whether it is myth or true, it
doesn’t matter. It is the reality of the community.

It takes time to learn this and you don’t learn it from the formal
induction process. It’s through lunches, coffees, cluster group
lunches and informal catch-ups that these things emerge. It took
me a couple of years to fully get a handle on it – and even now I
make mistakes.

Phillip

In fact, the exchange of this social etiquette knowledge was seen as an
integral part of the interpersonal knowledge exchange process, and the goal
of mastering this form of tacit knowledge was an implied reason for
participating in the interpersonal knowledge exchange process of the
consulting community of practice.
PREFERENCE FOR INTERPERSONAL PROCESS

Through participating in a group, you learn the knowledge sharing process, which is never written down, and often varies from individual to individual. Because you have exchanged knowledge, and been through the negotiation process several times before with a person or with groups of people, you learn the ‘game’ of how to have this negotiation on demand when you need it in relation to payload knowledge. You learn to have a beer first, or a coffee – and you learn that buying coffee is the accepted way of getting consultants out of the office or client site to participate in the process. It is all very subtle stuff, and it is part of the community norms, and the way things happen. This is an essential part of knowledge exchange.

Adam

The importance of how to go on with activities in any community, group, organisation or society was seen as fundamental to an individual achieving a successful outcome. However, most of what the consultant knows about the social etiquette of the consulting community’s practice remains unstated. It resides in a tacit practical consciousness of how to proceed (Giddens, 1984).

Being in the company helps you develop a shared understanding of how things get done. It may take some time to get to this point, and the time will vary from individual to individual, because some people would be there in a very short time, and I guess the types of people we employ in this company would get into the middle of the community fairly quickly.

Sasha

Skilled enactment of the community’s social etiquette dictated the success rate for negotiating agreement from source consultants to handover payload knowledge using the interpersonal knowledge exchange process. In consequence, the consultants prefer the interpersonal process because they understand the social etiquette and this allows them to access the context specific payload knowledge when required. The social etiquette dictates at ABC that interpersonal and social processes are the preferred method to exchange knowledge.
At ABC, everyone knows that the way to get [payload knowledge] is to do it in a socially enjoyable situation. Nobody wants to sit in front of a computer when it is not required. There is not social etiquette dictating that I must contribute and retrieve documents from the [explicit] database. However, just ask five consultants in the office right now about how knowledge is exchanged at ABC, and they will tell you [that it is the clear social etiquette that] knowledge is served with beer or coffee.

Owen

Respondents indicated that the explicit knowledge exchange system does not provide access to knowledge of the social etiquette required to become a part of the community. In fact, respondents also indicated that the social etiquette of ABC dictates that consultants use the interpersonal knowledge exchange process to exchange the majority of payload knowledge. This preference for interpersonal exchange suggests a further important reason for why the respondents, and perhaps consultants in general, prefer the interpersonal process to the explicit process: the interpersonal process is perceived as being fun and enjoyable.

5.5.6 SOCIAL ENJOYMENT

Respondents generally reported the act of participating in the community as a socially enjoyable and entertaining experience, with the knowledge exchange flowing arguably as a secondary benefit. The drinks and coffees, social events, informal catch-ups and gossip sessions all formed a part of the community’s knowledge exchange process and the respondents enjoyed feeling valuable and recognised for their knowledge capability. As Owen observes, ‘knowledge is served with beer or coffee.’
Respondents enjoyed the act of meeting other consultants and engaging in social behaviour. This contrasted with their response to the explicit exchange process, where consultants are often sitting on a computer remote from the head office, alone and isolated from their colleagues, trying to access explicit knowledge over the Internet.

I don’t know why anyone uses the [explicit knowledge] databases at ABC. I can think of nothing more boring. I’d rather have a few drinks and have some fun whilst getting hold of the knowledge required. Everyone works this way at ABC. If you don’t, you will not obtain much [payload] knowledge from the others. They like wine, beer, coffee and food to stimulate the process. And probably in that order.

Keith

It was clearly suggested by respondents therefore that consultants at ABC prefer to engage in the interpersonal knowledge exchange process because it is more socially enjoyable and, in general terms, more fun than the explicit knowledge exchange alternative.

5.6 CHAPTER OVERVIEW

Respondents in this study indicated, at an early stage, a clear preference for participation in the interpersonal knowledge exchange process as opposed to drawing on the company’s explicit knowledge store. In the view of the respondents, eighty to ninety percent of knowledge at ABC Consulting is exchanged using the interpersonal knowledge exchange process described in chapter Four. This presented an opportunity to ask the second research question,
Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

Chapter Five addressed this question by first clearly establishing that the respondents, and consultants in general at ABC, prefer to participate in the interpersonal as opposed to the explicit knowledge exchange process (section 5.2). Having established this point, it was necessary to build an understanding of the alternative explicit knowledge exchange process (section 5.3). Firstly the functional description of the IT architecture, access methods and content of the explicit knowledge store was described (section 5.3.1). This was followed with a description of the explicit knowledge exchange process (discussed in 5.3.2 and represented in Figure 5-2). The problems associated with the explicit knowledge exchange process, as indicated by the respondents, was discussed in section 5.3.3, highlighting that issues relating to confirmation of the knowledge, its currency, and its inability to efficiently meet the current client context, discourage consultants from using this form of explicit exchange.

The reasons why consultants at ABC participate in any form of knowledge exchange, whether interpersonal or explicit, was discussed in section 5.4. It was established that consultants were motivated by both self-interest through tangible and intangible rewards, and through an obligation to the community to enhance and maintain the community of practice as a viable and ongoing professional group.

Having established in general terms why consultants participate in knowledge exchange of any form, it was then possible to address the direct question of
why they prefer the interpersonal knowledge exchange process to the explicit knowledge exchange alternative (section 5.5). In essence, consultants prefer this process because it allows them to exchange context specific payload knowledge that cannot be expressed or stored in an explicit form.

Using shared language, norms, etiquette and mental models that have developed in the community over time, the respondents to this study indicated that consultants are able to decontextualise and recontextualise their knowledge in an exchange situation efficiently in a way that is not possible using the explicit process (section 5.5.1).

The decontextualisation and recontextualisation process, as a part of the interpersonal knowledge exchange process, offers many benefits to consultants that the explicit process cannot deliver. Namely, it:

1. Saves them time when exchanging complex and context specific payload knowledge (section 5.5.2).
2. Encourages them to exchange the artistry associated with implementing the payload knowledge (section 5.5.3).
3. Allows them to confirm their personal knowledge against that of the community of practice to ensure it is appropriate in the specific client context and it is up-to-date. (Section 5.5.4).
4. Enables them to learn and skilfully enact the social etiquette of the consulting community of practice (section 5.5.4).
5. Is socially required (as the prevailing community etiquette) to use interpersonal exchange processes as opposed to contributing and retrieving information from the explicit knowledge store (section 5.5.5).
6. Is socially enjoyable, and consultants prefer to exchange knowledge in a situation that is fun and enjoyable. The explicit process is generally not seen as fun or enjoyable (section 5.5.6).
In conjunction with the advantages available using the decontextualisation and recontextualisation processes (section 4.3.4), and further taking into account the identified problems with the explicit knowledge exchange process that discourage consultants from using this alternative (section 5.3.3), these six reasons describe why consultants at ABC prefer the interpersonal knowledge exchange process described in Chapter Four.
CHAPTER 6 - CONCLUSIONS AND IMPLICATIONS

6.1 INTRODUCTION TO THE CLOSING CHAPTER

This dissertation set out to investigate the nature of interpersonal knowledge exchange within a consulting practice to better understand and describe the process by which knowledge is exchanged between consultants.

Chapter One introduced the dissertation by explaining why the research is important to theory and practice. Knowledge and knowledge exchange was shown in Section 1.2 to be an increasingly important resource for organisations and therefore worthy of further research focus. Rather than focus only on the more obvious explicit dimensions of knowledge exchange, the unwritten or tacit dimension of knowledge exchange was included in the research focus. The significance of the research for consultants (Section 1.3) and the importance of complex and frequently tacit knowledge exchange in consulting firms (Section 1.4) was then highlighted as an influence in the design of the research, especially relating to the community aspect of knowledge exchange (Section 1.5).

From this background, the initial research question was posed:
What is the interpersonal process by which knowledge is exchanged between consultants?

It became apparent through early data gathering stages that an opportunity existed to explore the emerging clear preference that existed with consultants at the fictionalised consulting company ABC to the use of interpersonal rather than information system based knowledge exchange processes. Consequently, in an advance to the originally proposed methodology, a second research question was introduced:

Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

In pursuing the answer to these two questions, the aims of the research project (Section 1.6) were:

- To balance the knowledge management literature with empirical research, specifically referencing the interpersonal and tacit dimensions of knowledge exchange;

- To reduce the researcher’s feeling of unease with a view commonly expressed in the management literature that knowledge management is an information systems issue, such that most knowledge management solutions lie in the implementation of a new or more sophisticated IT system;

- To integrate practice and theory through a practical, workplace focused research project and to provide major and actionable contributions to practice;
CONCLUSIONS AND IMPLICATIONS

• To communicate clearly and concisely the research findings and conclusions to other researchers and practitioners, thus advancing the theory and practice of knowledge management.

In order to leverage existing work in the area, and to maximise the value of this research to practitioners and academics, a comprehensive literature review was carried out to frame the research questions within the existing body of knowledge (Chapter Two). The research was located within the strategic management framework, specifically focusing on knowledge management and maximising the value of knowledge as a strategic resource for the firm (Section 2.2). The research focus was narrowed to examine the process of knowledge exchange (Section 2.3), wherein knowledge exchange is typically described as a process based on a signalling metaphor adopted by communications theory. In this context, Dinur and Inkpen's (1996) model was chosen as a reference point for exploring the mechanism of the knowledge exchange process within a consulting firm.

However, the broad focus of the research project, including both tacit and explicit knowledge, required further expansion of this process-based communication model through the examination of knowledge as a social process exchanged within communities of practice (Section 2.4). To provide a fuller description of this exchange process, the motivation for participants to participate in the community based knowledge exchange was explored (Section 2.4.3).
Confirming self-interest as a major motivating factor, several further reasons for participation were identified. These were drawn from social exchange theory. The Wasko and Faraj (2000) classification of motivational factors was chosen as an initial framework for content analysis to understand why consultants participate in knowledge exchange processes, and further prefer the interpersonal process over the explicit IT based process.

Consultants were chosen as the focus of attention in this study to represent knowledge workers since they directly sell their personal and the firm’s knowledge to clients in return for consulting fees. The reasons for this choice are discussed in Section 2.5, along with an examination of literature in relation to knowledge exchange in consulting firms.

The research design for the study was developed from a literature review described in Chapter Three. Using a top down approach, the choice of qualitative methodology (Section 3.2) and case study were described (Section 3.3.2 and 3.3.3). The study involved in-depth interviews with sixteen consultants (Section 3.4 and 3.5) after which a content analysis of the transcripts was undertaken separately for each research question (Section 3.6). The role of the researcher (Section 3.7), considerations related to ensuring a high standard of research (Section 3.8) and the ethical considerations addressed in carrying out the research (Section 3.9) were also discussed in Chapter Three.

The findings of the dissertation were presented and discussed in two chapters:

CONCLUSIONS AND IMPLICATIONS
Chapter Four examined the research question

**What is the interpersonal process by which knowledge is exchanged between consultants?**

and Chapter Five discussed the findings in relation to the research question

**Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?**

Chapter Six concludes the dissertation, summarising the findings and drawing conclusions for each of the research questions in turn. In some cases, to allow the full description of the findings to unfold, conclusions were drawn in the relevant findings chapter. For example, a description of the eight stage interpersonal knowledge exchange process would be incomplete in Chapter Four without a full discussion regarding the conclusions developed relating to the decontextualisation and recontextualisation process that is carried out. In these cases, the conclusions are restated and briefly discussed in this chapter. The chapter identifies and discusses major implications for practice that can be drawn from each of the conclusions, and closes with suggestions for research design improvement and implications for further research direction.
6.2 CONCLUSIONS DRAWN FROM CHAPTER FOUR –
INTERPERSONAL EXCHANGE PROCESS

Chapter Four directly addressed the research question:

What is the interpersonal process by which knowledge is exchanged between consultants?

As a result of the findings presented in Chapter Four, conclusions have been drawn in the following five broad areas:

1. Dinur and Inkpen’s (1996) knowledge exchange process required enhancement to account for behaviour within communities of practice, and in relation to the interpersonal knowledge exchange process.

2. A construct labelled payload knowledge was introduced to assist respondents understanding of, and focus, on the exchange of both tacit and explicit knowledge required to solve their client’s problems.

3. The interpersonal process by which knowledge is exchanged by consultants can be described using an eight-stage framework.

4. The interpersonal process utilises a decontextualisation and recontextualisation process to funnel and condense the payload knowledge in order to exchange its full meaning between the requesting and source consultant.
5. The interpersonal knowledge exchange process is artistic and non-linear in nature.

Each of these five conclusions is discussed in turn in the following sections. The implications of these conclusions for practice are then discussed in section 6.5.1.

### 6.2.1 EXTENDING THE KNOWLEDGE TRANSFER MODEL

Many authors have described knowledge exchange or transfer as a process based on the signalling metaphor adopted by early communications theory and discussed in Section 4.1 (Argote and Ingram, 2000; Breshman, *et al*., 1999, Szulanski, 1996; 1999, Husman, 2001, Dinur and Inkpen, 1996). This foundation was used to build an eight-stage model describing the interpersonal knowledge exchange process used by consultants. Expanding on the communication theory metaphor, and specifically Dinur and Inkpen’s (1996) four stage model of knowledge exchange, these eight stages account, in this study, for the role of the community in encoding and decoding tacit message content through the use of shared mental models and well accepted socially based processes.

Dinur and Inkpen’s (1996) original model, which is based on Szulanski’s (1996) description of the knowledge transfer process, consists of four distinct stages as shown in the following Figure 6-1:
This research has applied Dinur and Inkpen’s (1996) framework to a community setting and found that additional stages and attributes were required to fully explain the research data gathered in relation to the process by which knowledge is exchanged between consultants. Specifically, the Dinur and Inkpen (1996) model does not appear to take into account the pull nature of knowledge exchange in consulting firms (see section 4.2) and assumes the knowledge exchange to begin once its need has been recognised by the knowledge source. Respondents to this study indicated that the knowledge exchange process begins well before this point, and that earlier stages define whether agreement will be reached with the source consultant to participate in the knowledge handover. Additionally, the Dinur
and Inkpen (1996) model assumes that knowledge can be fully converted from a tacit to an explicit form for handover from the source to the recipient.

Consequently, a conclusion was drawn in Chapter Four that the four stage Dinur and Inkpen (1996) model required enhancement to account for the interpersonal knowledge exchange process through incorporation of three additional stages leading up to an agreement to exchange by the source consultants (the knowledge pull process in stages one to three).

Further, the model required enhancement to expand the role of the community’s decontextualisation and recontextualisation process through a knowledge request and a knowledge handover stage. Each of these two stages involved an adaptation, translation and negotiation process applying the community’s shared language, mental models, community norms and social etiquette. A comparison between the eight-stage model developed in Chapter Four, and the original stages of Dinur and Inkpens’s (1996) model is shown in the following Figure 6-2.
6.2.2 PAYLOAD KNOWLEDGE

Rather than the much-debated distinctions between tacit and explicit knowledge, or the differences between data, information and knowledge, the respondents were far more practically focused on knowledge as a business input to produce an outcome for their client. Respondents became increasingly confused with the distinctions between difficult to understand knowledge concepts, especially the difference between tacit and explicit knowledge. To counter this difficulty, as discussed in section 4.2.1, a construct labelled payload knowledge was introduced.

Payload knowledge was defined in this dissertation as:
Payload knowledge is that specific distillation of knowledge, both tacit and explicit, required to resolve an applied problem in context.

A graphical representation of this concept was introduced to focus respondents on the practical knowledge exchanged in the interpersonal knowledge exchange process. This representation was shown as follows:

![Diagram](image)

*Figure 6-3: Representation of payload knowledge*

Respondents indicated that two further types of knowledge existed in the firm; Administrative and Prospect Knowledge. A representation was once again shown to respondents as follows:

![Diagram](image)

*Figure 6-4: Payload, administrative and prospect representation of the firm*
From the difficulties experienced in focusing consultants on the concept of knowledge transfer via interpersonal processes, especially in relation to distinctions between tacit and explicit knowledge, it can be concluded from this study that knowledge is not well defined in currently popular academic terms in the minds of consultants, nor do they require an explicit definition to exchange knowledge. A practically focused and clearly understandable concept, in this case *payload knowledge,* allowed consultants to conceptualise knowledge as anything they required to get the job done. This exploratory construct helped respondents to focus on how it is exchanged in an interpersonal manner.

### 6.2.3 INTERPERSONAL KNOWLEDGE EXCHANGE PROCESS

It was concluded from the findings described in Chapter Four that the interpersonal knowledge exchange process, in the view of the respondents, can be represented as a process involving eight independent and identifiable stages. In section 4.3, the eight-stage interpersonal knowledge exchange process was developed and described in detail. The final interpersonal exchange framework is repeated here in Figure 6-5:
The study identified a view that, in the consulting environment, the knowledge exchange process begins at the point when a need for knowledge is recognised (Stage One - section 4.3.1). To satisfy this knowledge need, the second stage of the process involves carrying out a self-resourced search (Stage Two - section 4.3.2). If the knowledge need cannot be satisfied at this point, the consultant looks for pointers as to where to find the knowledge (Stage Three - section 4.3.3) and, after going through several hops and jumps between pointers, the consultant finds a source of the knowledge required.
The consultant then engages in a request negotiation process where the knowledge need is adapted into a form that the knowledge source can understand (Stage Four - section 4.3.4). This leads to a negotiation process in which two minds meet and move toward a shared understanding of the knowledge requirement and its specific context in relation to both the client and the community of practice. The agreement to exchange is gained from the consultant with the required information (Stage Five - section 4.3.5), and the knowledge handover process is initiated (Stage Six - section 4.3.6).

The handover process involves further adaptation, negotiation and translation as source consultants (with the knowledge) describe or demonstrate what is needed to fill the requesting consultant’s knowledge need - based upon their perception of this need. Negotiation within the context of the consulting community’s shared practices, language, norms and mental models allows the consultants to quickly and efficiently move toward a common understanding of the knowledge required to solve the specific problem. This solution is adapted and translated in the negotiation process to move it as close as possible to the immediate context required by the requesting consultant.

When the handover is completed, the required information is finally distilled by the requesting consultant to meet the requirements of the client specific context (Stage Seven - section 4.3.7). This distillation may include a range of responses, including adapting a methodology to meet the specific industry or client, or transferring the information into an explicit form as payload knowledge for presentation to a client. Regardless of the adaptation required,
the final stage of the interpersonal knowledge exchange process involves the implementation of the exchanged knowledge (Stage Eight - section 4.3.8). The interpersonal knowledge exchange process is complete when the payload knowledge has been internalised through action by the requesting consultant. In many situations, the source consultant is also able to learn from the requesting consultant through applying the negotiated base payload knowledge to a different client context. Therefore both parties can be seen to benefit from the interpersonal knowledge exchange process. Through a reflective process the requesting consultant, and possibly also the source consultant, is able to modify future behaviour based on the outcome of what has become tacit knowledge.

6.2.4 DECONTEXTUALISATION AND RECONTEXTUALISATION PROCESS

Rather than seeing knowledge as emerging from information, which in turn is built from data, Tuomi (1999) asserts that this traditional hierarchy of data, information and knowledge is inverted; data can only be created with information that comes from knowledge. Building on Tuomi’s (1999) reverse hierarchy model, an observation was made in section 2.2.2 that the ‘reverse’ view appears to be based on viewing the traditional model from the opposite end of the decontextualisation and recontextualisation process. This observation was summarised in Figure 2-1 and is repeated here in Figure 6-6:
This foundation coupled with the concepts of decontextualisation and recontextualisation was used to describe how payload knowledge is funneled and condensed using the community’s shared mental models, language, social etiquette and cultural norms such that the full meaning of the payload knowledge can be reconstructed by the requesting consultant as intended by the source consultant. This process (described in section 4.3.4 and summarised in Figure 4-6) is carried out at the request negotiation stage (Stage Four) and the knowledge handover stage (Stage Six) of the interpersonal knowledge exchange process. The summary illustration is repeated here in Figure 6-7:
The negotiation process carried out in the interpersonal knowledge exchange process serves to align as closely as possible the requesting and the source consultant’s understanding of each other’s mental models, ability to use shared language, ability to skilfully observe the social etiquette of the consulting community, and ability to abide by the cultural norms. The negotiation process aligns these community attributes in such a way that the most efficient exchange will occur. The process (described in section 4.3.4) is summarised in figures Figure 4-7 (unaligned attributes) and Figure 4-8
CONCLUSIONS AND IMPLICATIONS

(aligned attributes). These figures are repeated below as a combined Figure 6-8;

![Diagram showing negotiation aligns the community attributes of request and source consultant]

Figure 6-8: Negotiation aligns the community attributes of requesting and source consultant

This illustration suggests that the unaligned source and recipient consultant (left illustration above) move toward an area of the community where they share common attributes that allow them to exchange the full meaning of the payload knowledge (right side of Figure 6-8).

6.2.5 ARTISTIC AND UNPREDICTABLE PROCESS

The eight-stage interpersonal knowledge exchange process described in Chapter Four is far from the linear process implied by Figure 4-3 (and repeated earlier in this chapter as Figure 6-5). It is a process embedded...
CONCLUSIONS AND IMPLICATIONS

within a community of practice with a shared language, cultural norms, mental models and social etiquette.

The respondents to this study indicated that the interpersonal knowledge exchange process is both unpredictable and artistic (see section 4.4 for a discussion of the findings, and page 51 for a discussion on ‘artistry’). Participation in the interpersonal knowledge exchange process, although moving through identifiable stages as confirmed by respondents, does not guarantee the requesting consultant finding the payload knowledge required. However, through the skilled application of their professional artistry (see page 51), and observing the community’s social etiquette, consultants are able to maximise their chances of creating a successful outcome through a transfer of payload knowledge from a willing source consultant.
CONCLUSIONS AND IMPLICATIONS

6.3 CONCLUSIONS DRAWN FROM CHAPTER FIVE – PREFERENCE FOR INTERPERSONAL EXCHANGE

Chapter Five directly addressed the second research question:

Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?

As a result of the findings presented in Chapter Five, the following four broad conclusions have been drawn:

1. Consultants at ABC clearly prefer to use the interpersonal knowledge exchange process to the explicit knowledge exchange process.

2. The explicit knowledge exchange system was predominantly IT based and held a number of inherent problems that discouraged its use.

3. There are a number of tangible, intangible and community related reasons why consultants participate in any form of knowledge exchange in an organisation, often acting beyond self-interest to contribute to the community.

4. Consultants prefer the interpersonal to the explicit knowledge exchange process at ABC predominantly because:
CONCLUSIONS AND IMPLICATIONS

• It allows them to exchange tacit and intangible aspects of knowledge related to the specific context for which the payload knowledge is required, and

• It avoids the problems associated with information technology solutions.

Respondents identified five further reasons why consultants preferred the interpersonal knowledge exchange process:

• Time saving
• The ability to learn the artistry of consulting
• The ability to confirm their personal knowledge against the community’s payload knowledge
• Allows them to skilfully use the social etiquette of the community to gain agreement from source consultants.
• Consultants also have fun and enjoy the interpersonal process more than the explicit IT alternative.

Each of these four broad conclusions is discussed in turn in the following sections. Further, the implications these conclusions have for practice are discussed in section 6.5.2.

6.3.1 CLEAR PREFERENCE FOR INTERPERSONAL PROCESS

In the opinion of the respondents, consultants displayed a clear preference to exchange payload knowledge using the interpersonal knowledge exchange process. Since the majority of payload knowledge (estimated at between eighty and ninety percent by respondents) exists in the heads of the consultants, it was initially inferred from the study that a preference for personal exchange should exist. This preference for interpersonal over explicit exchange processes was confirmed by the respondents in the study
(see section 5.2), leading to the conclusion that the consultants in general at ABC preferred this means of exchanging payload knowledge.

### 6.3.2 THE EXPLICIT KNOWLEDGE EXCHANGE PROCESS

In addition to the interpersonal knowledge exchange process, a small amount of knowledge (reportedly never above 20 per cent of the total knowledge exchanged by the consultants) was identified as being exchanged explicitly. The explicit knowledge exchange process was predominantly IT based, and took place across a number of stages. When initiated, it effectively bypassed the *Request Negotiation Process* (Stage Four), *Agreement to Exchange* (Stage Five), and the *Knowledge Handover Process* (Stage Six) shown in the model at Figure 6-5. This research suggests that the explicit knowledge transfer model is a simplified form of the entire knowledge exchange model as shown in Figure 6-9.

![Figure 6-9: Extracted explicit knowledge exchange process (original stage numbers unaltered)](image-url)
CONCLUSIONS AND IMPLICATIONS

It was observed in this study that the explicit knowledge exchange system, in the eyes of the respondents, suffered from several inherent problems that discouraged its use. As discussed in section 5.3.3, most problems related to the inability of the explicit process to exchange context specific payload knowledge that consultants require to solve their client’s problems. Coupled with the inability to confirm knowledge as an acceptable solution, and keeping knowledge up-to-date, these problems discouraged consultants from contributing to, or drawing on this resource to any large extent. It was concluded that response to these problems forms a substantial part of the answer as to why consultants prefer the interpersonal knowledge exchange process.

6.3.3 WHY CONSULTANTS PARTICIPATE IN ANY FORM OF KNOWLEDGE EXCHANGE

It was confirmed in section 5.4 that consultants are motivated to participate in knowledge exchange activities, both interpersonal and explicit, out of self-interest. Respondents indicated, however, that self-interest alone does not adequately explain the often altruistic and community centred behaviour of consultants in relation to knowledge exchange. It was concluded that consultants participate for a number of varied reasons, which can be grouped into tangible, intangible and community related rewards.

Respondents indicated that tangible rewards included gaining the payload knowledge to directly solve their client problem and being able to confirm their payload and personal knowledge is up-to-date and relevant. Intangible rewards, such as increasing their self-worth and gaining recognition from the
community of their expert status, also motivated consultants to exchange knowledge. However, there was a strong indication from respondents that consultants also participate in knowledge exchange as a community obligation, attempting to protect and ensure the ongoing survival of the community of practice through reciprocating either directly or indirectly for the benefits they have gained through their own participation.

6.3.4 WHY DO CONSULTANTS PREFER INTERPERSONAL TO EXPLICIT KNOWLEDGE EXCHANGE PROCESSES?

Having concluded that consultants prefer the interpersonal knowledge exchange process to the explicit knowledge exchange process, a number of reasons for this preference were identified.

Firstly, the explicit knowledge exchange system exhibited a number of inherent problems that discouraged consultants from contributing to, or extracting explicit knowledge objects from, the knowledge store. Secondly, the interpersonal exchange process allowed consultants to exchange the full meaning and context of the knowledge, beyond the explicit form it took, through the decontextualisation and recontextualisation process described in Chapter Four. Finally, a number of additional benefits were identified by the respondents that motivated consultants to choose the interpersonal over the explicit exchange process. These included that it:
CONCLUSIONS AND IMPLICATIONS

1. Saves them time when exchanging complex and context specific payload knowledge (section 5.5.2).

2. Encourages them to exchange the artistry associated with implementing the payload knowledge (section 5.5.3).

3. Allows them to confirm their personal knowledge against that of the community of practice to ensure it is appropriate in the specific client context and it is up-to-date. (Section 5.5.4).

4. Enables them to learn and skilfully enact the social etiquette of the consulting community of practice (section 5.5.4).

5. Is socially required (as the prevailing community etiquette) to use interpersonal exchange processes as opposed to contributing and retrieving information from the explicit knowledge store (section 5.5.5).

6. Is socially enjoyable, and consultants prefer to exchange knowledge in a situation that is fun and enjoyable. The explicit process is generally not seen as fun or enjoyable (section 5.5.6).
6.4 SUMMARY - WHAT DOES THIS MEAN?

This research has found that the interpersonal knowledge exchange process used to exchange payload knowledge between consultants at ABC Consulting can be represented as an eight-stage process based model. The execution of these eight stages by requesting consultants is an essentially artistic and unpredictable endeavour undertaken within an accepted social context and characterised by both conscious and unconscious decisions that move them toward a source of the payload knowledge.

A key advantage of the interpersonal process described is the decontextualisation and recontextualisation process that is carried out at both the request negotiation stage (Stage Four) and the knowledge handover stage (Stage Six) of the interpersonal process. This process uses the community’s shared language, mental models, social etiquette and cultural norms to compress and funnel the meaning of the payload knowledge into a form that can be transferred meaningfully to the requesting consultant.

Consultants prefer this interpersonal process primarily because the decontextualisation and recontextualisation process allows them to exchange payload knowledge that is directly and specifically relevant to their current client context and to the problems they need to solve. The alternative IT based explicit knowledge exchange process has several inherent problems related to confirmation of knowledge as being up-to-date, confirmation of the proposed solution as acceptable in the eyes of the community, and evidence
CONCLUSIONS AND IMPLICATIONS

that the data is appropriately protected from abuse by unscrupulous or non-community users.

Through participating in the interpersonal knowledge exchange process, consultants save time, and are provided with an opportunity to confirm their personal knowledge as up-to-date and relevant to the specific context. By using the interpersonal process, consultants abide by the community’s social etiquette, which dictates an interpersonal process as the preferred exchange mechanism. The interpersonal process allows them to practice and learn the consulting community’s professional artistry and, in the process, enjoy the exchange experience and have fun. These conclusions are summarised in the following Table 6-1:
CONCLUSIONS AND IMPLICATIONS

<table>
<thead>
<tr>
<th>Finding Number</th>
<th>Finding</th>
<th>Chapter One/Two References</th>
<th>Chapter Four References</th>
<th>Chapter Five References</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2.1 (Ch.4)</td>
<td>Extending the Knowledge Transfer Model</td>
<td>Section 2.2.2 on page 27</td>
<td>Section 4.2 on page 127</td>
<td></td>
</tr>
<tr>
<td>6.2.2 (Ch.4)</td>
<td>Payload Knowledge</td>
<td></td>
<td></td>
<td>Section 4.2.1 on page 131</td>
</tr>
<tr>
<td>6.2.3 (Ch.4)</td>
<td>Interpersonal Knowledge Exchange Process</td>
<td></td>
<td></td>
<td>Section 4.3 on page 138</td>
</tr>
<tr>
<td>6.2.4 (Ch.4)</td>
<td>Decontextualisation and Recontextualisation Process</td>
<td>Section 2.2.2 on page 27</td>
<td>Section 4.3.4 on page 154</td>
<td>Section 5.5.1 on page 206</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Section 4.3.6 on page 167</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Section 5.5.3 on page 212</td>
</tr>
<tr>
<td>6.2.5 (Ch.4)</td>
<td>Artistic and Unpredictable Process</td>
<td>Section 2.3.4 on page 49</td>
<td>Section 4.4 on page 175</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Section 5.5.3 on page 212</td>
</tr>
<tr>
<td>6.3.1 (Ch.5)</td>
<td>Clear Preference for Interpersonal Process</td>
<td></td>
<td></td>
<td>Section 5.2 on page 182</td>
</tr>
<tr>
<td>6.3.2 (Ch.5)</td>
<td>The Explicit Knowledge Exchange Process</td>
<td></td>
<td></td>
<td>Section 5.3 on page 184</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Section 5.3.2 on page 186</td>
</tr>
<tr>
<td>6.3.3 (Ch.5)</td>
<td>Why Consultants Participate In Any Form of Knowledge Exchange</td>
<td>Section 2.4.3 on page 61</td>
<td></td>
<td>Section 5.4 on page 197</td>
</tr>
<tr>
<td>6.3.4 (Ch.5)</td>
<td>Why Do Consultants Prefer Interpersonal To Explicit Knowledge Exchange Processes</td>
<td>Section 2.4.3 on page 61</td>
<td></td>
<td>Section 5.5 on page 205</td>
</tr>
</tbody>
</table>

Table 6-1: Summary of dissertation findings including references to previous chapters

The eight-stage model summarised by Figure 4-3 (and repeated earlier in this chapter as Figure 6-5), in conjunction with the findings regarding their preference for the interpersonal knowledge exchange, directly addresses the two research questions, and thus adds to the body of knowledge regarding the strategic exchange and use of the knowledge resources across one medium sized consulting firm.

The conclusions from this study have major implications affecting both the initial and ongoing education of all consultants, as well highlighting how firms can effectively capitalise on the knowledge maintained by their workers.
CONCLUSIONS AND IMPLICATIONS

Through a conscious focus on these implications for practice, managers can determine how knowledge is defined and leveraged as a strategic resource of the organisation, directly affecting its competitiveness. These implications for practice are identified in the following section.
6.5 IMPLICATIONS OF RESEARCH FOR PRACTICE

The strategic importance of knowledge and knowledge management practices in organisations was discussed in sections 1.2 and 2.2. As previously indicated (see page 38), Kogurt and Zander (1996) assert that, ‘a firm can be understood as a social community specialising in speed and efficiency in the creation and transfer of knowledge’ (p.503). In relation to the practical and efficient use of knowledge as a critical resource to the firm, knowledge exchange processes are of prime importance (as discussed in section 2.3). In the following sections, the practical summaries of the implications for practice are highlighted in italics (and collated and summarised in Table 6-2 on page 250).

6.5.1 IMPLICATIONS FOR PRACTICE FROM CHAPTER FOUR

6.5.1.1 Extending Knowledge Exchange Models

The eight-stage interpersonal knowledge exchange model developed and described in Chapter Four is presented as a significant enhancement to Dinur and Inkpen's (1996) four-stage knowledge transfer model.

*Through the application of the model developed in this study, managers and organisations are able to take account of the ‘pull’ nature of knowledge exchange in many situations*, wherein the employee in need finds and pulls the knowledge from its location, as opposed to the dominant ‘push’ paradigm where the employee with the knowledge is seen to somehow identify a knowledge need and hand over the required knowledge.
The extended model, if applied to organisations more generally than this consulting firm, is expected to generate positive effects by confirming the social nature of the workplace and of employees in relation to knowledge management, and move knowledge management from an IT related issue to a community related activity. As such, it provides confirmation of Snowden’s (2002a; 2002b) assertion that knowledge management is about managing social contexts, particularly utilising existing trusted networks and clusters as the basis for knowledge creation and distribution, rather than trying to artificially create trust in formal communities.

6.5.1.2 Using Easily Understandable Knowledge Constructs (Payload Knowledge)

Using complex knowledge constructs in the workplace, in areas that do not normally consider the nature of knowledge itself, appears to be problematic. Employees focused on their work rather than the distinction between knowledge related definitions, appear to become confused if their knowledge exchange processes are described in such terms. For example, in this study respondents generally rejected Nonaka’s (1995) distinction between tacit and explicit knowledge as it was applied to conversion between the forms. Through avoiding complex terms, technical jargon and ‘buzz words’, and focusing more precisely on a definition of what knowledge is to the employee (such as payload knowledge in this study), the organisation may be able to gain greater understanding and commitment to knowledge management initiatives. Béchervaise, Bourke and Shephard (2002) suggest that cultural and communication audits are useful in identifying these locally constructed terms and processes.
6.5.1.3 The Interpersonal Knowledge Exchange Process

The eight-stage interpersonal knowledge exchange model, when applied to organisations, has the potential to significantly improve their knowledge exchange activities, and consequently the strategic competitive advantage of the firm.

Organisations should be able to identify improvements in their personal development and training programs by focusing on how the need arises for knowledge (Stage One), and the circumstances in which consultants fail to find payload knowledge through their own self-resourced search (Stage Two). These training needs will become apparent from ongoing deficiencies in knowledge requests in a particular area.

Organisations can optimise their pointer systems (Stage Three) by encouraging network groups and sub-communities to form, implementing mentoring programs, creating knowledge directories (often referred to as knowledge ‘yellow-pages’) and deploying other such mechanisms to connect requesting employees with potential sources of knowledge. It is however recognised that the consultants in this study appeared to reject such formal explicit systems and tended rely more fully on informal pointer systems. As such, the benefits of implementing such systems must be carefully considered against the implementation cost and effort, whilst also considering the cultural fit of such a new system to the organisation. Organisations can leverage the natural preference of employees for using their personal networks to enhance their knowledge management system though legitimising these networks as a source of the company’s strength.
CONCLUSIONS AND IMPLICATIONS

Significant organisational effort should be focussed on the knowledge request process (Stage Four) and the knowledge handover process (Stage Six). Drinking lots of coffee, chatting in corridors, having a few drinks after work, and indulging in a long lunch or two may come to be seen as the backbone of the organisation’s knowledge sharing processes. These stages describe where the payload knowledge is exchanged between one employee and another and, as such, they are essential to effective functioning in any knowledge management system. Determining where and how these exchanges occur, and encouraging them as normal business practices, is expected to build an acceptance in the organisation of informal employee activities.

It is suggested that organisations should focus on building a culture for maximising the possibility of the source consultant agreeing to participate (Stage Five). This might be achieved through building reward and recognition systems to reward a culture of moving beyond self-interest toward contributing to the community as a whole by helping fellow employees.

Developing processes to assist in this translation (Stage Seven) and implementation (Stage Eight) of the payload knowledge, such as solution review meetings between small groups of consultants, will ensure that the translated solution is fed back into the company’s knowledge management system.

It is important to recognise the requesting consultant’s skill and knowledge involved in translating the sourced information into a form of payload
knowledge that is directly applicable to the client site. The knowledge exchange process of the firm, and ultimately meeting the client’s specific need, is dependent on the final two stages of the model.

Ensuring that other consultants learn quickly about what type of work has been completed, and by whom, will allow up-to-date and efficient solutions to be leveraged for similar contexts elsewhere by encouraging the interpersonal knowledge exchange process to repeat itself, this time with the requesting consultant as the new source of payload knowledge.

6.5.1.4 Negotiating Aligned Community Attributes To Exchange Payload Knowledge

Community participation should be actively encouraged. Managers must recognise that communities of practice are an integral aspect of the organisation’s knowledge exchange process. This allows them to focus on intangible and often invisible organisational processes that are tacitly understood by their employees and which, in other contexts, are identified as the culture of the organisation.

Managers are encouraged to familiarise themselves, through research and reflective practice, with many of the concepts outlined in this dissertation in relation to interpersonal and community related knowledge exchange. For instance, the decontextualisation and recontextualisation process that occurs at the knowledge request stage (Stage Four) and the knowledge handover stage (Stage Six) relies on shared mental models, social etiquette, cultural norms and language. Through understanding these concepts, managers are best positioned to encourage social and community activities such as
company picnics, sporting groups, breakfast catch-ups and specialist groups to maximise the opportunity for these shared community attributes to develop. Conclusions drawn from this study suggest that the development of these shared community attributes must be a prime consideration for knowledge management in organisations. Although making these explicit where possible may be a genuine area of improvement, recognition and acceptance by management that many of these attributes will remain tacitly understood by the community is an important implication to practice of this model.

The value of recruiting employees who can immediately participate in the process through a rapid assimilation into the community’s shared processes and social etiquette is a further implication from this study. If the recruitment process is not focused on producing employees ready to enter the community almost immediately then a comprehensive and active induction process may be required to move them from the periphery to the core of the community as quickly as possible. This induction process needs to include a comprehensive social agenda, ensuring that new recruits learn the social practices and etiquette of the community of practice as quickly as practical. The more quickly employees are accepted into the core of the community, the sooner the organisation can enjoy the benefits of the community’s knowledge exchange process.

6.5.1.5 Artistic and Unpredictable Process
Organisations should recognise, and celebrate, when they see their knowledge exchange process as unpredictable and uncontrollable – this appears to be the most efficient state for it to function. Allowing the
interpersonal knowledge exchange process to follow an unpredictable and artistic path toward the source of the payload knowledge, and ultimately the implemented solution to the specific problem appears to be critical to the efficiency and effectiveness of the process to source payload knowledge. The temptation arises to formalise the process with procedures, processes and templates documented in a knowledge management policy. However, the respondents to this study indicate that the process as it stands is preferred because it is fun and promotes personal ‘flair’ to find what knowledge is required.

6.5.2 IMPLICATIONS FOR PRACTICE FROM CHAPTER FIVE

6.5.2.1 Clear Preference
This study found that a clear preference existed for the interpersonal knowledge exchange process over the explicit, IT based, exchange process. This preference suggests that the implementation of IT systems to improve the knowledge management capability of the firm may not be the most effective use of available funds.

The development of communities of practice encourages and maintains efficient exchange of the tacit ways work is performed in the company and the industry. As such, involvement in the community is essential to maintain a competitive strategic advantage. Managers in organisations typically define knowledge management and knowledge exchange as an IT issue, involving the implementation of better knowledge management systems and applications. This research highlights the social nature of knowledge
exchange, and the clear preference of consultants, as specialist knowledge workers, to engage in knowledge exchange processes that are tacit in nature and embedded in the practice of their direct professional community. It is this community that defines the artistry of the profession.

Organisations are encouraged to focus on social knowledge exchange practices rather than explicit knowledge bases or IT systems to deliver results to customers and stakeholders. The allure of directing company funds toward implementing IT solutions to the knowledge exchange problem is understandable. Implementing an IT system is far more tangible and apparently measurable in relation to executive performance measurement and reward than the prospect of encouraging communities of practice to evolve and prosper.

6.5.2.2 The Explicit Process

A full scrutiny of IT investment in knowledge management should be thoroughly undertaken to ensure the company’s strategic direction and its client needs will be advanced through the implementation of IT systems. Several problems were identified with the explicit knowledge exchange process as implemented at ABC.

Given the lack of ability to exchange context specific knowledge, managers should fully investigate the suitability of a codification, storage and retrieval system to their business. In the case of consulting, it was shown that consultants have a wide variety of possible problems relating to a wide variety of work tasks, hence one solution in one context seems unlikely to satisfy the
payload knowledge needs of a requesting consultant if sourced from a database.

6.5.2.3 Why Participate At All?
Organisations should recognise that a person holding personal payload knowledge has substantial power in relation to participating in knowledge exchange activities (Snowden, 2000). Accepting this assumption, organisations can develop programs to ensure that participating in knowledge sharing activities is the dominant cultural norm and hoarding knowledge is unacceptable.

6.5.2.4 Why Interpersonal Process Is Preferred To Explicit
The findings of this study indicate that consultants overwhelmingly prefer the interpersonal knowledge exchange process to the explicit alternative for a number of reasons. By focusing on these reasons, and using them as drivers to build a more effective interpersonal process, a high degree of participation may be expected.

Time was seen as a precious resource by consultants, and the interpersonal process, in the opinion of the respondents, allowed them to save time in exchanging context specific payload knowledge. By focusing on this advantage, and promoting it to the community as a reason for participation in general, a stronger knowledge sharing culture may be developed. However, by ignoring the perception of the community, and implementing a compulsory IT solution, strong resistance may be generated as the advantages are seen to be lost.
Consultants indicated that the interpersonal process was fun and enjoyable. The organisation should leverage fun as an advantage of the interpersonal knowledge exchange process by organising enjoyable activities to assist knowledge exchange. Having a fully stocked bar fridge in the lunchroom, or providing an espresso machine, are two examples at ABC that assist consultants to sit down together to enjoy the knowledge sharing process. Further opportunities should be sought and implemented to maximise the chances of gaining agreement to participate from source consultants.
6.6 IMPLICATIONS FOR FUTURE RESEARCH DESIGN

The implications for future research design have been drawn from the practical experiences of the researcher in carrying out this study. In this section, the experience is first described, then followed by the action suggested for future researchers to improve their research design. For example;

The Experience:

As with all research carried out in organisations, this study has been constrained by the limitation of resources available to the researcher. The delicate balance between theoretical perfection in relation to the method used will always be weighed against the practicalities of conducting the research.

The Suggested Action:

Future researchers are urged to articulate this limitation consciously from the start of the research design and in the sample selection process in order to reduce the frustrations experienced by this researcher.

6.6.1 GETTING STARTED

The Experience:

A researcher preoccupied with tying up loose ends and firmly tightening up the nuts and bolts of the methodology is more than likely to never begin research (Buchanan, et al, 1988). This research project adopted the practical
and opportunistic approach suggested by Buchanan, et al (1988) to gather
data from busy and difficult-to-access consultants.

Fieldwork is permeated with the conflict between what is theoretically desirable on the one hand and what is practically possible on the other. It is desirable to ensure representativeness in the sample, uniformity of interview procedures, adequate data collection across the range of topics to be explored, and so on. But members of organisations block access to information, constrain time allowed for interviews, lose your questionnaires, go on holidays and join other organisations in the middle of your unfinished study. In the conflict between the desirable and the possible, the possible always wins.

So whatever carefully constructed views the researcher has of the nature of social science research, of the process of theory development, of data collection methods, or of the status of different types of data, those views are constantly compromised by the practical realities, opportunities and constraints presented by organisational research.

(Buchanan, et al, 1988, pp. 53-54)

Future researchers may take comfort from the fact that things do not go to plan at all stages, and a ‘best endeavours’ approach must be taken. Consultants claim to be extremely busy people. To interview them requires removing them from their client site and disturbing their ongoing professional activities. In this study, several consultants cancelled interviews, shortened them to their lunch break, came straight from the work site with major issues still on their mind, or rescheduled several times (in one instance seven times) before being able to meet for the interviews. When time was limited, the findings to date were often summarised and presented to the respondent nearing the completion of the interview, and an opportunity afforded to discuss their responses in relation to the evolving model and theory.
CONCLUSIONS AND IMPLICATIONS

The Suggested Action:

Future researchers can seek to combat this issue by gaining full commitment up front from potential respondents, and locking in times and dates as fully as possible. Making follow up calls confirming the time, and at each instance stressing the importance of the interview to the successful timely completion of the research project are useful strategies for improving cooperation from respondents. The researcher, however, must also be adaptable, willing to move locations, times and durations as required since the respondents, ultimately, are participating on trust and as an act of good will. If possible therefore, they might reasonably be rewarded with a bottle of wine or a small gift where appropriate, especially when follow up interviews or clarifications are required.

6.6.2 RESPONDENT PREPARATION

The Experience:

Apart from the expected problems of access, interviews and follow-ups were well received by most respondents. Many indicated that they found the interview theme of interest and of great importance to the firm. Several established that the opportunity had allowed them to clarify their own thoughts and reflect on their own practices, mirroring the benefits of action learning discussed by Schön (1983) in relation to the reflective practitioner (see Section 2.3.4).
The Suggested Action:

This experience confirms the benefit for future researchers in carrying out follow-ups and clarifying outstanding issues with respondents – each party benefits from the activity; the respondent learning a little more about themselves, and the researcher learning more about the phenomena being studied. According to Strauss and Corbin (1994), we are obliged to give life to the actors we have studied. To let them live in the research material, to give them voice, albeit in the context of their own inevitable interpretations and to tell their stories, will allow this. Most importantly, we are obliged to show them how they are interpreted and what we have learned from our meeting with them.

6.6.3 FOCUSING MODELS

The Experience:

Some of the questions were perceived as being very difficult, requiring the respondent to reflect on complicated issues, previous answers and other facts. The methodology was changed to include presentation of a knowledge model to respondents to conceptualise payload knowledge (see section 4.2.1). This focusing exercise proved to be invaluable in leading consultants to recall relevant knowledge exchange experiences.

In phenomenographic research the analytic work is made without a certain theory in mind (Larsson, 1986). Andersen, et al, (1995) described the important role that research theory played in their study, but not until later in
the process as a supplier of concepts and models that could capture and facilitate a sharper interpretation of significant empirical observations. Theoretical concepts function as words that facilitate and lead to a dawning understanding by respondents (Osteraker, 2001).

**The Suggested Action:**

Despite some methodological argument about data contamination (For example, Glaser and Strauss's (1967) view that theory should emerge directly from uncontaminated raw data), future researchers may consider introducing such a tool as a part of the original methodology to limit the wide variety of knowledge-related exchanges that occur in organisations. This allows more concentrated data analysis and categorisation, making the task of comparing responses easier and improving content reliability as respondents describe similar types of exchange experiences. Using this process helped to form a contextual reality as it consists of the way the objective reality is combined according to the subjects' conceptions of it (Osteraker, 2001).

If the importance of an existing theory is observed in the empirical findings, it creates a new understanding in the context in which the study has been conducted. The contextual reality is hence an understanding based upon existing theories selected by the subjective value given by the informants.

(Osteraker, 2001, p. 7)

Here the empirical findings function not, as in inductive logic, as a generator of theory, but as an indicator of relevant existing theories that should be combined for new understanding about a phenomenon.
6.6.4 INTERVIEWS

The Experience:

Interviews were expected to flow naturally, to be conversation-like, and to promote frank discussion. In the majority of cases this was achieved. Sometimes questions were answered earlier than expected, whilst other questions triggered ‘war stories’ of divergences that sometimes took much of the interview time. Often these ‘war Stories’ appeared provide greater insight than a constrained response to a specific, even open-ended, question. In many cases, the relevance of the ‘war story’ to the study was not apparent at the time of the interview, emerging only later during the data analysis stage. As a rule, the researcher let the respondent finish the response and perhaps skip the theme (or probe deeper) later in the interview. In most interviews however, the succession of questions seemed natural.

The Suggested Action:

Researchers need to be prepared to deviate from the prepared script in the interest of gaining a more complete understanding of the explanations being given by the respondents, even though this may mean running out of time or being unable to ask all the questions that were initially planned to be asked.

6.6.5 PERSONAL ISSUES

The Experience:

As a consultant in fulltime employment, the researcher substantially underestimated the exhausting task of completing the research project. The practicalities of balancing a young family, work and academic commitments
while trying to fit in some recreation time, as well as a little sleep, made time a limited and ever more scarce commodity. One area highly underestimated in terms of resource and time requirements was the transcription and data analysis process. With an average time of ten hours taken to transcribe each interview tape recording, and a further twenty to thirty hours of categorisation and data analysis on top of this for each one-hour interview, time became a major component in the research effort.

The option of outsourcing this component to a professional transcription expert was considered. However, it was concluded that this would compromise the quality of understanding of the data. Typing each transcript allowed the researcher to consider every line of dialogue within its context, and this could be recalled at a later date when re-reading each transcript.

**The Suggested Action:**

Based on this experience, future researchers are urged to:

- Keep in touch with family. Involve them as research assistants wherever possible, include them in discussions on evolving thought and coopt them as proofreaders.

- Keep the workplace informed of progress and the demands currently on your time. In this study, the researchers direct client and manager were both given the opportunity to review the draft manuscript of the near completed dissertation, and encouraged to discuss the knowledge management related issues pertinent to their organisation.
CONCLUSIONS AND IMPLICATIONS

- Make the additional effort to personally transcribe the interviews to produce the highest possible understanding of data.

6.6.6 CONTENT ANALYSIS CODING

The Experience:

The evolving nature of the content analysis codes involved significant rework. As the initial four stages suggested by Dinur and Inkpen (1996) expanded to eight, and the participation categories suggested by Wasko and Faraj (2000) evolved in a similarly iterative manner, initially coded interview transcripts had to be recoded. This added considerably to the time and effort involved in the coding and analysis stage.

When discussing why consultants prefer each knowledge exchange process (for example, preferences for or against email as discussed in Section 4.3.3 on page 147), the content analysis coding may have been enhanced by the inclusion of a code based on testing of respondents for personal styles (for instance the Belbin Test). This would allow consideration of the impact of personal styles and preferences on the knowledge exchange process.

More time over a longer period may have improved the quality of the study findings and discussion. It may have generated the luxury of further data collection and analysis. However, the researcher (and his wife!) believes that this project achieved a practical balance over a reasonable timeframe (of four years) to produce a research report with conclusions that have been accepted as both accurate and useful within the community of practice from which the data was drawn.
The Suggested Action:

Future researchers might attempt to finalise the categories for content analysis through a pilot study, or through using three initial interview transcripts as a first stage to develop the categories to be used for the entire study. In this study, three initial interviews were carried out to refine the interview question guide, however no prior consideration was given to additional categories that might be used for content analysis in this refinement process.

Future researchers may incorporate coding based on the personal style preferences of individuals through the inclusion of tools to measure and categorise the respondents (for example, use of the Belbin Test to establish the differences between RI and ME).

6.7 SUGGESTIONS FOR FUTURE RESEARCH DIRECTIONS

Throughout this research project, several areas of interest to knowledge management professionals and researchers arose that were unable to be pursued. As for all researchers, the constraints of time and resources prevented pursuit of these threads since they did not directly relate to answering the selected research questions.

These peripheral issues and areas arising from the data collection are suggested as directions for future research. Considerations falling outside the realm of future research are reflected upon in the final section of the dissertation (Section 6.10 on page 285).
6.7.1 KNOWLEDGE TYPES

The Experience:

In this investigation, three types of knowledge were found to exist within a consulting firm (see Section 4.2.1). These were defined as payload, administrative and prospect knowledge.

Suggested Future Research Direction:

Further investigation into the boundaries between these knowledge types, and indeed the identification of further knowledge types within the consulting firm should be of interest to future researchers. Such investigations might then provide a taxonomy of knowledge types previously unidentified, and highlight an alternative view of the firm’s operations via knowledge flows and interactions.

6.7.2 KNOWLEDGE EXCHANGE BETWEEN THE CONSULTANT AND CLIENT

The Experience:

This research project specifically investigated only intra-firm knowledge exchange processes from consultant to consultant, and developed an eight-stage model for interpersonal knowledge exchange, as well as defining the explicit knowledge exchange process and their interrelationship. Much of the literature highlights a unique and crucial aspect of knowledge exchange in consulting firms relating to the role of a client in the knowledge management system.
Consulting firms achieve their competitive advantage by having up-to-date and industry specific knowledge that can be leveraged between clients. However, the paradox exists that this knowledge is obtained through a knowledge exchange process with those same clients.

**Suggested Future Research Direction:**

A future research direction would require investigation of the mechanism of this two-way process wherein the consulting firm, through the individual consultant, gains payload knowledge from the client, whilst at the same time the client’s knowledge grows as a result of the consultant working on their problem.

### 6.7.3 SIZE OF COMPANY

**The Experience:**

Evidence emerged from several of the interviews that the knowledge exchange process within the firm was influenced by the size of the company and its rate of growth. The firm in question had been growing quite rapidly. Consultants lamented ‘the good old days’ when they knew everyone in the knowledge network, and could find exactly what they wanted because they knew exactly who held what knowledge.

**Suggested Future Research Direction:**

Future research could usefully extend the knowledge management literature by investigating the implications of:
CONCLUSIONS AND IMPLICATIONS

- The implications of the size of a company on the knowledge exchange process, and

- The implications of the company life-cycle stages on the functioning of the knowledge exchange system and knowledge management systems in general.

These studies could usefully be approached from an IT systems direction, through application of the community knowledge exchange metaphor, or possibly from both directions simultaneously.

6.7.4 SOCIAL ETIQUETTE

The Experience:

The respondents to this study identified the importance of social etiquette repeatedly. They indicated that it was imperative for consulting community members to both learn and apply the etiquette of the knowledge exchange process to efficiently achieve their goals and to solicit participation in the process. Understanding of social etiquette in relation to any aspect of consulting or professional practice, let alone to relation knowledge management, appears to be limited.

Suggested Future Research Direction:

A study of the social etiquette practices of the group, and of how group members learn these tacit practices, would add to a growing body of
knowledge in relation to Legitimate Peripheral Participation (Lave, 1988; Lave and Wenger, 1991) and community of practice research (Lave and Wenger, 1991; Wenger, 1998a).

6.7.5 CULTURE

The Experience:

The link between corporate culture and communities of practice is an area of research that was not included within the scope of this project. However, on face value, many of the aspects talked about in relation to communities appear to mirror research on cultural aspects of organisations. Shared mental models, shared language, community norms and a negotiated understanding of how to do things in an organisation, appear to be common threads of both research agendas.

Suggested Future Research Direction:

A future research project may examine the link between culture and knowledge exchange practices in the community of practice, drawing on the respective literature of each to enhance understanding in the other.
6.8 LIMITATIONS OF THE STUDY

This section discusses the potential limitations that exist with this study as it was designed and implemented.

6.8.1 RESEARCH DESIGN

When studying something as complex as knowledge, and more specifically tacit knowledge, a limitation exists in respect to the difficulty of asking respondents questions regarding non-conscious issues. It is difficult to articulate the basis of knowledge exchange or to put it into concrete terms, regardless of the experience of the practitioner. For instance, the more established and routine a particular knowledge transfer process is (for example, exchanging ‘war stories’ over coffee in a café) the more difficult it may be to explain it.

Tacit elements of the processes involved in knowledge transfer leave room for disagreement between individuals involved in exactly the same events as attempts are made to describe them explicitly. Different meanings can be ascribed to the same concepts and similar meanings to different concepts. There are no standards of meaning for such notions as stickiness, implicit knowledge, tacit knowledge or context specific knowledge.

As a result, it is difficult to be certain that the knowledge exchange experiences of the respondents to this study are directly comparable since their descriptions may be based on different foundations of meaning. The use of the payload knowledge construct was an attempt to minimise this...
CONCLUSIONS AND IMPLICATIONS

limitation, and move the shared meaning of knowledge exchange closer together.

A further difficulty arises in the interview process when researching a phenomenon as complex as the exchange of tacit and explicit knowledge. Individuals may respond to questioning based on their perception and judgement of reality, which may be markedly different from the observed or some nominally ‘objective’ reality. In discussing this issue, Argyris and Schön (1996) labelled the different outcomes ‘espoused theory’ and ‘theory-in-use.’ The former referring to the theory of action that is advanced (For example, in an interview setting) to explain or justify a given pattern of activity. Theory-in-use, on the other hand, was seen to be implicit in the performance of activities.

In the case of this research, espoused theory was seen to be the most relevant since the researcher was specifically interested in personal judgments of reality in relation to interpersonal knowledge exchange. As a result, however, the research findings may not represent the reality of how knowledge is exchanged at ABC, but rather the perceptions of the individual consultants that participate in this exchange process. How these might be differentiated remains a matter of methodological debate (Patton, 1990; Bain, 1989; Miles and Huberman, 1994; Argyris and Schön, 1996).

6.8.2 RANDOMNESS OF SAMPLE

Another potential limitation concerns whether there are any features that might differentiate case studies where access was not gained from those
where access was gained. The importance of this point is dealt with by Blau (1964) who, in conducting a study investigating bureaucracy within organisations, approached several organisations to act as case studies for his research. He found those who refused access were established organisations whilst those who granted access were newer organisations, typically less than five years old. Thus, his research conclusions appeared to be limited to newer organisations. Blau concluded that established organisations are reluctant to open themselves up to scrutiny.

In this study, the consultants who agreed to be interviewed were typically younger, and had definite thoughts on the knowledge exchange process. This may have skewed the results and limited any possibility for generalisability of the results. Furthermore, it draws attention to the use of the generic term ‘consultant’. By inference, the focus on ‘consultants’ assumes that they are a generic profession; whereas the reality is that consultants typically have very different social circumstances, family situations and other background environmental factors. These may also influence their ideas on knowledge exchange within the community of practice.

### 6.8.3 PERSONAL INVOLVEMENT

The researcher was a consultant in the firm at the centre of the study. Personal and professional contacts in the organisation facilitated access to participants, and insider knowledge most certainly influenced the interpretation of the data.
CONCLUSIONS AND IMPLICATIONS

Despite some methodological concerns (see section 3.7 on page 116 for a discussion of this issue), this was considered to be a positive asset to the study. It enabled the researcher to contribute to a richer and more accurate description of the knowledge exchange processes in the firm. However, it is accepted as a potential limitation because it inevitably skewed the results through a non-conscious filtering process by the researcher. To reduce this bias, responses were fed back to respondents and the final draft of the report was discussed at a focus group meeting of consultants from ABC prior to submission. Both of these mechanisms helped to confirm the findings as an accurate reflection of reality in the view of the consultants and respondents from ABC Consulting.

6.8.4 USING WRITTEN WORDS TO DESCRIBE A TACITLY UNDERSTOOD PROCESS

To attempt to place into explicit words the complex task of exchanging knowledge is a bold undertaking, and one that can only reflect a small piece of reality. Furthermore, it may not be possible to render the tacit as explicit (Polanyi, 1966; Snowden, 2002a; 2002b). In research we hold up a mirror to life to focus our attention on specific aspects of interest.

As Plato cautions, we perceive the reality as a reflection – we are seeking reality by focusing on a reflection of reality. Looking into our distorted mirror, we sacrifice breadth of view for clarity. In magnifying a part of the image, we lose sense of its scale.

(de Araugo, 2001)

Consultants know how to exchange knowledge - this is their tacit skill within their community of practice. The artistry of the consulting professional community under examination is learned across years of participation in the
CONCLUSIONS AND IMPLICATIONS

group. In consequence, it is recognised that the findings of this research, utilising the relatively feeble mechanism of printed words on pages (Cowen, et al, 1999) cannot substitute for the act of participating in the consulting group and learning, over time, from the social practices of the group, the acceptable exchange process to apply in knowledge exchange.

This research report is the output of the author’s participation in ABC’s consulting community over a three-year period. Consultants within that community will gain a different meaning from this document than those who have not been involved in the community. Those who joined later may gain different meanings again because all meaning is created within context.

This research report sought to describe clearly and concisely the interpersonal knowledge exchange process built from the respondent’s data in order to advance the theory and practice of knowledge exchange within communities. In doing this, the author has utilised the language and processes of the academic community to achieve his aim. However, much like the description of learning to ride a bike by reading a book (as identified by Polanyi, 1966), it is only through the processes of participation in the community that the process can be fully, and tacitly, understood.
6.9 A MAJOR CONTRIBUTION TO PRACTICE

The major findings of this dissertation indicate that the interpersonal knowledge exchange process is predictable in terms of passing through eight identifiable stages, yet unpredictable in terms of knowing how each community interaction will lead to the exchange of payload knowledge. The sourcing, handover and implementation of payload knowledge are seen to be artistic endeavours, characterised by social community based exchanges that 'hop' the consultants toward their specific contextual need.

The dissertation makes a major contribution to practice by confirming, extending and creating a new understanding of consulting practice through the presentation of its findings and conclusions. The process by its very nature is tacitly understood by those within the consulting community of practice. Through understanding the process and the reasons that consultants prefer the interpersonal knowledge exchange process, it is anticipated that managers will be better able to produce a knowledge-based sustainable competitive advantage for their firms.

The conclusions and their implications for developing and extending practice are summarised in the following Table 6-2. The conclusions have been categorised as:
CONCLUSIONS AND IMPLICATIONS

- **Confirms**: Confirming existing understanding of practice
- **Extends**: Extending or sophisticating current understanding of practice, and
- **New**: Creating new understanding of, or suggesting new ways of understanding previous approached to practice

As the table illustrates, the confirmation, extension and creation of researched conclusions for this study, individually and in total, provide a major contribution to the practice of professional consulting.
### CONCLUSIONS AND IMPLICATIONS

<table>
<thead>
<tr>
<th>Finding No.</th>
<th>Conclusion Label</th>
<th>Description of Conclusion</th>
<th>Confirms</th>
<th>Extends</th>
<th>New</th>
<th>Implications For Practice</th>
</tr>
</thead>
</table>
| 6.2.1 (Ch.4) | Extending the Knowledge Transfer Model | Dinur and Inkpen’s (1996) knowledge exchange process required enhancement to account for behaviour within communities of practice, and in relation to the interpersonal knowledge exchange process. | ✓ | ✓ | | 1. Establishes the ‘pull’ nature of knowledge exchange for managers in consulting and possibly other firms as opposed to the dominant push perspective  
2. Establishes knowledge management is about managing social contexts, particularly utilising existing trusted networks as the basis for knowledge distribution and creation, as opposed to trying to artificially create new networks. |
| 6.2.2 (Ch.4) | Payload Knowledge | A construct labelled ‘payload knowledge’ was introduced to assist respondents understanding of, and focus, on the exchange of both tacit and explicit knowledge required to solve their client’s problems. | ✓ | | | 1. Respondents rejected the notion of conversion of knowledge types between explicit and tacit as artificial from their point of view.  
2. If organisations avoid ‘buzz’ words and jargon, and focus on terms that are meaningful to their employees in relation to knowledge and knowledge types, as greater understanding and commitment to the knowledge management initiatives can be expected. |
| 6.2.3 (Ch.4) | Interpersonal Knowledge Exchange Process | The interpersonal process by which knowledge is exchanged by consultants can be described using an eight-stage framework. | ✓ | ✓ | | By utilising the eight stage interpersonal knowledge exchange process developed, managers and organisations might be able to:  
1. Identify training and development needs of employees by monitoring the types of knowledge that cannot be sourced from a self-resourced search (stage 2), or monitoring the knowledge needs that arise for employees (stage 1).  
2. Optimise the pointer process that hops employees to the required payload knowledge (stage 3), the knowledge capabilities of the organisation are enhanced.  
3. Leverage the natural preference of employees for using their networks to enhance their knowledge management system through legitimising these networks as a source of the company’s strength.  
4. Identify and understand where and how knowledge is exchanged through the de/recontextualisation process (stage 4 and 6). Once determined, these can be encouraged as normal business practice, including informal activities such as coffee catch ups and long lunches.  
5. Encourage a culture whereby agreement to exchange (stage 5) is encouraged, and hoarding is discouraged. The goal is to build a culture that moves beyond self-interest toward contributing to the community as a social obligation. This could be done through formal and informal recognition of contribution.  
6. Understand and recognise the skill involved in translating the exchanged knowledge to a client solution (stage 7) and implementing and internalising the knowledge (stage 8). It is suggested that solution review meetings be established, and news be spread quickly about who has done what, so that the requesting consultant can quickly become a future source of the implemented knowledge.  
7. Ensure that other consultants learn quickly about what type of work has been complete, and by whom, to allow up-to-date and efficient solutions to be leveraged for similar contexts elsewhere by encouraging the interpersonal knowledge exchange process to repeat itself – this time with the requesting consultant as the new source of potential payload knowledge. |
## CONCLUSIONS AND IMPLICATIONS

<table>
<thead>
<tr>
<th>Finding No.</th>
<th>Conclusion Label</th>
<th>Description of Conclusion</th>
<th>Confirms</th>
<th>Extends</th>
<th>New</th>
<th>Implications For Practice</th>
</tr>
</thead>
</table>
| 6.2.4       | Decontextualisation and Recontextualisation Process | The interpersonal process utilises a decontextualisation and recontextualisation process to funnel and condense the payload knowledge in order to exchange its full meaning between the requesting and source consultant | ✓      | ✓      |     | 1. Allows managers to focus on intangible and invisible processes that are tacitly understood by their employees.  
2. The development of shared community attributes (language, mental models, social etiquette and cultural norms) is a prime organisational knowledge management aim. It is suggested that informal activities such as company sporting groups, picnics, breakfast catch-ups and specialist groups be encouraged to flourish.  
3. Managers are encouraged to familiarise themselves through research and reflective practice with the many concepts outlined in this dissertation (for instance, mental models, shared language, communities of practice, social etiquette and cultural norms.)  
4. The organisation should actively recruit employees who can immediately participate in the process through rapid assimilation into the community of practice. Alternatively, develop a comprehensive induction program to move new employees quickly to the core of the community of practice, including an agenda of social activities to assist in the learning of shared attributes for knowledge exchange. |
| 6.2.5       | Artistic and Unpredictable Process | The interpersonal knowledge exchange process is artistic and non-linear in nature | ✓      |        |     | 1. Organisations should resist the temptation to formalise and document knowledge management procedures. Often they are artistic and should remain tacit in nature, understood by the community participants.  
2. Organisations should recognise and celebrate when they see unpredictable and uncontrollable knowledge exchange processes in action. |
| 6.3.1       | Clear Preference for Interpersonal Process | Consultants at ABC clearly prefer to use the interpersonal knowledge exchange process to the explicit knowledge exchange process. | ✓      |        |     | 1. The allure of defining knowledge management and exchange as an IT issue should be avoided. Consultants showed a clear preference for interpersonal knowledge exchange processes over IT based exchange options.  
2. Organisations are encouraged to focus on social knowledge exchange practices rather than explicit knowledge bases or database driven solutions to deliver results to customers and stakeholders. |
| 6.3.2       | The Explicit Knowledge Exchange Process | The explicit knowledge exchange system was predominantly IT based and held a number of inherent problems that discouraged its use | ✓      | ✓      |     | 1. The IT based explicit exchange processes were unable to efficiently exchange context specific knowledge required by employees to get work done. Hence codification, storage and retrieval systems must be closely examined to ensure they add to the competitive advantage of the firm.  
2. A full scrutiny of IT investment in knowledge management should be thoroughly undertaken to ensure the company’s strategic direction and its clients needs will be advanced through the implementation of IT systems. |
| 6.3.3       | Why Consultants Participate In Any Form of Knowledge Exchange | There are a number of tangible, intangible and community related reasons why consultants participate in any form of knowledge exchange in an organisation, often acting beyond self-interest to contribute to the community. | ✓      | ✓      |     | 1. Organisations must recognise that individuals hold a great degree of power in relation to participating in knowledge exchange activities.  
2. Organisations should develop programs to ensure that participating in knowledge exchange activities is seen as the cultural norm, and the accepted social etiquette in the organisation.  
3. Organisations can focus on tangible, intangible and community related rewards to achieve this end. |
### CONCLUSIONS AND IMPLICATIONS

<table>
<thead>
<tr>
<th>Finding No.</th>
<th>Conclusion Label</th>
<th>Description of Conclusion</th>
<th>Confirms</th>
<th>Extends</th>
<th>New</th>
<th>Implications For Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3.4 Ch.5</td>
<td>Why Do Consultants Prefer Interpersonal To Explicit Knowledge Exchange Processes</td>
<td>Consultants prefer the interpersonal to the explicit knowledge exchange process at ABC predominantly because: It allows them to exchange tacit and intangible aspects of knowledge related to the specific context for which the payload knowledge is required, and It avoids the problems associated with information technology solutions. Respondents identified five further reasons why consultants preferred the interpersonal knowledge exchange process: Time saving The ability to learn the artistry of consulting The ability to confirm their personal knowledge against the community’s payload knowledge Allows them to skillfully use the social etiquette of the community to gain agreement from source consultants Consultants also have fun and enjoy the interpersonal process more than the explicit IT alternative.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>1. Focus on the identified reasons as to why employees prefer the interpersonal processes. Convert these reasons into drivers to build a more effective interpersonal process. For instance, saving time was seen as an essential feature of the process. Highlight this advantage, gaining greater acceptance by the community that this is an efficient and effective exchange process. 2. Do not ignore these preferences (for example, by forging ahead with an IT implementation that is not accepted by the community). Strong resistance may be generated, and funds may be less wasted implementing a system that will not get used. 3. The interpersonal process was shown to be far more fun and enjoyable than the explicit IT based exchange process as implemented at ABC. Companies should lever this, supplying fully stocked bar fridges and coffee machines to assist consultants to sit down and take the time to exchange payload knowledge. 4. Further opportunities should be sought and implemented in order to maximise the chances of gaining agreement to participate from source employees with the payload knowledge to share.</td>
</tr>
</tbody>
</table>

Table 6-2: Summary of research conclusions and implications for practice and research
6.10 THE FINAL WORDS – A PERSONAL REFLECTION

The process of conducting the study, culminating in the completion of this dissertation, has greatly enhanced my understanding of knowledge exchange, organisation dynamics, research methods and the social nature of the workplace. However, as I write this final section, I also understand that there is so much more to learn, and many of the intricacies, paradoxes and fine details of the interpersonal knowledge exchange process are only now consciously unfolding.

In conducting any research study, a point must come when the drafting process formally ends and the written product is submitted to the research community for examination and scrutiny. As I prepare to submit this dissertation, I am left with the temptation to extend the study to examine, in even greater detail, important aspects of the interpersonal knowledge exchange process described in Chapter Four. The compromise made to this temptation was to submit the dissertation as planned, but with this final section added, outlining the themes, ideas and details emerging at this late stage of the study.

Firstly, in comprehensively reviewing the completed thesis in the later proofreading stages, an underlying theme emerged relating to the apparent loneliness of the consultants within the consulting profession. Respondents referred repeatedly to individual consultants out on client sites alone, vulnerable and exposed. The impression emerges of a firm’s consulting community of practice as a psychological support mechanism to these consultants, with each consultant within that community feeling an obligation to surround and support the consultants at risk. The interpersonal knowledge exchange mechanism is one such support process. Although not directly emerging from the study data, the hypothesis could be posed that the reason the interpersonal knowledge exchange process is preferred is because it relieves this loneliness and isolation felt by consultants by providing much needed social contact. Perhaps the knowledge exchange outcome is only a
CONCLUSIONS AND IMPLICATIONS

minor component of these informal and impromptu catch-ups when compared to this need for belonging, interaction with the community and direct contact with close work colleagues.

One surprising aspect of the study was the apparent lack of interest, or in many instances confusion perhaps, shown by the respondents in relation to the tacit and explicit dimensions of knowledge. This was not anticipated from the literature review carried out, given the large volume of literature specifically devoted to the distinction between these forms of knowledge. The assumption was made that these concepts were mature and well accepted by practitioners, and as such would assist in the research data gathering process if used in the questioning process. However, the opposite was true, and the term payload knowledge was coined to overcome this confusion and lack of common understanding.

Payload knowledge served its purpose well, and assisted in focusing respondents in the interview process. However, developing this construct appears at the later stages of the dissertation to be problematic if one asks, ‘At what point does payload knowledge come into existence?’ The final weeks of the dissertation authoring process led increasingly to reflection on this finer point of detail. The definition of payload knowledge, if accepted as suggested on page 135

Payload knowledge is that specific distillation of knowledge, both tacit and explicit, required to resolve an applied problem in context

suggests that it is most probably not until Stage Seven (The Recipient Translates To Current Context) that payload knowledge comes into existence. It is not until this point that the requesting consultant distils all of the information and knowledge received from the source consultant with their personal knowledge to relate it to the specific client context.

This implies that the interpersonal knowledge exchange process is perhaps far more artistic in nature than described in this dissertation. It suggests that
the requesting consultant may treat all source consultants as potential information sources who may eventually contribute to the mix of tacit and explicit knowledge, ultimately becoming payload knowledge. Perhaps at that stage, however, the knowledge need is only partially identified (or perhaps it remains tacit), and the specific issue is not yet even formulated. The requesting consultant may not be seeking specific information, and may simply engage in informal discussions, exchanging war stories and other insights, while the payload knowledge mysteriously evolves from the distillation process at Stage Seven. This, I believe, is the nature of reflective practice, wherein the individual engages in a process of bouncing ideas being presented against their own inner (and often only barely formulated) questions and issues. The mechanics of the reflection process, however, remain beyond the scope of this study.

Trust is another consideration underlying the knowledge transfer process described in this dissertation. Though only indirectly referred to by the respondents, it is clearly a factor in the process of interpersonal knowledge exchange. Consultants appear to only hand over their potential payload knowledge to recipient consultants if a bond of trust exists. The knowledge is treated as an intensely personal possession, intricately infused into the personality and identity of the person that holds it. To hand knowledge over to requesting consultants is an act of faith, only to be carried out if the bond of trust exists either directly between the source and recipient, or if the trust has been developed through wider relationships within the consulting community of practice.

The potential for misuse, even abuse, or the perception of the source consultant that the recipient does not have the foundation knowledge to correctly and professionally implement their ‘pearls of wisdom’, directly influence the decision to participate by the source consultant at Stage Five (Agreement to Participate). A misinterpretation of their knowledge, or a misuse of the knowledge in the wrong context, appears to be treated as a potential personal injury to their professional identity, and a poor reflection upon their artistic skill in guarding the consulting practice’s knowledge, and
ultimately the consulting community’s itself. Again, however, the place of trust in the agreement stage remains beyond the scope of this study though, again, a more psychologically oriented study might profitably review its role in the exchange process.

Finally, the review process of the dissertation allowed consultants from four consulting organisations other than the one studied to comment on the findings and conclusions. They expressed concern that the dissertation did not proceed more boldly towards generalisability, since the interpersonal knowledge exchange process accurately reflected their perception of how knowledge was transferred in their organisations. The constraints of the methodology, of time and resources concerned them less than was reasonable to me as the researcher. Their focus on understanding practice was satisfied. For them, reasons why consultants prefer the interpersonal knowledge exchange process to the explicit exchange process were confirmed as an accurate reflection of their consulting practices.

Certainly, if time and resources had allowed, this study might formally have been extended to several consulting organisations to improve the generalisability of the findings and conclusions. Indeed the study may have been extended beyond consulting firms to test the applicability of the findings to other industry sectors such as government, manufacturing or retail. It may be possible that the knowledge exchange processes utilised by consulting firms do not work well in non-consulting businesses. Further, the study may have tested the effect of differing local cultures on the knowledge exchange processes described in this thesis through extending the sample selection beyond domestic consulting companies to individual firms operating in several different international locations. Finally, ABC consulting was a medium sized consulting company that had been operating for only fifteen years. Increased generalisability may have been achieved through investigating different sized consulting firms of varying maturity. However, despite not undertaking these research extension paths laying beyond the scope of the original research question, the acceptance of the findings by well respected members of other consulting firms has provided me with great personal satisfaction, and has
been acknowledged as a major contribution to my colleagues understanding of their practice. Hence, I shall leave the extension towards generalisability for future researchers, for whom the scope and orientation of the study may be more directly developed.
REFERENCES


- References -


York, NY.
approach to organisational learning', Journal of Applied Behavioural Science, June, Vol. 34(2),
pp. 161-180.
Quinn, J.B., Anderson, P. and Finkelstein, S. (1996). 'Managing professional intellect: Making the most of
Rastogi, P.N. (2000). 'Knowledge management and intellectual capital: The new virtuous reality of
Revans, R.W. (1945). Plans for recruitment, training and education in the mining industry, Mining
Association of Great Britain, London.
Rich, E. and Duchessi, P. (2001). 'Models for understanding the dynamics of organisational knowledge in
consulting firms', Proceedings of the Hawaii International Conference on System Sciences, Jan
3-6, Maui.
Robson, C. (1993). Real world research: A resource for social scientists and practitioner-researchers,
Oxford, Blackwell.
New York.
Sarvary, M. (1999). 'Knowledge management and competition in the consulting industry', California
Schein, E.H. (1983). 'The role of the founder in creating organisational culture'. Organisational Dynamics,
Scriven, M. (1971). 'Objectivity and subjectivity in educational research' in I. and G. Thomas (eds),
Philosophical redirection of educational research (71st Yearbook of the National Society for the


APPENDICES

Appendix A - Informed Consent Letter to Participants

SWINBURNE UNIVERSITY OF TECHNOLOGY
HUMAN RESEARCH ETHICS COMMITTEE

FORM OF DISCLOSURE AND INFORMED CONSENT

This statement is a written statement describing the research project that you are volunteering to participate in. The purpose of this form is to allow all potential participants to make an informed choice as to whether or not to participate in this research project. Please read following carefully and sign the consent form if you agree to participate.

1. PROJECT TITLE

Exchanging Tacit Knowledge: Knowledge Exchange within Consulting Communities of Practice

2 INVESTIGATORS

2.1 Principal Investigator/s

Dr. Neil Béchervaise  (Cert Ed [ATTI], Bed [Calgary], Med, PhD [Monash])
Coordinator of DBA Research at Swinburne Graduate School of Management
Contact Number: 9592 2674

2.2 Names of other Senior and Associated Investigators

Kevin McKenzie  CoT (Elec), B Bus (Monash), MBA (RMIT)
DBA Student at Swinburne University of Technology
Contact Number: 0419 379 135

3 PARTICIPANT’S NAME

INSERT PARTICIPANTS NAME HERE

4 CODE NUMBER ALLOCATED (if any)

To ensure confidentiality of your data as a participant, we shall code your name as a code number. Only the Principal Investigator and myself (Kevin McKenzie) will have knowledge of the names and code numbers that are used in this project. The principle investigator at the end of this study will destroy this information. If confidentiality is required to be broken, the Principal Investigator may only do this after consultation with the Participant in writing.

Your code number for this project is: INSERT CODE NUMBER HERE
Thank you for volunteering to assist in this doctoral research project.

The scope of the research is an exploration as to how knowledge is exchanged by consultants within consulting companies, and their respective communities of practice. This research will investigate a process-based model in an effort to identify the stages of the interpersonal knowledge exchange process, and to also identify the reasons and motivations as to why the consultants participate in the process. The aim of this research is to answer the question ‘What is the interpersonal process by which knowledge is exchanged between consultants?’ As mentioned, the research focuses on the socially constructed nature of knowledge and looks at knowledge from the perspective of communities. The transfer of explicit knowledge will be discussed in relation to its complimentary and separate role to tacit knowledge, but the existing research literature on this form of knowledge exchange, through the codification and storage view, has been discussed at length. Such research usually specifically excludes tacit knowledge, or relegates it to the ‘other end of the spectrum’ in the knowledge management strategy, as opposed to just a different form of knowledge.

The second question addressed in the dissertation focuses upon answering, ‘Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?’

The Research Questions:

The research questions that you will be helping me to answer are:

‘What is the interpersonal process by which knowledge is exchanged between consultants?’ and

‘Why do consultants prefer to participate in the interpersonal knowledge exchange process in preference to using stored explicit knowledge?’

Aims of the Research:

By answering these two questions, the researchers objective is to balance the knowledge management literature with empirical research in relation to the tacit dimension of knowledge exchange. The goal is to reduce the researchers feeling of unease that existed with the commonly held view in the management literature that characterised knowledge management as an information systems issue, with the solution being the implementation of a new IT system.

Although an easier course for management to adopt due to the tangible outcome of an IT system asset that can be capitalised on the company asset base, the danger of this approach is that it ignores the reality of how work is really carried out by knowledge workers within their communities of practice.

The research aims to strike a balance between attempting to solve real workplace issues (or offering novel or insightful comment on workplace problems/opportunities), and the insights gained from a review of the current literature that bears on the topic. Although the dissertation contains a large component of theoretical review and discussion, the objective of the researcher is to integrate theory and practice. The final output will be a process based model of knowledge exchange, as well as a narrative description of why consultants participate in this process.

Your involvement:

This research study requires you to participate in a loosely structures interview with Kevin McKenzie to explore issues surrounding interpersonal knowledge exchange in your organisation.

The study is a multi-staged approach and you may be involved in each of these stages as follows:

- Initial interviews with consultants engaged in a consulting practice to explore the knowledge exchange process and motivations for participation.
- Confirmation interviews to validate data from initial interviews and discuss emerging findings.
- Final confirmation interviews to validate the final models and findings obtained from the research process.

Potential Benefits:

At an organisational level, the findings of this research may be of benefit in implementing knowledge management systems. There are no potential benefits to you as an individual foreseeable if you contribute as a volunteer in this project.
Please note:

- There is no foreseeable discomfort and possible hazards to you whilst being involved in participating in this project.
- The maximum amount of time that will be required from you will be three 2-hour interviews (A total of six hours in the space of approximately one year).
- You are free to withdraw your consent and to discontinue participation in the study at any time.

Any questions regarding the project outline in this statement can be directed to:

Neil Béchervaise  
Coordinator of DBA Research  
Swinburne Graduate School of Management  
Contact Number: (03) 9592 2674

In the event that you have any complaint about the way you have been treated during the study, or a query that the Senior Investigator has been unable to satisfy, please write to:

The Chair  
Human Research Ethics Committee  
Swinburne University of Technology  
P O Box 218  
HAWTHORN. VIC. 3122

**CONSENT:**

I ___________________________ have read and understood the information above. Any questions I have asked have been answered to my satisfaction.

I agree to participate in this activity, realising that I may withdraw at any time. I accept that I may be interviewed and I agree that this interview may be tape recorded as a data source for the researcher(s) but that the recordings will not be published or publicly displayed.

I understand that I may withdraw from the project at any time and I am satisfied that all information supplied to the researcher will be treated in the strictest confidence.

I agree that research data collected for the study may be published or provided to other researchers on the condition that anonymity is preserved so that I cannot be identified.

**NAME OF APPLICANT:** ___________________________
**SIGNATURE:** ________________________ **DATE:** ___/___/___

**NAME OF INVESTIGATOR(S):** _____________________________________
**SIGNATURE:** ______________________________ DATE: ___/___/___
**SIGNATURE:** ______________________________ DATE: ___/___/___
**SIGNATURE:** ______________________________ DATE: ___/___/___
Appendix B - Initial Interview Guide

Appendix B contains the initial interview guide used in carrying out the first round of interviews. This guide was modified after the third interview to make the questions more relevant to the topic and to reduce the breadth of information to be covered in the limited time available.

Interview Schedule for Tacit Knowledge Exchange Research
(First Round Interviews)

A brief explanation of research to be given prior to interview.

General:
1. How much knowledge do you believe is written down at ABC?
2. What is Knowledge at ABC?
3. Is Knowledge important to ABC? Why?
4. How is tacit knowledge exchanged between consultants at ABC?
5. Is this the way most people would go about finding knowledge in your organisation?

Receiving (Wants) Knowledge Unit:
1. How does the need usually arise for knowledge exchange at ABC for the receiving unit?
2. What are the various ways at ABC that consultants at ABC find this knowledge?
3. What communications channels are used?
4. How is the request for knowledge transfer framed (For example, Time constraint, context etc)
5. How do you (as a receiving unit) pick up tacit knowledge?

Sending Units (Has knowledge to share):
1. Why does a consultant with knowledge contribute?
2. What motivates the consultant?
3. What influences whether a consultant contributes or not?
4. How does a consultant with knowledge at ABC usually exchange it with the receiving unit?

Communities of Practice:
1. How do new employees learn about what knowledge exists in the organisation?
2. What are the various roles of people within communities of practice (teachers, bludgers, economic payback types)?
3. Do informal groups of employees exist in your organisation that share specialised knowledge in an informal way (say over coffee, special interest groups, technicians lunch break)
4. How do people share information on ‘how’ to carry out a task in the best way (as opposed to ‘what’ the task is? (For example, Reading a book on how to ride a bicycle must then be followed up with practice - the ‘how’ of riding the bicycle).
5. How do you find the ‘guru’ in your organisation for a specialist subject? (For example, The IT security specialist that knows everything about the topic)
6. If employees are not on your site (For example, Consultants working on client site), how do they share knowledge with the company and each other?

Process view of knowledge exchange:
1. If you require knowledge regarding an immediate problem that needs solving (for instance, you are a consultant and your client asks you to solve a problem that is unfamiliar to you), how would you go about finding this knowledge?
2. How is tacit knowledge outside the company gathered/shared/exchanged?
3. What happens to tacit or explicit knowledge that is not formally endorsed by the company? (For example, How to take a shortcut to cut down paperwork, how to get leave over a busy period)
4. What role does IT play in your knowledge management system at your company?

Knowledge Management System
1. What is the danger of your losing your knowledge (For example, Employees leaving)? How do you protect this?
2. What is the danger of your knowledge being copied by your competitors?
3. How do you protect against this?
Appendix C - Modified Interview Guide Used

Interview Schedule for Tacit Knowledge Exchange Research

(First Round Interviews)

A brief explanation of research to be given prior to interview.

General:
1. How much knowledge do you believe is written down at ABC?
2. How do you define Knowledge at ABC?
3. How is tacit knowledge exchanged between consultants at ABC?

Process:
1. How does the need usually arise for knowledge exchange at ABC for the receiving unit?
2. If you require knowledge regarding an immediate problem that needs solving (for instance, you are a consultant and your client asks you to solve a problem that is unfamiliar to you), how would you go about finding this knowledge?
3. What communications channels are used?
4. How is the request for knowledge transfer framed (For example, Time constraint, context etc)
5. How do people share information on ‘how’ to carry out a task in the best way (as opposed to ‘what’ the task is? (For example, Reading a book on how to ride a bicycle must then be followed up with practice - the ‘how’ of riding the bicycle).
6. How do you (as a receiving unit) pick up tacit knowledge?
7. What role does IT play in your knowledge management system at your company?

Why Participate?
1. Why do consultants contribute to the exchange process?
2. What motivates you to contribute?
3. What barriers exist that influence whether a consultant contribute or not?

Communities:
1. Do informal groups of employees exist in your organisation that share specialized knowledge in an informal way (say over coffee, special interest groups, technicians lunch break)
2. How do you find the ‘guru’ in your organisation for a specialist subject? (For example, The IT security specialist that knows everything about the topic)
3. How do new employees learn about what knowledge exists in the organisation?
4. What are the various roles of people within communities of practice (teachers, bludgers, economic payback types)?
5. What is the danger of your losing your knowledge (For example, Employees leaving)? How do you protect this?
6. What is the danger of your knowledge being copied by your competitors? How do you protect against this?
Appendix D - Exchange Process - Sample Coded Interview Transcript

Appendix D contains a sample interview transcript for respondent Carl. This interview was carried out at the respondent’s corporate offices after working hours. To reduce the length for the reader, and to make the text more directly relevant to the topic, the transcript has been edited to remove information covered that was not directly related to the research questions.

This transcript has been coded for each of the research questions using colour coding. The colour-highlighted text shows the coding for the description of the interpersonal knowledge exchange process. The colour coding system and the text content has been summarised in a table at Appendix E.

TRANSCRIPT Carl: 26/06/01 MELBOURNE

*How much knowledge is written down at your company?*

The quick answer is very little. *I don’t think people here would place much stock in codified information held in databases. They probably don’t think its rich enough, and the context is not there;*

The reason for this is that it’s the practice. *There is no rich methodologies or anything apparent, and the organisation has been going for a reasonable length of time – sixteen or so years – and they don’t exist. And the argument seems to be a bit cyclical - ‘We haven’t needed them in the past, and been successful. So why do we need them now?’*

And there is a certain pride that when you codify it, you remove a lot of the thinking that goes with it. *And what I mean by that, ABC consultants to me … one of the things that they pride*
themselves on … is they are flexible and adaptable. And to a certain extent, they have to survive on their own. So they go into an organisation, they take in what’s there, they bring with them their own knowledge, and then they call on their own networks to pull in the bits that they need to get the job done. And it’s customised. And it seems to be relatively effective.

It may not be terribly comfortable for that consultant, but what they do is come up with something that … works!

These are grand assertions.

*What do you define as knowledge?*

… Silence ….

I’m thinking out loud here. The ability to interpret events in a valid and actionable way. So I can take an event and explain a cause and effect relationship, and from that, … and I’m talking from a consulting point of view, which to me is valid and actionable advice, I can argue the case why that is as it is, and I prescribe an action that you can take based upon that. So I’m using that consultant view of knowledge.

*So if very little of that is written down, how do consultants exchange knowledge?*

Well … I take a pull and a push view on how they exchange knowledge.

If somebody came and asked me for knowledge on something, like ‘How do you do such and such?’ Well I *call on my network and resources to help answer that question.* What that question may be asking about may be, I don’t know … ‘How would I go about something?’ ‘Have I ever done such and such?’, ‘Do I know this person?’ So that is someone calling on me.

The other way is if I have a problem. *Something causing me pain … usually …*
And again, I will call upon my own personal network of people based within and outside the company to see if they can answer my questions.

What do I use? Mechanisms … Within the company there are Centres of Excellence that I call on. In my case, the business transformation CoE. I call on those people, and within that group there is certain people that I know that have got certain expertise. How do I know that they've got certain expertise? - Basically through dialogue with them. And its one of the reasons I'm in the network, because I want to know who has got stuff that I can call upon from time to time.

The process of conversations and dialogue helps build up the knowledge of who’s who in the CoE?

Yes. In terms of knowledge, I’d say that rather than having the explicit knowledge itself codified or captured in our system, I’ve got a listing (in my head) of who the holders of the knowledge may be. And that’s what I’m looking for.

Are you looking for pointers to the knowledge?

I’m looking for information, and the context of how to use the information, which is why I find people useful. And they can either give it to me, or point me to other people who may have it.

I think people are really effective because they contextualise the information. If I was doing a global search on a dumb database, I might come up with an answer, but how do I interpret the answer, and ask all of these other questions that I hadn’t even thought to ask in the first place.

I do use, not greatly, my own personal searches and knowledge. I have a professional library of books at home, built on largely recommendations of my colleagues internally, and others externally to the organisation that have worked in my field. They will tell me the big books that they have found useful. Which I find really useful. So that is my number one stop. That and the people.

Do you use yourself or people first?
Depending on the context of the question, I will use people or self first. If it’s not in my area of expertise, I will ask people first. The self-resourced search allows you to know which question to ask if it is a field new to you. They can have a vague kick around of the footy sort of thing.

I guess my first recourse would be to try to answer the question myself. Work out an approach and then maybe validate with other people, or ask them if they have a better approach. Or in fact, I’d ask them their approach and then compare this with my approach without clouding what they might suggest.

Hence, this process can validate my own knowledge with peers. Going a little bit further, I go to network meetings, just to see what people put up. There is no specific agenda or question in my head. I just go in there trawling.

*How does this participation and trawling help with knowledge exchange? Is it a maintenance function?*

It is much easier to ask a friend or acquaintance. They don’t have to be a friend, but they know who you are as opposed to a faceless person – a name. So yes, participation is a maintenance activity that helps with the exchange process when required. Absolutely.

You feel much more comfortable even knowing certain personalities in the group. Who you would ask? *And I guess to a certain extent, you narrow down your target, so I might ask a certain person about Business Process Reengineering, just because an off-the-cuff type comments that you encompass – you might think, she might be worth listening to, whereas another person, when they talk, you might think ‘well – they don’t seem to be terribly sophisticated in that field’, so I won’t ask them. Based upon language and way they talk about the topic, you make a judgement of where they sit.*

*Looking at the community model with bands of participation ranging from novice to expert or core group (model explained), is knowledge exchange more efficient the closer to the core that the two parties are?*
Well my personal experience when I joined the company is that you don’t know who knows what. You don’t know who’s who. And I guess initially, you’d say that anyone in the core group, you by default, give them a high status (in regard to expert knowledge), and the others that aren’t in the core group, until proven otherwise, because they obviously have an interest in a particular field, and it’s a feeling out sort of process. What do these people know? How does this stack up against what I know? Can I learn something? Or can I offer something to these people?

And I know, even recently with a group, new people come on board and they are quite reluctant initially to offer up anything, because they are concerned they won’t stack up against what the group has accepted as knowledge within the group, or telling grandma to suck eggs type of thing. So there is a certain feeling out process.

*How do people or the group overcome this initial barrier to participation for newcomers?*

I haven’t come across too many formal processes in this organisation. It’s an informal feeling out and a matter of people becoming more comfortable, and offering things. And again there might be certain encouragements to offer certain stuff, but ultimately its up to the person to let go, or to let other people know what they know.

*If you need some knowledge, how does the need typically manifest itself to you?*

My experience is that it typically happens when you are out on a project. Actually at different stages of the project. You might be up for a project, or being interviewed for a project, and you might think I need to bolster up my knowledge on this aspect that the client may want.

Or you might actually be out on a project, and you get to a certain bit and you think, there must be a better way of doing this. This is another trigger.

The other one that I’d say is a variation of this – you get stuck.

They are the reactive triggers.
There is evidence though that there are other people that are just thinking ‘Well strategically I'm interested in working in a particular field, so I'll actively go suss out some information on it and position myself, you know, whether I want to pursue it, so that I can move into that area.

How do you move from that need, to finding the knowledge?

Well we’ve talked about personal networks earlier. Another method we haven’t covered yet is email requests.

I see people putting out global broadcast emails, requests for info. Personally I find them quite annoying, but the people that do that have found that it's been quite effective. This is because it generated five or ten responses from people that they otherwise wouldn’t get if they had targeted a particular person. So I guess that behaviour is reinforcing.

I just find it annoying to get them. They have a nuisance factor. Especially when you are off site, and you might have fifty messages, and none of them are particularly relevant to you, and you have to make time to open the message and read it. It's annoyance value.

Have you ever responded to any? What’s the difference from the ones you ignore?

Yes. I have responded. General practice is that if I know anything that I can do that is not too painful to me, I'll offer it regardless of who they are. And to me, its just potential payoff in the future.

Why do people contribute at all to the knowledge exchange process?

There are a couple of levels of payoff. One is if the questions I answer are in the circle of work that I'm interested in – business transformation. So, if I help the company and others be successful in that area, and we win work in that area, there is more potential for me to work in that area. So I do more in that area. So it grows the sort of work that I want to work in.
On a personal level, if I help somebody, it wins brownie points psychologically. That's my notional view on it. Not that I go out to explicitly to do it that way, but I guess that's the bottom line. If I help people, they help me.

There is a school of thought that says knowledge is power. My experience has been, if I give some of my knowledge away, then it has actually benefited me. Because people link that knowledge back, certainly the first couple of people anyway, back to where the thoughts come from. So it actually elevates my own position.

But giving it away actually helps me, because usually you are giving it to people who appreciate the context and experience in using it that you can add. It's like a marketing tool. I don't do it in such a cold and calculating way. So what I'm trying to say is that I don't hoard information and knowledge – If I can help people, I give it to them.

Why ... I guess in the long term it comes back and benefits me. But I don't have to have a transaction like 'one plus one equals two'. Just in general concepts.

Do people rely on personal networks rather than explicit databases because people appreciate being asked?

I think that's an important point. Psychologically there is an immediate payoff. Someone is grateful that you've done something for them. And they give it back to you, as opposed to dumping it in some database.

I have a real problem with the fields, or the lack of fields, that you can have in a database. You can't codify it in the same way (as talking to your network and people). And, it goes into the black hole.

The other thing is accessibility. People are accessible. I can ring them up. I can do all sorts of stuff. A big super dooper database within the company certainly doesn't exist, that I can access externally.
And the one internally is really poor in terms of weakness of data and context. Really it's full of basic stuff, and generally if they are simple problems, I can solve them myself. If they are complex problems, then I still need a person that can contextualise it for me. So either way, a database driven solution doesn't really help me.

*What is the sort of contextual stuff you were talking about (for instance timing)?*

Going back a step too, there is also the mechanism by which I'd ask for it.

*If it's important to me, I'm going to target certain people. And yes, I'll ... given the timeframe and the background to the problem, ... ... I'm just wondering if I'd share with them what I'd done to date, or leave it open to get new ideas. Probably the latter. And then once they've given me something I'd share.*

But I don't ask too much of people. I ask them something that I think is possible for them to give without hurting too much. Unless they are a colleague on a project, and that's different. They are in there with me and they can sweat blood.

It's how much pain am I going to ask of this person. If I'm not going to ask too much, and I might get something. And I guess going back to those email ones – I've never sent a global email – I guess because I've never had to. And the thing that bugs me is that these email ask for the knowledge by close of business today. And I don't have that time.

Also, depending on the complexity of the knowledge to be transferred will influence whether I would use email. For instance if it was the names of three software packages, then this would be OK. If it was more complex, I wouldn't consider it, nor would I reply via email.

I go to a person. My experience has always been face to face is the best. Go to somebody that knows something. Second is by phone. And absolutely last would be email direct to a person that I have a relationship with. I would also ring people who I had been recommended by my network as a knowledge carrier.
Is it important to let people know the trail by which you got to them when you call someone you don't know?

This is something I've never thought about, because to me this is just normal social practice. You explain why you are ringing because you don't have a relationship, and you would be mentioning how you got onto them. So I have been doing that, but never actually thinking about why. I think there would be a benefit.

There is fair evidence to support the fact that the community norms support cold calling. You feel supported in the local office, as opposed to ringing someone in another (geographic) office. People in the local office rarely go outside the local community unless they know the person directly, or they are recommended to ring. To me the whole thing is built on relationships – I have stronger relationships with the people that I work with. Number one. So the people that I would call on first are the people that I work side by side with on projects and I know them really well. We know each other, and we've backed each other and done work together. So you've got a really strong relationship with those people, and it extends out to me. So I've got a known relationship with them.

How is tacit knowledge transferred at the company?

Well to me, the ideal way is apprenticeship. But you need some active reflection going with it. What I mean by that is, if I want to learn a new way of going about something - I'd like to go on a project with someone that I acknowledge is better at it than me, and work along side them, and ask lots of questions while you do it that way. And probably ask them questions that they have never thought about themselves to bring out some of that tacit knowledge. And make it explicit so that I can learn from it. But the act of doing is important, as opposed to just asking them over the phone, or even over lunch or something is not effective as being there and doing it.

To me, there is a big difference between information and knowledge. And to me, it is being able to do something based upon information. The use of information is knowledge. So reading a book, listening to people tell me their experiences, and going through case studies, is
not knowledge. I'm going to have to do it before it becomes something that I know. So, particularly with business transformation stuff, there are a lot of nuances. For instance, how you would set up a room, furniture, tone of voice. I mean so much stuff that is useful to have actually another person in to help you reflect back on what worked and didn't work.

I think it's a joke to think you can stick it in a database!

Being able to ride a bike is fine, and being able to transfer this knowledge to someone else is a different thing again. And, trying to teach is a great way to learn, because then you have to go back and reflect on it, and actually try to pull out some of the tacit bits. It's a dynamic between a whole lot of things, and that's why the apprenticeship thing is an attractive thing.

What role does participation in the consulting community play in knowledge exchange?

Well recently I've been reading a couple of books on consulting practice, and again you read it and think OK, this is something that perhaps I can put into action. It's only by doing active reflection that you actually get to make progress. By doing.

I don't think our company is on about an expert driven approach. A partnership coaching approach is what we are on about. So this a bit different to having the master, and here's the apprentice coming in. So even though I'm sort of saying apprenticeship:

In our organisation, everyone is quite talented. And the environment is different at different places, different times and different projects. So the role moves around. At our company, the core group (or the community) is probably convenors and facilitators – not experts. As opposed to the traditional trades expert model. Hence the core member of the community is not necessarily the expert. It may be someone who has been here for three years, and you've gone through the rituals, and you've done some projects, so now you are custodian of our practice. And when someone wants to know something about how to do something, they come to the custodian, because they know how to do things in this company.
The key differential between the core and peripheral in the community is the energy that they are investing into the community. And you often hear this saying, ‘You get out of it what you put into it.’ And in any community, be it a footy club or whatever, there is the core group of people putting in a significant amount of more energy than the fringe ones.

And the general experience has been that there is a turnover. So there does seem to be a net loss of energy if you are in the core group. The community needs processes to reinvigorate the core group over time in order to sustain itself. You have good communities and bad communities, but you need continuity to sustain itself.

And I think one of the interesting things at our company has been exactly that issue. Being a loose network type organisation, there has been a general reluctance to adopt some of those formal strategies that other voluntary organisations do. As a result, some of the core group people have burnt themselves out. And as a result, you end up with a vacuum.

Is that a time thing – consultants working full days on client sites don’t have time to contribute?

Well I don’t think so. And yes I think it’s hard. But I think it’s like any voluntary group that I’ve ever been involved in, its always not enough time and other demands. And by having some of the formal processes, such as I’ll take this role on for a given period of time, and involves some personal sacrifice, and then people take that on. Because they know there is an end to it. I think that, with the Business Transformation group here, we have been looking at, or have, put up some structures to say that you can take on this role for a period of time, to in a way give people boundaries. You can do this little bit, and this little bit, to try to handle that sustainability.

What is the function in knowledge exchange of ‘just participating’ in the community of practice?

To me, the actual learning takes place on the projects, where it counts. That’s where you focus your energy and your efforts. The projects are very demanding, and if you don’t have a very good reason then you would never, I don’t think, invest the amount of time and energy necessary to actually learn or give something. So participating in real work is where the
learning happens. The Centre of Excellence (for example) is more an information gathering about who is who and what's out there that you can call upon when the time comes.

And there is some superficial sort of stuff that goes on, but that's all it is. It's more like – this is a bike, and this is how you ride it, etc etc. And there is different sort of bikes. You put that away, and come Christmas and you get the bike, and you think where was that stuff. Then you dig it out, and then you call Joe Blow who knows a lot about bikes.

**How do new employees find out where the knowledge exists?**

I'm not sure about the induction process in detail. I think it lists COE's by name, and they click around on the intranet, and its up to them to call the contact people. The onus is on the new person to a large extent.

My group hasn't been actively going out seeking new people telling them about our Business Transformation group. The organisation has organised a showcase of all of the different groups.

**What about the bench – does this have a role in tacit knowledge exchange?**

Most of the bench is flat out writing proposals, and in the process of doing that is finding explicit knowledge. And if we are lucky, putting it in a place where other people can then use it.

Any time you are working with other people, it helps in knowledge exchange. So if you are writing proposals jointly with other people on the bench, this is like a network building activity. And as a ... we have our network cluster groups type meeting, which again is building relationships.

**So to summarise the company's knowledge management and exchange processes.** Ninety percent goes on knowing people, and building your networks, and knowing key people and what they can do and what background they have got. Whether it is a network groups, or a project team, or on the bench, in terms of knowledge management the key thing is creating
networks and relationships that you can call on later when you need them. The more groups you get involved in the better for this reason.

These groups hold about ten percent on codified information – methodologies, a few good links. The rest is tacit.

To me, my model of the company is a loose federation of independent consultants. So, if I was an independent consultant, and I was on a project. Well, firstly I would have to win the project on my own capabilities, and demonstrate a capability which is pretty hard, and pretty restrictive in terms of learning, because you only do work that you can already do. In this company, the payoff of this network organisation, basically I can get on projects that I don't have to have had demonstrated experience, so I can stretch a bit. I can call on these other people who also have a vested interest in me succeeding. If the company succeeds, they succeed. And I think this is a good model just in terms of thinking about the knowledge management and exchange stuff. This loose network of independent consultants that you share with more fully than you would if they were totally independent, because you have an interest in them succeeding.

So they can run and function totally independently quite well, in most circumstances. Which means they are quite flexible and adaptable in most circumstances and they can call on their own little network of people. But where they are getting stretched, they can call to the greater organisation and the community has got ability and a need to help them.

The good thing is that this is very dynamic. It’s a bit of a leap, but I’ll make it. It’s current. If Joe Blow has knowledge of relevant techniques and experience, as opposed to a faceless organisation has a repository of knowledge – well what’s current, and what’s not. Is someone managing this content? How would they do it? How do they know if it’s current or not? Then it becomes an admin job for one of the community of practice members to come in and make that call. Or they have arbitrary rules, and they will archive information because it wasn't used in the last two years. If you take that approach, this means that the bible would be archived, because it was written 2000 years ago therefore it is no good. It’s nonsensical.

I just tap into what people hold as dear, and this is a good approach.
What role do mental models play in the interpersonal knowledge exchange process?

I don’t know if you are familiar with a model called the ladder of inference. It is a similar thing to mental models. Here is the raw data. I convert the data and make some assumptions on it and select the data that is relevant to my mental model. And you go up this ladder, and I come up with a different position than you would even though we both got the raw data.

Well, in terms of conversations, is having dialogues. I send out information, and if you have any questions, and if you are a good recipient, you replay it in your own words, reflecting the content and the feelings that I am expressing. This way you understand what you are asking. And then we can come back to the answer. But the first stage is making sure you understood the message as sent, and sending it back. This negotiation allows you to very quickly hone down to the context specific knowledge that you are looking for.

And, in that sort of exchange, you are saying, if you are asking about this. Because I am an intelligent person on the other side, I can say yes I understand what you want, and you I can give you this. However, I can also say, you are much better off doing this which is a quantum leap from what you’ve asked. Which is where the intelligence comes in as opposed to a dumb database. Database you can’t do that.

The opposite may be true – rather than needing War and Peace, I might only need two paragraphs to stick into a client report. I want someone I trust to give me those two paragraphs to ensure what goes in is the right stuff – that is what the community of practice thinks is important. It takes a whole lot of time and effort to work this out, and I don’t have the experience to work it out anyway. I don’t know which is good, and which is bad. Hence, by ringing up an expert, they will say, ‘What do you want? What is this, what is that?’ Based upon what you’ve told me, this is the number one choice, and I’ll give you this other one as a backup and you can go to your client to see what they want. A whole lot of stuff that I may not have even asked for, or even thought to ask for, because I don’t know enough – that’s why I’m asking. I don’t know the questions to ask. The expert will come back and ask me these important questions.
Would better IT systems change the way things are done now?

There is a place for searching databases – for professional articles and all the rest. So to ignore them is not the answer. I support the fact that you always need to have a face-to-face system, where you know who is who, and who to go to get that specific information, and the value add that they can do. The database can’t do this. Having more money for more computers would not change this. IT would not help.

Validation of the data is another key issue. I don’t want to waste my time reading rubbish. At least in the face-to-face system, you get to validate via your knowledge of the person and their standing in the community as to the value of the information to you. You can take into account rigour and credentials in the person giving you the knowledge.

However, who knows. Let’s say you made the switch now to the super dooper database thing. And it’s an adjunct too. You would build on it, get more methodologies, and how to go about things and blah blah blah. You wonder whether subsequent generations of consultants would become dependant on it, and thinking goes out the door, and you would end up with the situation in ten years time where they don’t really understand what they are doing. And they follow something religiously because this is what you do, and we’ve been successful, and we have a track record using that methodology, and in fact we’ve even gone one step worse. We’ve sold that methodology. That is what we are doing to client X. And then they are locked in – everything is locked in. Even though it’s not the focus of that particular context, and how you would solve that problem. It’s beyond me really how this would work.

Does the growing size of the company make a difference to knowledge exchange?

I don’t thing we are taking advantage of the increasing size. I don’t have strong relationships with people in the other states. I effectively work locally. Whether or not we are a national or international company, in practice we are a Melbourne based company. And you know, that’s my experience. Which doesn’t seem sensible.
I don’t see much sense with replacing what’s already available with a company flavour. If I’ve written all of these research tools, why would I want a company specific brand of them? And the most specific thing to us is choosing who is in the company, and what is their specialist area of knowledge. We can do a lot more with that. Like a meta search engine, rather than the actual knowledge itself. That would be well used.

**What about validation of who is an expert – at the moment it’s self proclaimed by the individual?**

Sure – this is a key point. I do my own validation. If Joe Blow is an expert on strategic planner or something. Strategic management. And I have an experience with Joe that suggests he is not, well then I won’t ask him next time.

**SIDE 2 of TAPE:**

**What about the danger of losing knowledge at the company when people leave?**

As we are a loose federation of consultants, people do leave. So the question is not, do they leave with the knowledge, it is what impact does it have?

One of the advantages is that the knowledge that comes in is current. You don’t have problems with outdated knowledge. It just goes. And to a certain extent, it is self-organising, because if you are a successful consultant, and your remuneration reflects this, hopefully you will stick around. If you are not successful, then you will leave the company. Well you take your knowledge with you because it is probably not much good anyway. If you were super successful, you would start your own practice, and take it off with you. Yeah – it goes. But if you have had interactions with people, and transferred to them to such a degree that they could actually do it, well the fact that you had it and you were capable of doing it, is irrelevant as far as the company’s capability is concerned.
So really the answer there is about structuring projects so that we have buddies, with so called experts in conjunction with novices, or people who are interested but not yet too confident. You transfer the actual practice to the people, rather than any database.

**What about the danger of knowledge being copied by competitors?**

Yes – that’s an interesting one. I’m going through a book now, ‘The flag guru’, and he lays out all his knowledge, and give practices of how to do it, and you get CD’s and software, has a web site to back up any questions, and this knowledge you could easily bill out at 5000 bucks per day. And he is giving it away. And do you think the world is awash with people trying to take it away. No – because its hard. Its really hard. Its hard graft – it takes a lifetime practice to make it happen. And even then if you are half as good as this guru, you’d be doing really really well.

So the only knowledge that would be easy to copy is probably not very high value anyway. It’s the practice and expertise of doing it that is valuable. So really giving it away is more of a marketing thing – ala McKinsey Quarterly and stuff – they don’t give away much there. It’s just superficial, and it gets working and promotes your own self.

It’s a bit like someone could give me a piano. They could give me Mozart’s music. I still couldn’t play it. I can listen to it, and I can say, yeah – I know what I have to do. But I still can’t play it. I can’t do it.

**What are your thoughts on this knowledge spectrum model of organisation (shown diagram)**

Obviously it’s a bit hard to comment on this without knowing the model in detail.

Obviously you, or organisations, can’t know everything. And the more I learned myself – the more studies I’ve done, the more courses, the more experience, the more I’ve learnt – I realise that I know less and less. Which is interesting. And certainly I can’t be an expert in everything in the world. I can’t know everything in the world, and be an expert in everything in the world.
So in terms of bounding where you want to focus your energies, I think this is a fair thing to put boundaries in. In terms of what drives those boundaries, certainly I’m making an active decision on an individual basis about which knowledge is going to have the most payoff. Should I go for knowledge that I think has 5000 dollars per day consulting type consulting, or menial bread and butter stuff. And make some active decision on that on where I spend my time and effort.

Culturally, and I’m speaking on an individual basis because I can relate to this. Culturally, I certainly make decision about this organisation. ‘Is this the type of work that they have a market presence in?’ whether it’s fit for the organisation, whether they can sell it and whether it fits into their strategy about where they want to be. The technology – without a means to enact the knowledge, it’s a waste of time, if you define technology as the delivery system. It’s capability.

If the environment is amenable to selling certain types of knowledge – for example balanced scorecard is flavour of the month – this would make the knowledge worth learning. You can then develop a product based upon what is out there in the environment.

The knowledge state concept is OK on face value.

*Summary of the Interpersonal knowledge exchange process – Looking at the process here, lets talk through the end to end process to summarise what we have spoken about today.*

(Summarised conversation – both interviewer and respondent)

This is the process view of knowledge as we have discussed.

 Initial, as the receiving unit, you have a need for some knowledge and you recognise that need. I think what happens is that you then translate that need into a request based upon your mental models of the world based upon what you perceive will get you the result based upon the source unit and the communications mechanism.
So then, you typically will look for a pointer that is the most efficient way to get it. Either it's in your head, in which case there is no consultant to consultant exchange process, because you don't go anywhere else other than your own external professional library and the like. You will then look at some pointers, and you will try to identify a guru, or use an email to ask some people how do I find their knowledge. You will then take one or two hops before you go into what has been called the negotiation stage. So this doesn't happen immediately. You have to call someone, and you have to sound them out – are they the person with the knowledge. If not, they will hop you to the next person. So, in this stage there is something about finding the knowledge or finding the right person. And this is partly the validation step.

Some sort of negotiation takes place. You find the person, and you say, this is what I want. And they say, that is not what you want, and so on.

The need to transfer knowledge is recognised by that person, and they then go through a similar thing with the mental model translation. They adapt the knowledge at the source, based upon the perceived need of the recipient. After the negotiation, they think, 'I think Bob wants this', so they change it at the source based upon the needs of the recipients.

This then goes back into another negotiation stage. This gets put more into the local context of the recipients need. You say, 'Well this is what I need, but I'm talking about telecommunications, you are talking about banking and finance industry. Is this relevant to me?' You then receive this knowledge.

When you have got this, the person that received the knowledge leaves the scene to some extent, unless there is further negotiation, and they then adapt it further to the specific context that you are trying to use it for. 'I need to modify it for my client and place it into this context.'

Once you have done this, you then implement the knowledge. You use it. It then becomes a part of your own tacit knowledge base. You've done it. You've picked up that tacit knowledge. Fiddled with it some how. Internalised it somehow. The premise here is that you are not going to go back through the same process if something similar comes up again.
Any further comments on the tacit exchange model:

Just a couple of suggestions on it. I know that there are some things that are implicit in here.

One is the differentiation between information sharing and knowledge creation. It is implicit here where you are fiddling with it. I can fiddle with a methodology to make it fit my new client, but it is only when I enact it at the client site, and do the learning loops of error correction – that didn’t work, go back and refine it. But then the double loop learning – which is, ‘What assumptions and mental models do I need to change based upon the success or otherwise of the implementation.’ This is the knowledge part of this model. As opposed to just dumping information on someone.

Transferring information is one thing – I can tell you what it says, can I take action, so I guess it’s a matter of definition. Its only when you add the context, the experiences, and the specific need at that point, and the tacit knowledge of the individual, do you have knowledge. This appears why personal networks seem to be efficient.

I think an IT driven approach would say, ‘if you had sufficient fields, and sufficiently clever queries and stuff, it will give you some answers’. This is incredibly inefficient though. Because it’s fragmenting information again, again and again. And it loses its context. It’s hard to get this context back again. People networks can do it really, really efficiently.

People will contribute if they know what their knowledge will be used for, and it doesn’t disappear into a black hole, never to be seen again.

Do you have any last words or comments?

No – there is nothing that comes immediately to mind. So If I think of something I’ll give you a call.

END OF INTERVIEW.
**Appendix E - Exchange Process: Coded Interview Transcript Summary Table**

This appendix contains the coded sample interview transcript of data collection to answer the first research question, *What is the interpersonal process by which knowledge is exchanged between consultants?*

### Stage 1 - Need Identified

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need Identified</td>
<td>Carl</td>
<td>Something causing me pain … usually …</td>
</tr>
<tr>
<td>Need Identified</td>
<td>Carl</td>
<td>My experience is that it typically happens when you are out on a project. Actually at different stages of the project. You might be up for a project, or being interviewed for a project, and you might think I need to bolster up my knowledge on this aspect that the client may want.</td>
</tr>
<tr>
<td>Need Identified</td>
<td>Carl</td>
<td>Or you might actually be out on a project, and you get to a certain bit and you think, there must be a better way of doing this. This is another trigger.</td>
</tr>
<tr>
<td>Need Identified</td>
<td>Carl</td>
<td>They are the reactive triggers.</td>
</tr>
<tr>
<td>Need Identified</td>
<td>Carl</td>
<td>The other one that I'd say is a variation of this — you get stuck.</td>
</tr>
<tr>
<td>Need Identified</td>
<td>Carl</td>
<td>There is evidence though that there are other people that are just thinking 'Well strategically I'm interested in working in a particular field, so I'll actively go and work out some information on it and position myself, you know, whether I want to pursue it, so that I can move into that area.</td>
</tr>
<tr>
<td>Need Identified</td>
<td>Carl</td>
<td>Initially, as the receiving unit, you have a need for some knowledge and you recognise that need.</td>
</tr>
</tbody>
</table>

### Stage 2 - Self-Resourced Search

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Resourced Search</td>
<td>Carl</td>
<td>I do use, not greatly, my own personal searches and knowledge.</td>
</tr>
<tr>
<td>Self Resourced Search</td>
<td>Carl</td>
<td>I have a professional library of books at home, but on largely recommendations of my colleagues internally, and others externally to the organisation that I have worked in my field.</td>
</tr>
<tr>
<td>Self Resourced Search</td>
<td>Carl</td>
<td>They will use the big books that they have found useful. Which I find really useful. So that's my number one step, then and the people.</td>
</tr>
<tr>
<td>Self Resourced Search</td>
<td>Carl</td>
<td>And to a certain extent, they have to survive on their own. So they go into an organisation, they take in what's there, they bring with them their own knowledge, and then they call on their own networks to pull in the bits that they need to get the job done.</td>
</tr>
<tr>
<td>Self Resourced Search</td>
<td>Carl</td>
<td>Depending on the context of the question, I will use people or self first. If it's not in my area of expertise, I will ask people first. The self-resourced search allows you to know which question to ask if it is a field new to you. They can have a vague kick around of the body of that.</td>
</tr>
</tbody>
</table>
| Self Resourced Search | Carl | I guess my first recourse would be to try to answer the question myself. Work out an approach, and then maybe validate with other people, or ask them.
Stage 3 - Pointers Sought

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>I call on my network and resources to help answer that question.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>And again, I will call upon my own personal network of people based within and outside the company to see if they can answer my questions.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>I call on those people, and within that group there is certain people that I know that have got certain expertise. How do I know that they’ve got certain expertise? - Basically through dialogue with them. And its one of the reasons I’m in the network, because I want to know who has got stuff that I can call upon from time to time.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>In terms of knowledge, I’d say that rather than having the explicit knowledge itself codified or captured in our system, I’ve got a listing (in my head) of who the holders of the knowledge may be. And that’s what I’m looking for.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>I’m looking for information, and the context of how to use the information, which is why I find people useful. And they can either give it to me, or point me to other people who may have it.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>Hence, this process can validate my own knowledge with peers. Going a little bit further, I go to network meetings, just to see what people put up. There is no specific agenda or question in my head. I just go in there trawling.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>And I guess to a certain extent, you narrow down your target, so I might ask a certain person about Business Process Reengineering, just because an off-the-cuff type comments that you encompass – you might think, she might be worth listening to, whereas another person, when they talk, you might think well – they don’t seem to be terribly sophisticated in that field, so I won’t ask them. Based upon language and way they talk about the topic, you make a judgement of where they sit.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>Well we’ve talked about personal networks earlier. Another method we haven’t covered yet is email requests.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>So to summarise the company’s knowledge management and exchange processes. Ninety percent goes on knowing people, and building your networks, and knowing key people and what they can do and what background they have got. Whether it is a network groups, or a project team, or on the bench, in terms of knowledge management the key thing is creating networks and relationships that you can call on later when you need them. The more groups you get involved in the better for this reason.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>I see people putting out global broadcast emails, requests for info. Personally I find them quite annoying, but the people that do that have found that its been quite effective. This is because it generated five or ten responses from people that they otherwise wouldn’t get if they had targeted a particular person. So I guess that behaviour is reinforcing.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>I go to a person. My experience has always been face to face is the best. Go to somebody that knows something. Second is by phone. And absolutely last would be email direct to a person that I have a relationship with. I would also ring people who I had been recommended by my network as a knowledge carrier.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>To me the whole thing is built on relationships – I have stronger relationships with the people that I work with. Number one. So the people that I would call on first are the people that I work side by side with on projects and I know them really well. We know each other, and we’ve backed each other and done work together. So you’ve got a really strong relationship with those people, and it extends out to me. So I’ve got a known relationship with them.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>And there is some superficial sort of stuff that goes on, but that's all it is. It's more like—this is a bike, and this is how you ride it, etc etc. And there is different sort of bikes. You put that away, and come Christmas and you get the bike, and you think where was that stuff. Then you dig it out, and then you call Joe Blow who knows a lot about bikes.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>I think what happens is that you then translate that need into a request based upon your mental models of the world based upon what you perceive will get you the result based upon the source unit and the communications mechanism.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>You will then look at some pointers, and you will try to identify a guru, or use an email to ask some people how do I find their knowledge. You will then take one or two hops before you go into what has been called the negotiation stage.</td>
</tr>
<tr>
<td>Pointers Sought</td>
<td>Carl</td>
<td>So this doesn't happen immediately. You have to call someone, and you have to sound them out—are they the person with the knowledge. If not, they will hop you to the next person. So, in this stage there is something about finding the knowledge or finding the right person. And this is partly the validation step.</td>
</tr>
</tbody>
</table>

**Stage 4 – Request Sub-process**

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Sub-Process</td>
<td>Carl</td>
<td>I think people are really effective because they contextualise the information.</td>
</tr>
<tr>
<td>Request Sub-Process</td>
<td>Carl</td>
<td>If I was doing a global search on a dumb database, I might come up with an answer, but how do I interpret the answer, and ask all of these other questions that I hadn't even thought to ask in the first place.</td>
</tr>
<tr>
<td>Request Sub-Process</td>
<td>Carl</td>
<td>It is much easier to ask a friend or acquaintance. They don't have to be a friend, but they know who you are as opposed to a faceless person—a name. So yes, participation is a maintenance activity that helps with the exchange process when required.</td>
</tr>
<tr>
<td>Request Sub-Process</td>
<td>Carl</td>
<td>If it's important to me, I'm going to target certain people. And yes, I'll… given the timeframe and the background to the problem, …… I'm just wondering if I'd share with them what I'd done to date, or leave it open to get new ideas. Probably the latter. And then once they've given me something I'd share.</td>
</tr>
<tr>
<td>Request Sub-Process</td>
<td>Carl</td>
<td>But I don't ask too much of people. I ask them something that I think is possible for them to give without hurting too much. Unless they are a colleague on a project, and that's different. They are in there with me and they can sweat blood.</td>
</tr>
<tr>
<td>Request Sub-Process</td>
<td>Carl</td>
<td>Also, depending on the complexity of the knowledge to be transferred will influence whether I would use email. For instance if it was the names of three software packages, then this would be OK. If it was more complex, I wouldn't consider it, nor would I reply via email.</td>
</tr>
<tr>
<td>Request Sub-Process</td>
<td>Carl</td>
<td>Well, in terms of conversations, is having dialogues. I send out information, and if you have any questions, and if you are a good recipient, you replay it in your own words, reflecting the content and the feelings that I am expressing. This way you understand what you are asking. And then we can come back to the answer. But the first stage is making sure you understood the message as sent, and sending it back. This negotiation allows you to very quickly hone down to the context specific knowledge that you are looking for.</td>
</tr>
<tr>
<td>Request Sub-Process</td>
<td>Carl</td>
<td>And, in that sort of exchange, you are saying, if you are asking about this. Because I am an intelligent person on the other side. I can say yes I understand what you want, and you I can give you this.</td>
</tr>
<tr>
<td>Request Sub-Process</td>
<td>Carl</td>
<td>The opposite may be true—rather than needing War and Peace, I might only need two paragraphs to stick into a client report. I want someone I trust to give me those two paragraphs to ensure what goes in is the right stuff. It is what the community of practice thinks is important. It takes a whole lot of time and effort to work this out, and I don't have the experience to work it out anyway. I don't know which is good, and which is bad. Hence, by ringing up an expert, they will say, 'What do you want? What size project is it? What is this, what is that?' Based upon what you've told me, this is the number one choice, and I'll give you this other one as a backup and you can go to your client to see what they want. A whole lot of stuff that I may not have even asked for, or even thought to ask for, because I don't know enough—that's why I'm asking. I don't know the questions to ask. The expert will come back and ask me these important questions.</td>
</tr>
</tbody>
</table>
### Request Sub-Process

| Carl | I think what happens is that you then translate that need into a request based upon your mental models of the world based upon what you perceive will get you the result based upon the source unit and the communications mechanism. |
| Request Sub-Process | Carl | Some sort of negotiation takes place. You find the person, and you say, this is what I want. And they say, that is not what you want, and so on. |

### Stage 5 - Source Agrees to Exchange

| Finding: | Who | Quote from Evidence |
| Source Agrees to Exchange | Carl | Yes. I have responded. General practice is that if I know anything that I can do that is not too painful to me, I'll offer it regardless of who they are. And to me, it's just potential payoff in the future. |
| Source Agrees to Exchange | Carl | The need to transfer knowledge is recognised by that person, and they then go through a similar thing with the mental model translation. |
| Source Agrees to Exchange | Carl | They adapt the knowledge at the source, based upon the perceived need of the recipient. After the negotiation, they think, 'I think Bob wants this, so they change it at the source based upon the needs of the recipients. |

### Stage 6 – Knowledge Handover Sub-Process

| Finding: | Who | Quote from Evidence |
| Knowledge Handover | Carl | If they are complex problems, then I still need a person that can contextualise it for me. So either way, a database driven solution doesn’t really help me. |
| Knowledge Handover | Carl | But you need some active reflection going with it. What I mean by that is, if I want to learn new way of going about something - I’d like to go on a project with someone that I acknowledge is better at it than me, and work along side them, and ask lots of questions while you do it that way. And probably ask them questions that they have never thought about themselves to bring out some of that tacit knowledge. And make it explicit so that I can learn from it. |
| Knowledge Handover | Carl | Being able to ride a bike is fine, and being able to transfer this knowledge to someone else is a different thing again. And, trying to teach is a great way to learn, because then you have to go back and reflect on it, and actually try to pull out some of the tacit bits... it’s a dynamic between a whole lot of things, and that’s why the apprenticeship thing is an attractive thing. |
| Knowledge Handover | Carl | I don’t think our company is on about an expert driven approach. A partnership coaching approach is what we are on about. So this a bit different to having the master, and here’s the apprentice coming in... So even though I’m sort of saying apprenticeship... |
| Knowledge Handover | Carl | To me, the actual learning takes place on the projects, where it counts. That’s where you focus your energy and your efforts. The projects are very demanding, and if you don’t have a very good reason then you would never, I don’t think, invest the amount of time and energy necessary to actually learn or give something. |
| Knowledge Handover | Carl | So participating in real work is where the learning happens. |
| Knowledge Handover | Carl | These groups hold about ten percent on codified information – methodologies, a few good links. The rest is tacit. |
| Knowledge Handover | Carl | This then goes back into another negotiation stage. This gets put more into the local context of the recipients need. You say, 'Well this is what I need, but I’m talking about telecommunications, you are talking about banking and finance industry... Is this relevant to me?'. You then receive this knowledge. |

### Stage 7 - Recipient Adaptation to Local Context

- Appendix E -
### Finding: Who Quote from Evidence

#### Recipient Adaptation to Local Content

*Carl*

> When you have got this, the person that received the knowledge leaves the scene to some extent, unless there is further negotiation, and they then adapt it further to the specific context that you are trying to use it for. ‘I need to modify it for my client and place it into this context’.

#### Stage 8 - Recipient Implementation

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recipient Implementation</td>
<td><em>Carl</em></td>
<td>The use of information is knowledge. So reading a book, listening to people tell me their experiences, and going through case studies, is not knowledge. I'm going to have to do it before it becomes something that I know. So, particularly with business transformation stuff, there are a lot of nuances. For instance, how you would set up a room, furniture, tone of voice. I mean so much stuff that is useful to have actually another person in to help you reflect back on what worked and didn’t work.</td>
</tr>
<tr>
<td>Recipient Implementation</td>
<td><em>Carl</em></td>
<td>The use of information is knowledge. So reading a book, listening to people tell me their experiences, and going through case studies, is not knowledge. I'm going to have to do it before it becomes something that I know. So, particularly with business transformation stuff, there are a lot of nuances. For instance, how you would set up a room, furniture, tone of voice. I mean so much stuff that is useful to have actually another person in to help you reflect back on what worked and didn’t work.</td>
</tr>
<tr>
<td>Recipient Implementation</td>
<td><em>Carl</em></td>
<td>Once you have done this, you then implement the knowledge. You use it. It then becomes a part of your own sort knowledge base. You've done it. You've picked up that tacit knowledge. Piddled with it some how. Internalised it somehow. The premise here is that you are not going to go back through the same process if something similar comes up again.</td>
</tr>
<tr>
<td>Recipient Implementation</td>
<td><em>Carl</em></td>
<td>One is the differentiation between information sharing and knowledge creation. It is implicit here where you are fiddling with it. I can fiddle with a methodology to make it fit my new client, but it is only when I enact it at the client site, and do the learning loops of error correction – didn’t work, go back and refine it. But then the double loop learning – which is: ‘What assumptions and mental models do I need to change based upon the success or otherwise of the implementation.’ This is the knowledge part of this model. As opposed to just dumping information on someone.</td>
</tr>
</tbody>
</table>

#### Explicit Store

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit Store</td>
<td><em>Carl</em></td>
<td>I don't think people here would place much stock in codified information held in databases. They probably don't think it is rich enough, and the context is not here.</td>
</tr>
<tr>
<td>Explicit Store</td>
<td><em>Carl</em></td>
<td>The reason for this is that it's the practice. There is no rich methodologies or anything apparent, and the organisation has been going for a reasonable length of time – sixteen or so years – and they don't exist. And the argument seems to be a bit cyclical – 'We haven't needed them in the past, and been successful. So why do we need them now?'</td>
</tr>
<tr>
<td>Explicit Store</td>
<td><em>Carl</em></td>
<td>And there is a certain pride that when you codify it, you remove a lot of the thinking that goes with it. And what I mean by that, ABC consultants to me is one of the things that they pride themselves on – that they are flexible and adaptable.</td>
</tr>
<tr>
<td>Explicit Store</td>
<td><em>Carl</em></td>
<td>The good thing is that this [interpersonal knowledge exchange process] is very dynamic. It's a bit of a leap, but I'll make it. It's current. If Joe Blow has knowledge of relevant techniques and experience, as opposed to a faceless organisation has a repository of knowledge – well what's current, and what's not. Is someone managing this content? How would they do it? How do they know if it's current or not? Then it becomes an admin job for one of the community of practice members to come in and make that call. Or they have arbitrary rules, and they will archive information because it wasn't used in the last two years. If you take that approach, this means that the bible would be archived, because it was written 2000 years ago therefore it is no good. It's...</td>
</tr>
<tr>
<td>Explicit Store</td>
<td>Carl</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>However, I can also say, you are much better off doing this which is a quantum leap from what you’ve asked. Which is where the intelligence comes in as opposed to a dumb database. Database you can’t do that.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is a place for searching databases – for professional articles and all the rest. So to ignore them is not the answer. I support the fact that you always need to have a face-to-face system, where you know who is who, and who to go to get that specific information, and the value add that they can do. The database can’t do this. Having more money for more computers would not change this. It would not help.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Think an IT driven approach would say, if you had sufficient fields, and sufficiently clever queries and stuff, it will give you some answers. This is incredibly inefficient though. Because its fragmenting information again, again and again. And it loses its context. It’s hard to get this context back again. People networks can do it really, really efficiently.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix F – Preference: Sample Coded Interview Transcript

Appendix F contains the recoded text of the sample interview transcript that was presented in Appendix D for respondent Carl. In this case, the text was coded for the second research question in relation to why consultants prefer the interpersonal knowledge exchange process. The same transcript has been presented in order to highlight that when both coding systems are used, the majority of the interview text was utilised in the data analysis process. This is typical of all interview transcripts coded this way.

The coloured underlined text shows the coding for the description of the interpersonal knowledge exchange process, and the colour coding system and the content has been summarised in a table at Appendix G.

TRANSCRIPT Carl: 26/06/01 MELBOURNE

How much knowledge is written down at your company?

The quick answer is very little. I don’t think people here would place much stock in codified information held in databases. They probably don’t think its rich enough, and the context is not there.

The reason for this is that ‘it’s the practice’. There is no rich methodologies or anything apparent, and the organisation has been going for a reasonable length of time – sixteen or so years – and they don’t exist. And the argument seems to be a bit cyclical - ‘We haven’t needed them in the past, and been successful. So why do we need them now?’

And there is a certain pride that when you codify it, you remove a lot of the thinking that goes with it. And what I mean by that, ABC consultants to me … one of the things that they pride
themselves on … is they are flexible and adaptable. And to a certain extent, they have to
survive on their own. So they go into an organisation, they take in what’s there, they bring with
them their own knowledge, and then they call on their own networks to pull in the bits that they
need to get the job done. And it’s customised. And it seems to be relatively effective.

It may not be terribly comfortable for that consultant, but what they do is come up with
something that … works!

These are grand assertions.

What do you define as knowledge?

... Silence ....

I’m thinking out loud here. The ability to interpret events in a valid and actionable way. So I
can take an event and explain a cause and effect relationship, and from that, … and I’m talking
from a consulting point of view, which to me is valid and actionable advice, I can argue the
case why that is as it is, and I prescribe an action that you can take based upon that. So I’m
using that consultant view of knowledge.

So if very little of that is written down, how do consultants exchange knowledge?

Well … I take a pull and a push view on how they exchange knowledge.

If somebody came and asked me for knowledge on something, like ‘How do you do such and
such?’ Well I call on my network and resources to help answer that question. What that
question may be asking about may be, I don’t know … ‘How would I go about something?’,
‘Have I ever done such and such?’, ‘Do I know this person?’ So that is someone calling on me.

The other way is if I have a problem. Something causing me pain … usually …
And again, I will call upon my own personal network of people based within and outside the company to see if they can answer my questions.

What do I use? Mechanisms … Within the company there are Centres of Excellence that I call on. In my case, the business transformation CoE. I call on those people, and within that group there is certain people that I know that have got certain expertise. How do I know that they’ve got certain expertise? - Basically through dialogue with them. And its one of the reasons I’m in the network, because I want to know who has got stuff that I can call upon from time to time.

*The process of conversations and dialogue helps build up the knowledge of who’s who in the CoE?*

Yes. In terms of knowledge, I’d say that rather than having the explicit knowledge itself codified or captured in our system, I’ve got a listing (in my head) of who the holders of the knowledge may be. And that’s what I’m looking for.

*Are you looking for pointers to the knowledge?*

I’m looking for information, and the context of how to use the information, which is why I find people useful. And they can either give it to me, or point me to other people who may have it.

I think people are really effective because they contextualise the information. If I was doing a global search on a dumb database, I might come up with an answer, but how do I interpret the answer, and ask all of these other questions that I hadn’t even thought to ask in the first place.

I do use, not greatly, my own personal searches and knowledge. I have a professional library of books at home, built on largely recommendations of my colleagues internally, and others externally to the organisation that have worked in my field. They will tell me the big books that they have found useful. Which I find really useful. So that is my number one stop. That and the people.

*Do you use yourself or people first?*
Depending on the context of the question, I will use people or self first. If it's not in my area of expertise, I will ask people first. The self-resourced search allows you to know which question to ask if it is a field new to you. They can have a vague kick around of the footy sort of thing.

I guess my first recourse would be to try to answer the question myself. Work out an approach, and then maybe validate with other people, or ask them if they have a better approach. Or in fact, I’d ask them their approach and then compare this with my approach without clouding what they might suggest.

Hence, this process can validate my own knowledge with peers. Going a little bit further, I go to network meetings, just to see what people put up. There is no specific agenda or question in my head. I just go in there trawling.

How does this participation and trawling help with knowledge exchange? Is it a maintenance function?

It is much easier to ask a friend or acquaintance. They don’t have to be a friend, but they know who you are as opposed to a faceless person – a name. So yes, participation is a maintenance activity that helps with the exchange process when required. Absolutely.

You feel much more comfortable even knowing certain personalities in the group. Who you would ask? And I guess to a certain extent, you narrow down your target, so I might ask a certain person about Business Process Reengineering, just because an off-the-cuff type comments that you encompass – you might think, she might be worth listening to, whereas another person, when they talk, you might think ‘well – they don’t seem to be terribly sophisticated in that field’, so I won’t ask them. Based upon language and way they talk about the topic, you make a judgement of where they sit.

Looking at the community model with bands of participation ranging from novice to expert or core group (model explained), is knowledge exchange more efficient the closer to the core that the two parties are?
Well my personal experience when I joined the company is that you don’t know who knows what. You don’t know who’s who. And I guess initially, you’d say that anyone in the core group, you by default, give them a high status (in regard to expert knowledge), and the others that aren’t in the core group, until proven otherwise, because they obviously have an interest in a particular field, and it’s a feeling out sort of process. What do these people know? How does this stack up against what I know? Can I learn something? Or can I offer something to these people?

And I know, even recently with a group, new people come on board and they are quite reluctant initially to offer up anything, because they are concerned they won’t stack up against what the group has accepted as knowledge within the group, or telling grandma to suck eggs type of thing. So there is a certain feeling out process.

**How do people or the group overcome this initial barrier to participation for newcomers?**

I haven’t come across too many formal processes in this organisation. It’s an informal feeling out and a matter of people becoming more comfortable, and offering things. And again there might be certain encouragements to offer certain stuff, but ultimately its up to the person to let go, or to let other people know what they know.

**If you need some knowledge, how does the need typically manifest itself to you?**

My experience is that it typically happens when you are out on a project. Actually at different stages of the project. You might be up for a project, or being interviewed for a project, and you might think I need to bolster up my knowledge on this aspect that the client may want.

Or you might actually be out on a project, and you get to a certain bit and you think, there must be a better way of doing this. This is another trigger.

The other one that I’d say is a variation of this – you get stuck.

They are the reactive triggers.
There is evidence though that there are other people that are just thinking, ‘Well strategically I’m interested in working in a particular field, so I’ll actively go suss out some information on it and position myself, you know, whether I want to pursue it, so that I can move into that area.

**How do you move from that need, to finding the knowledge?**

Well we’ve talked about personal networks earlier. Another method we haven’t covered yet is email requests.

I see people putting out global broadcast emails, requests for info. Personally I find them quite annoying, but the people that do that have found that it’s been quite effective. This is because it generated five or ten responses from people that they otherwise wouldn’t get if they had targeted a particular person. So I guess that behaviour is reinforcing.

I just find it annoying to get them. They have a nuisance factor. Especially when you are off site, and you might have fifty messages and none of them are particularly relevant to you, and you have to make time to open the message and read it. It’s annoyance value.

**Have you ever responded to any? What’s the difference from the ones you ignore?**

Yes. I have responded. General practice is that if I know anything that I can do that is not too painful to me, I’ll offer it regardless of who they are. And to me, it’s just potential payoff in the future.

**Why do people contribute at all to the knowledge exchange process?**

There are a couple of levels of payoff. One is if the questions I answer are in the circle of work that I’m interested in – business transformation. So, if I help the company and others be successful in that area, and we win work in that area, there is more potential for me to work in that area. So I do more in that area. So it grows the sort of work that I want to work in.
On a personal level, if I help somebody, it wins brownie points psychologically. That's my notional view on it. Not that I go out to explicitly to do it that way, but I guess that's the bottom line. If I help people, they help me.

There is a school of thought that says knowledge is power. My experience has been, if I give some of my knowledge away, then it has actually benefited me. Because people link that knowledge back, certainly the first couple of people anyway, back to where the thoughts come from. So it actually elevates my own position.

But giving it away actually helps me, because usually you are giving it to people who appreciate the context and experience in using it that you can add, it's like a marketing tool. I don't do it in such a cold and calculating way. So what I'm trying to say is that I don't hoard information and knowledge – If I can help people, I give it to them.

Why … I guess in the long term it comes back and benefits me. But I don't have to have a transaction like 'one plus one equals two'. Just in general concepts.

Do people rely on personal networks rather than explicit databases because people appreciate being asked?

I think that's an important point. Psychologically there is an immediate payoff. Someone is grateful that you've done something for them. And they give it back to you, as opposed to dumping it in some database.

I have a real problem with the fields, or the lack of fields, that you can have in a database. You can't codify it in the same way (as talking to your network and people). And, it goes into the black hole.

The other thing is accessibility. People are accessible. I can ring them up. I can do all sorts of stuff. A big super dooper database within the company certainly doesn't exist, that I can access externally.
And the one internally is really poor in terms of weakness of data and context. Really it’s full of basic stuff, and generally if they are simple problems, I can solve them myself. If they are complex problems, then I still need a person that can contextualise it for me. So either way, a database driven solution doesn’t really help me.

*What is the sort of contextual stuff you were talking about (for instance timing)?*

Going back a step too, there is also the mechanism by which I’d ask for it.

If it’s important to me, I’m going to target certain people. *And yes, I’ll ... given the timeframe and the background to the problem, ... ... I’m just wondering if I’d share with them what I’d done to date, or leave it open to get new ideas. Probably the latter. And then once they’ve given me something I’d share.*

But I don’t ask too much of people. I ask them something that I think is possible for them to give without hurting too much. Unless they are a colleague on a project, and that’s different. They are in there with me and they can sweat blood.

It’s how much pain am I going to ask of this person. If I’m not going to ask too much, and I might get something. And I guess going back to those email ones – *I’ve never sent a global email – I guess because I’ve never had to. And the thing that bugs me is that these email ask for the knowledge by close of business today. And I don’t have that time.*

*Also, depending on the complexity of the knowledge to be transferred will influence whether I would use email. For instance if it was the names of three software packages, then this would be OK. If it was more complex, I wouldn’t consider it, nor would I reply via email.*

I go to a person. My experience has always been face to face is the best. Go to somebody that knows something. Second is by phone. And absolutely last would be email direct to a person that I have a relationship with. I would also ring people who I had been recommended by my network as a knowledge carrier.
Is it important to let people know the trail by which you got to them when you call someone you don’t know?

This is something I've never thought about, because to me this is just normal social practice. You explain why you are ringing because you don't have a relationship, and you would be mentioning how you got onto them. So I have been doing that, but never actually thinking about why. I think there would be a benefit.

There is fair evidence to support the fact that the community norms support cold calling. You feel supported in the local office, as opposed to ringing someone in another (geographic) office. People in the local office rarely go outside the local community unless they know the person directly, or they are recommended to ring. To me the whole thing is built on relationships – I have stronger relationships with the people that I work with. Number one. So the people that I would call on first are the people that I work side by side with on projects and I know them really well. We know each other, and we’ve backed each other and done work together. So you’ve got a really strong relationship with those people, and it extends out to me. So I’ve got a known relationship with them.

How is tacit knowledge transferred at the company?

Well to me, the ideal way is apprenticeship. But you need some active reflection going with it. What I mean by that is, if I want to learn a new way of going about something - I’d like to go on a project with someone that I acknowledge is better at it than me, and work along side them, and ask lots of questions while you do it that way. And probably ask them questions that they have never thought about themselves to bring out some of that tacit knowledge. And make it explicit so that I can learn from it. But the act of doing is important, as opposed to just asking them over the phone, or even over lunch or something is not effective as being there and doing it.

To me, there is a big difference between information and knowledge. And to me, it is being able to do something based upon information. The use of information is knowledge. So reading a book, listening to people tell me their experiences, and going through case studies, is
not knowledge. I’m going to have to do it before it becomes something that I know. So, particularly with business transformation stuff, there are a lot of nuances. For instance, how you would set up a room, furniture, tone of voice. I mean so much stuff that is useful to have actually another person in to help you reflect back on what worked and didn’t work.

**I think it’s a joke to think you can stick it in a database!**

Being able to ride a bike is fine, and being able to transfer this knowledge to someone else is a different thing again. And, trying to teach is a great way to learn, because then you have to go back and reflect on it, and actually try to pull out some of the tacit bits. It’s a dynamic between a whole lot of things, and that’s why the apprenticeship thing is an attractive thing.

**What role does participation in the consulting community play in knowledge exchange?**

Well recently I’ve been reading a couple of books on consulting practice, and again you read it and think OK, this is something that perhaps I can put into action. It’s only by doing active reflection that you actually get to make progress. By doing.

I don’t think our company is on about an expert driven approach. **A partnership coaching approach is what we are on about.** So this a bit different to having the master, and here’s the apprentice coming in. So even though I’m sort of saying apprenticeship.

**In our organisation, everyone is quite talented.** And the environment is different at different places, different times and different projects. So the role moves around. At our company, the core group (or the community) is probably convenors and facilitators – not experts. **As opposed to the traditional trades expert model.** Hence the core member of the community is not necessarily the expert. It may be someone who has been here for three years, and you’ve gone through the rituals, and you’ve done some projects, so now you are custodian of our practice. And when someone wants to know something about how to do something, they come to the custodian, because they know how to do things in this company.
The key differential between the core and peripheral in the community is the energy that they are investing into the community. And you often hear this saying, ‘You get out of it what you put into it.’ And in any community, be it a footy club or whatever, there is the core group of people putting in a significant amount of more energy than the fringe ones.

And the general experience has been that there is a turnover. So there does seem to be a net loss of energy if you are in the core group. The community needs processes to reinvigorate the core group over time in order to sustain itself. You have good communities and bad communities, but you need continuity to sustain itself.

And I think one of the interesting things at our company has been exactly that issue. Being a loose network type organisation, there has been a general reluctance to adopt some of those formal strategies that other voluntary organisations do. As a result, some of the core group people have burnt themselves out. And as a result, you end up with a vacuum.

*Is that a time thing – consultants working full days on client sites don’t have time to contribute?*

Well I don’t think so. And yes I think it’s hard. But I think it’s like any voluntary group that I’ve ever been involved in, its always not enough time and other demands. And by having some of the formal processes, such as I’ll take this role on for a given period of time, and involves some personal sacrifice, and then people take that on. Because they know there is an end to it. I think that, with the Business Transformation group here, we have been looking at, or have, put up some structures to say that you can take on this role for a period of time, to in a way give people boundaries. You can do this little bit, and this little bit, to try to handle that sustainability.

*What is the function in knowledge exchange of ‘just participating’ in the community of practice?*

To me, the actual learning takes place on the projects, where it counts. That’s where you focus your energy and your efforts. The projects are very demanding, and if you don’t have a very good reason then you would never, I don’t think, invest the amount of time and energy necessary to actually learn or give something. So participating in real work is where the
learning happens. The Centre of Excellence (for example) is more an information gathering about who is who and what’s out there that you can call upon when the time comes.

And there is some superficial sort of stuff that goes on, but that’s all it is. It’s more like – this is a bike, and this is how you ride it, etc etc. And there is different sort of bikes. You put that away, and come Christmas and you get the bike, and you think where was that stuff. Then you dig it out, and then you call Joe Blow who knows a lot about bikes.

**How do new employees find out where the knowledge exists?**

I’m not sure about the induction process in detail. I think it lists COE’s by name, and they click around on the intranet, and its up to them to call the contact people. The onus is on the new person to a large extent.

My group hasn’t been actively going out seeking new people telling them about our Business Transformation group. The organisation has organised a showcase of all of the different groups.

**What about the bench – does this have a role in tacit knowledge exchange?**

Most of the bench is flat out writing proposals, and in the process of doing that is finding explicit knowledge. And if we are lucky, putting it in a place where other people can then use it.

Any time you are working with other people, it helps in knowledge exchange. So if you are writing proposals jointly with other people on the bench, this is like a network building activity. And as a … we have our network cluster groups type meeting, which again is building relationships.

So to summarise the company’s knowledge management and exchange processes. Ninety percent goes on knowing people, and building your networks, and knowing key people and what they can do and what background they have got. Whether it is a network groups, or a project team, or on the bench, in terms of knowledge management the key thing is creating
networks and relationships that you can call on later when you need them. The more groups you get involved in the better for this reason.

These groups hold about ten percent on codified information – methodologies, a few good links. The rest is tacit.

To me, my model of the company is a loose federation of independent consultants. So, if I was an independent consultant, and I was on a project. Well, firstly I would have to win the project on my own capabilities, and demonstrate a capability which is pretty hard, and pretty restrictive in terms of learning, because you only do work that you can already do. In this company, the payoff of this network organisation, basically I can get on projects that I don’t have to have had demonstrated experience, so I can stretch a bit. I can call on these other people who also have a vested interest in me succeeding. If the company succeeds, they succeed. And I think this is a good model just in terms of thinking about the knowledge management and exchange stuff. This loose network of independent consultants that you share with more fully than you would if they were totally independent, because you have an interest in them succeeding.

So they can run and function totally independently quite well, in most circumstances. Which means they are quite flexible and adaptable in most circumstances and they can call on their own little network of people. But where they are getting stretched, they can call to the greater organisation and the community has got ability and a need to help them.

The good thing is that this is very dynamic. It’s a bit of a leap, but I’ll make it. It’s current. If Joe Blow has knowledge of relevant techniques and experience, as opposed to a faceless organisation has a repository of knowledge – well what’s current, and what’s not. Is someone managing this content? How would they do it? How do they know if it’s current or not? Then it becomes an admin job for one of the community of practice members to come in and make that call. Or they have arbitrary rules, and they will archive information because it wasn’t used in the last two years. If you take that approach, this means that the bible would be archived, because it was written 2000 years ago therefore it is no good. It’s nonsensical.

I just tap into what people hold as dear, and this is a good approach.
What role do mental models play in the interpersonal knowledge exchange process?

I don’t know if you are familiar with a model called the ladder of inference. It is a similar thing to mental models. Here is the raw data. I convert the data and make some assumptions on it and select the data that is relevant to my mental model. And you go up this ladder, and I come up with a different position than you would even though we both got the raw data.

Well, in terms of conversations, is having dialogues. I send out information, and if you have any questions, and if you are a good recipient, you replay it in your own words, reflecting the content and the feelings that I am expressing. This way you understand what you are asking. And then we can come back to the answer. But the first stage is making sure you understood the message as sent, and sending it back. This negotiation allows you to very quickly hone down to the context specific knowledge that you are looking for.

And, in that sort of exchange, you are saying, if you are asking about this. Because I am an intelligent person on the other side, I can say yes I understand what you want, and you I can give you this. However, I can also say, you are much better off doing this which is a quantum leap from what you’ve asked. Which is where the intelligence comes in as opposed to a dumb database. Database you can’t do that.

The opposite may be true – rather than needing War and Peace, I might only need two paragraphs to stick into a client report. I want someone I trust to give me those two paragraphs to ensure what goes in is the right stuff – that is what the community of practice thinks is important. It takes a whole lot of time and effort to work this out, and I don’t have the experience to work it out anyway. I don’t know which is good, and which is bad. Hence, by ringing up an expert, they will say, ‘What do you want? What size project is it? What is this, what is that?’ Based upon what you’ve told me, this is the number one choice, and I’ll give you this other one as a backup and you can go to your client to see what they want. A whole lot of stuff that I may not have even asked for, or even thought to ask for, because I don’t know enough – that’s why I’m asking. I don’t know the questions to ask. The expert will come back and ask me these important questions!
**Would better IT systems change the way things are done now?**

There is a place for searching databases – for professional articles and all the rest. So to ignore them is not the answer. I support the fact that you always need to have a face-to-face system, where you know who is who, and who to go to get that specific information, and the value add that they can do. The database can’t do this. Having more money for more computers would not change this. IT would not help.

**Validation of the data is another key issue. I don’t want to waste my time reading rubbish. At least in the face-to-face system, you get to validate via your knowledge of the person and their standing in the community as to the value of the information to you. You can take into account rigour and credentials in the person giving you the knowledge.**

However, who knows. Let’s say you made the switch now to the super dooper database thing. And it’s an adjunct too. You would build on it, get more methodologies, and how to go about things and blah blah blah. You wonder whether subsequent generations of consultants would become dependant on it, and thinking goes out the door, and you would end up with the situation in ten years time where they don’t really understand what they are doing. And they follow something religiously because this is what you do, and we’ve been successful, and we have a track record using that methodology, and in fact we’ve even gone one step worse. We’ve sold that methodology. That is what we are doing to client X. And then they are locked in – everything is locked in. Even though it’s not the focus of that particular context, and how you would solve that problem. It’s beyond me really how this would work.

**Does the growing size of the company make a difference to knowledge exchange?**

I don’t thing we are taking advantage of the increasing size. I don’t have strong relationships with people in the other states. I effectively work locally. Whether or not we are a national or international company, in practice we are a Melbourne based company. And you know, that’s my experience. Which doesn’t seem sensible.
I don’t see much sense with replacing what’s already available with a company flavour. If I’ve written all of these research tools, why would I want a company specific brand of them? And the most specific thing to us is choosing who is in the company, and what is their specialist area of knowledge. We can do a lot more with that. Like a meta search engine, rather than the actual knowledge itself. That would be well used.

*What about validation of who is an expert – at the moment it’s self proclaimed by the individual?*

Sure – this is a key point. I do my own validation. If Joe Blow is an expert on strategic planner or something. Strategic management. And I have an experience with Joe that suggests he is not, well then I won’t ask him next time.

**SIDE 2 of TAPE:**

*What about the danger of losing knowledge at the company when people leave?*

As we are a loose federation of consultants, people do leave. So the question is not, do they leave with the knowledge, it is what impact does it have?

*One of the advantages is that the knowledge that comes in is current. You don’t have problems with outdated knowledge. It just goes. And to a certain extent, it is self-organising, because if you are a successful consultant, and your remuneration reflects this, hopefully you will stick around.* If you are not successful, then you will leave the company. Well you take your knowledge with you because it is probably not much good anyway. If you were super successful, you would start your own practice, and take it off with you. Yeah – it goes. But if you have had interactions with people, and transferred to them to such a degree that they could actually do it, well the fact that you had it and you were capable of doing it, is irrelevant as far as the company’s capability is concerned.
So really the answer there is about structuring projects so that we have buddies, with so-called experts in conjunction with novices, or people who are interested but not yet too confident. You transfer the actual practice to the people, rather than any database.

**What about the danger of knowledge being copied by competitors?**

Yes – that’s an interesting one. I’m going through a book now, ‘The flag guru’, and he lays out all his knowledge, and give practices of how to do it, and you get CD’s and software, has a website to back up any questions, and this knowledge you could easily bill out at 5000 bucks per day. And he is giving it away. And do you think the world is awash with people trying to take it away. No – because its hard. Its really hard. Its hard graft – it takes a lifetime practice to make it happen. And even then if you are half as good as this guru, you’d be doing really really well.

So the only knowledge that would be easy to copy is probably not very high value anyway. It’s the practice and expertise of doing it that is valuable. So really giving it away is more of a marketing thing – ala McKinsey Quarterly and stuff – they don’t give away much there. It’s just superficial, and it gets working and promotes your own self.

It’s a bit like someone could give me a piano. They could give me Mozart’s music. I still couldn’t play it. I can listen to it, and I can say, yeah – I know what I have to do. But I still can’t play it. I can’t do it.

**What are your thoughts on this knowledge spectrum model of organisation (shown diagram)?**

Obviously it’s a bit hard to comment on this without knowing the model in detail.

Obviously you, or organisations, can’t know everything. And the more I learned myself – the more studies I’ve done, the more courses, the more experience, the more I’ve learnt – I realise that I know less and less. Which is interesting. And certainly I can’t be an expert in everything in the world. I can’t know everything in the world, and be an expert in everything in the world.
So in terms of bounding where you want to focus your energies, I think this is a fair thing to put boundaries in. In terms of what drives those boundaries, certainly I'm making an active decision on an individual basis about which knowledge is going to have the most payoff. Should I go for knowledge that I think has 5000 dollars per day consulting type consulting, or menial bread and butter stuff. And make some active decision on that on where I spend my time and effort.

Culturally, and I'm speaking on an individual basis because I can relate to this. Culturally, I certainly make decision about this organisation. 'Is this the type of work that they have a market presence in?' whether it's fit for the organisation, whether they can sell it and whether it fits into their strategy about where they want to be. The technology – without a means to enact the knowledge, it's a waste of time, if you define technology as the delivery system. It's capability.

If the environment is amenable to selling certain types of knowledge – for example balanced scorecard is flavour of the month – this would make the knowledge worth learning. You can then develop a product based upon what is out there in the environment.

The knowledge state concept is OK on face value.

*Summary of the Interpersonal knowledge exchange process – Looking at the process here, lets talk through the end to end process to summarise what we have spoken about today.*

(Summarised conversation – both interviewer and respondent)

This is the process view of knowledge as we have discussed.

Initially, as the receiving unit, you have a need for some knowledge and you recognise that need. I think what happens is that you then translate that need into a request based upon your mental models of the world based upon what you perceive will get you the result based upon the source unit and the communications mechanism.
So then, you typically will look for a pointer that is the most efficient way to get it. Either its in your head, in which case there is no consultant to consultant exchange process, because you don’t go anywhere else other than you own external professional library and the like. You will then look at some pointers, and you will try to identify a guru, or use an email to ask some people how do I find their knowledge. You will then take one or two hops before you go into what has been called the negotiation stage. So this doesn’t happen immediately. You have to call someone, and you have to sound them out – are they the person with the knowledge. If not, they will hop you to the next person. So, in this stage there is something about finding the knowledge or finding the right person. And this is partly the validation step.

Some sort of negotiation takes place. You find the person, and you say, this is what I want. And they say, that is not what you want, and so on.

The need to transfer knowledge is recognised by that person, and they then go through a similar thing with the mental model translation. They adapt the knowledge at the source, based upon the perceived need of the recipient. After the negotiation, they think, ‘I think Bob wants this’, so they change it at the source based upon the needs of the recipients.

This then goes back into another negotiation stage. This gets put more into the local context of the recipients need. You say, ‘Well this is what I need, but I’m talking about telecommunications, you are talking about banking and finance industry. Is this relevant to me?’ You then receive this knowledge.

When you have got this, the person that received the knowledge leaves the scene to some extent, unless there is further negotiation, and they then adapt it further to the specific context that you are trying to use it for. ‘I need to modify it for my client and place it into this context’.

Once you have done this, you then implement the knowledge. You use it. It then becomes a part of your own tacit knowledge base. You’ve done it. You’ve picked up that tacit knowledge. Fiddled with it some how. Internalised it somehow. The premise here is that you are not going to go back through the same process if something similar comes up again.
Any further comments on the tacit exchange model:

Just a couple of suggestions on it. I know that there are some things that are implicit in here.

One is the differentiation between information sharing and knowledge creation. It is implicit here where you are fiddling with it. I can fiddle with a methodology to make it fit my new client, but it is only when I enact it at the client site, and do the learning loops of error correction – that didn’t work, go back and refine it. But then the double loop learning – which is, ‘What assumptions and mental models do I need to change based upon the success or otherwise of the implementation.’ This is the knowledge part of this model. As opposed to just dumping information on someone.

Transferring information is one thing – I can tell you what it says, can I take action, so I guess it’s a matter of definition. Its only when you add the context, the experiences, and the specific need at that point, and the tacit knowledge of the individual, do you have knowledge. This appears why personal networks seem to be efficient.

I think an IT driven approach would say, ‘if you had sufficient fields, and sufficiently clever queries and stuff, it will give you some answers’. This is incredibly inefficient though. Because its fragmenting information again, again and again. And it loses its context. It’s hard to get this context back again. People networks can do it really, really efficiently.

People will contribute if they know what their knowledge will be used for, and it doesn’t disappear into a black hole, never to be seen again.

Do you have any last words or comments?

No – there is nothing that comes immediately to mind. So If I think of something I’ll give you a call.

END OF INTERVIEW.
This appendix contains a sample coded interview transcript of data collection to answer the second research question, ‘Why do consultants prefer the interpersonal knowledge exchange process in preference to using stored explicit knowledge?’

**PARTICIPATION**

**Tangible Returns**

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful information available</td>
<td>Carl</td>
<td>Depending on the context of the question, I will use people or self first. If it’s not in my area of expertise, I will ask people first. The self-resourced search allows you to know which question to ask if it is a field new to you.</td>
</tr>
<tr>
<td>Useful information available</td>
<td>Carl</td>
<td>They can have a vague kick around of the [knowledge] body sort of thing.</td>
</tr>
<tr>
<td>Useful information available</td>
<td>Carl</td>
<td>You might be up for a project, or being interviewed for a project, and you might think I need to bolster up my knowledge on this aspect that the client may want.</td>
</tr>
<tr>
<td>Useful information available</td>
<td>Carl</td>
<td>There is evidence though that there are other people that are just thinking. Well strategically I’m interested in working in a particular field, so I’ll actively go jump out some information on it and position myself, you know, whether I want to pursue it, so that I can move into that area.</td>
</tr>
<tr>
<td>Useful information available</td>
<td>Carl</td>
<td>Also, depending on the complexity of the knowledge to be transferred will influence whether I would use email. For instance if it was the names of three software packages, then this would be OK. If it was more complex, I wouldn’t consider it, nor would I reply via email.</td>
</tr>
<tr>
<td>Useful information available</td>
<td>Carl</td>
<td>But where they are getting stretched, they can call to the greater organisation and the community has got ability and a need to help them.</td>
</tr>
<tr>
<td>Useful information available</td>
<td>Carl</td>
<td>I just tap into what people hold as dear, and this is a good approach.</td>
</tr>
<tr>
<td>Useful information available</td>
<td>Carl</td>
<td>The good thing is that this is very dynamic; One of the advantages is that the knowledge that comes in is current. You don’t have problems with outdated knowledge. It just goes. And to a certain extent, it is self-organising, because if you are a successful consultant, and your remuneration reflects this, hopefully you will stick around.</td>
</tr>
<tr>
<td>Answer to specific questions</td>
<td>Carl</td>
<td>Or you might actually be out on a project, and you get to a certain bit and you think, there must be a better way of doing this. This is another trigger.</td>
</tr>
<tr>
<td>Answer to specific questions</td>
<td>Carl</td>
<td>The other one that I’d say is a variation of this – you get stuck.</td>
</tr>
<tr>
<td>Answer to specific questions</td>
<td>Carl</td>
<td>This is because it generated five or ten responses from people that they otherwise wouldn’t get if they had targeted a particular person. So I guess that behaviour is reinforcing.</td>
</tr>
<tr>
<td>Answer to specific questions</td>
<td>Carl</td>
<td>The other thing is accessibility. People are accessible. I can ring them up. I can do all sorts of stuff. A big super dooper database within the company.</td>
</tr>
<tr>
<td>Finding:</td>
<td>Who</td>
<td>Quote from Evidence</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Personal gain</td>
<td>Carl</td>
<td>Well my personal experience when I joined the company is that you don’t know who knows what. You don’t know who’s who. And I guess initially, you'd say that anyone in the core group, you by default, give them a high status (in regard to expert knowledge), and the others that aren’t in the core group, until proven otherwise, because they obviously have an interest in a particular field, and it’s a feeling out sort of process.</td>
</tr>
<tr>
<td>Personal gain</td>
<td>Carl</td>
<td>And again there might be certain encouragements to offer certain stuff ...</td>
</tr>
<tr>
<td>Personal gain</td>
<td>Carl</td>
<td>And to me, its just potential payoff in the future.</td>
</tr>
<tr>
<td>Personal gain</td>
<td>Carl</td>
<td>On a personal level, if I help somebody, it wins brownie points psychologically. That’s my notional view on it. Not that I go out to explicitly to do it that way, but I guess that’s the bottom line. If I help people, they help me.</td>
</tr>
<tr>
<td>Personal gain</td>
<td>Carl</td>
<td>There is a school of thought that says knowledge is power. My experience has been, if I give some of my knowledge away, then it has actually benefited me. Because people link that knowledge back, certainly the first couple of people anyway, back to where the thoughts come from. So it actually elevates my own position.</td>
</tr>
<tr>
<td>Personal gain</td>
<td>Carl</td>
<td>But giving it away actually helps me, because usually you are giving it to people who appreciate the context and experience in using it that you can add. It’s like a marketing tool.</td>
</tr>
<tr>
<td>Personal gain</td>
<td>Carl</td>
<td>Why ... I guess in the long term it comes back and benefits me. But I don’t have to have a transaction like “one plus one equals two”. Just in general concepts.</td>
</tr>
<tr>
<td>Personal gain</td>
<td>Carl</td>
<td>In this company, the payoff of this network organisation, basically I can get on projects that I don’t have to have had demonstrated experience, so I can stretch a bit. I can call on these other people who also have a vested interest in me succeeding. If the company succeeds, they succeed. And I think this is a good model just in terms of thinking about the knowledge management and exchange stuff. This loose network of independent consultants that you share with more fully than you would if they were totally independent, because you have an interest in them succeeding.</td>
</tr>
</tbody>
</table>

**Intangible Returns**

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoyment/Entertaining</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Interaction with Community

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple viewpoints</td>
<td>Carl</td>
<td>I guess my first recourse would be to try to answer the question myself. Work out an approach, and then maybe validate with other people, or ask them if they have a better approach.</td>
</tr>
<tr>
<td>Multiple viewpoints</td>
<td>Carl</td>
<td>Or in fact, I'd ask them their approach and then compare this with my approach without clouding what they might suggest.</td>
</tr>
<tr>
<td>Multiple viewpoints</td>
<td>Carl</td>
<td>Hence, this process can validate my own knowledge with peers. Going a little bit further, I go to network meetings, just to see what people put up. There is no specific agenda or question in my head. I just go in there trawling.</td>
</tr>
<tr>
<td>Multiple viewpoints</td>
<td>Carl</td>
<td>And I guess to a certain extent, you narrow down your target, so I might ask a certain person about Business Process Reengineering, just because off-the-cuff type comments that you encompass – you might think, she might be worth listening to, whereas another person, when they talk, you might think well – they don't seem to be terribly sophisticated in that field, so I won't ask them. Based upon language and way they talk about the topic, you make a judgment of where they sit.</td>
</tr>
<tr>
<td>Multiple viewpoints</td>
<td>Carl</td>
<td>In our organisation, everyone is quite talented.</td>
</tr>
<tr>
<td>Peer group</td>
<td>Carl</td>
<td>I don't think people here would place much stock in codified information held in databases. They probably don't think its rich enough, and the context is not there.</td>
</tr>
<tr>
<td>Peer group</td>
<td>Carl</td>
<td>The reason for this is that 'it’s the practice’. There is no rich methodologies or anything apparent, and the organisation has been going for a reasonable length of time – sixteen or so years – and they don’t exist. And the argument seems to be a bit cyclical - ‘We haven’t needed them in the past, and been successful. So why do we need them now?’</td>
</tr>
<tr>
<td>Peer group</td>
<td>Carl</td>
<td>I have a real problem with the fields, or the lack of fields, that you can have in a database. You can’t codify it in the same way (as talking to your network and people). And, it goes into the black hole.</td>
</tr>
<tr>
<td>Peer group</td>
<td>Carl</td>
<td>I go to a person. My experience has always been face to face is the best. Go to somebody that knows something. Second is by phone. And absolutely last would be email direct to a person that I have a relationship with. I would also ring people who I had been recommended by my network as a knowledge carrier. (Richest source of data)</td>
</tr>
<tr>
<td>Peer group</td>
<td>Carl</td>
<td>I think it’s a joke to think you can stick it in a database!</td>
</tr>
<tr>
<td>Peer group</td>
<td>Carl</td>
<td>Ninety percent goes on knowing people, and building your networks, and knowing key people and what they can do and what background they have got. Whether it is a network groups, or a project team, or on the bench, in terms of knowledge management the key thing is creating networks and relationships.</td>
</tr>
</tbody>
</table>
that you can call on later when you need them. The more groups you get involved in the better for this reason.

Peer group

Carl Because I am an intelligent person on the other side, I can say yes I understand what you want, and you I can give you this. However, I can also say, you are much better off doing this which is a quantum leap from what you’ve asked. Which is where the intelligence comes in as opposed to a dumb database. Database you can’t do that.

Peer group

Carl The opposite may be true — rather than needing War and Peace, I might only need two paragraphs to stick into a client report. I want someone I trust to give me those two paragraphs to ensure what goes in is the right stuff – that is what the community of practice thinks is important. It takes a whole lot of time and effort to work this out, and I don’t have the experience to work it out anyway. I don’t know which is good, and which is bad. Hence, by ringing up an expert, they will say, What do you want? What size project is it? What is this, what is that? Based upon what you’ve told me, this is the number one choice, and I’ll give you this other one as a backup and you can go to your client to see what they want. A whole lot of stuff that I may not have even asked for or even thought to ask for, because I don’t know enough – that’s why I’m asking. I don’t know the questions to ask. The expert will come back and ask me these important questions!

Peer group

Carl Validation of the data is another key issue. I don’t want to waste my time reading rubbish. At least in the face-to-face system, you get to validate via your knowledge of the person and their standing in the community as to the value of the information to you. You can take into account rigour and credentials in the person giving you the knowledge.

Finding: Who Quote from Evidence

Altruism/pro-social behaviour

Carl It is much easier to ask a friend or acquaintance. They don’t have to be a friend, but they know who you are as opposed to a faceless person – a name. So, yes, participation is a maintenance activity that helps with the exchange process when required. Absolutely.

Altruism/pro-social behaviour

Carl You feel much more comfortable even choosing certain personalities in the group. Who would ask?

Altruism/pro-social behaviour

Carl So what I’m trying to say is that I don’t hoard information and knowledge – If I can help people, I give it to them.

Altruism/pro-social behaviour

Carl There is fair evidence to support the fact that the community norms support cold calling. You feel supported in the local office, as opposed to ringing someone in another (geographic) office.

Altruism/pro-social behaviour

Carl To me the whole thing is built on relationships – I have stronger relationships with the people that I work with. Number one. So the people that I would call on first are the people that I work side by side with on projects and I know them really well. We know each other, and we’ve backed each other and done work together. So you’ve got a really strong relationship with those people, and it extends out to me. So I’ve got a known relationship with them.

Finding: Who Quote from Evidence

Reciprocity

Carl Yes. I have responded. General practice is that if I know anything that I can do that is not too painful to me, I’ll offer it regardless of who they are.

Reciprocity

Carl I think that’s an important point. Psychologically there is an immediate payoff. Someone is grateful that you’ve done something for them. And they give it back to you, as opposed to dumping it in some database.

Reciprocity

Carl And yes, I’ll … given the timeframe and the background to the problem, … I’m just wondering if I’d share with them what I’d done to date, or leave it open to get new ideas. Probably the latter. And then once they’ve given me something I’ll share.

Reciprocity

Carl But I don’t ask too much of people. I ask them something that I think is possible for them to give without hurting too much. Unless they are a colleague on a project. Then I can ask them more.
project, and that’s different. They are in there with me and they can sweat blood.

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance the community</td>
<td>Carl</td>
<td>And there is a certain pride that when you codify it, you remove a lot of the thinking that goes with it. And what I mean by that, ABC consultants to me – one of the things that they pride themselves on – is they are flexible and adaptable. And to a certain extent, they have to survive on their own. So they go into an organisation, they take in what’s there, they bring with them their own knowledge, and then they call on their own networks to pull in the bits that they need to get the job done. And it’s customised. And it seems to be relatively effective.</td>
</tr>
<tr>
<td>Advance the community</td>
<td>Carl</td>
<td>There are a couple of levels of payoff. One is if the questions I answer are in the circle of work that I’m interested in – business transformation. So, if I help the company and others be successful in that area, and we win work in that area, there is more potential for me to work in that area. So I do more in that area. So it grows the sort of work that I want to work in.</td>
</tr>
<tr>
<td>Advance the community</td>
<td>Carl</td>
<td>A partnership coaching approach is what we are on about. So this a bit different to having the master, and here’s the apprentice coming in. So even though I’m sort of saying apprenticeship.</td>
</tr>
<tr>
<td>Advance the community</td>
<td>Carl</td>
<td>As opposed to the traditional trades expert model. Hence the core member of the community is not necessarily the expert. It may be someone who has been here for three years, and you’ve gone through the rituals, and you’ve done some projects, so now you are custodian of our practice. And when someone wants to know something about how to do something, they come to the custodian, because they know how to do things in this company.</td>
</tr>
<tr>
<td>Advance the community</td>
<td>Carl</td>
<td>The community needs processes to reinvigorate the core group over time in order to sustain itself. You have good communities and bad communities, but you need continuity to sustain itself.</td>
</tr>
<tr>
<td>Advance the community</td>
<td>Carl</td>
<td>The key differential between the core and peripheral in the community is the energy that they are investing into the community. And you often hear this saying, ‘You get out of it what you put into it.’ And in any community, be it a footy club or whatever, there is the core group of people putting in a significant amount of more energy than the fringe ones.</td>
</tr>
<tr>
<td>Advance the community</td>
<td>Carl</td>
<td>Being a loose network type organisation, there has been a general reluctance to adopt some of those formal strategies that other voluntary organisations do.</td>
</tr>
</tbody>
</table>

Barriers to Participation

<table>
<thead>
<tr>
<th>Finding:</th>
<th>Who</th>
<th>Quote from Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group related barriers</td>
<td></td>
<td>And I know, even recently with a group, new people come on board and they are quite reluctant initially to offer up anything, because they are concerned they won’t stack up against what the group has accepted as knowledge within the group, or telling grandma to suck eggs type of thing. So there is a certain feeling out process.</td>
</tr>
<tr>
<td>Obstacles to participation</td>
<td>Carl</td>
<td>I see people putting out global broadcast emails, requests for info. Personally I find them quite annoying, but the people that do that have found that its been quite effective.</td>
</tr>
</tbody>
</table>
Obstacles to participation

Carl I just find it annoying to get them. They have a nuisance factor. Especially when you are off site, and you might have fifty messages, and none of them are particularly relevant to you, and you have to make time to open the message and read it. It’s annoyance value.

Obstacles to participation

Carl And the one internally is really poor in terms of weakness of data and context. Really it’s full of basic stuff, and generally if they are simple problems, I can solve them myself. If they are complex problems, then I still need a person that can contextualize it for me. So either way, a database driven solution doesn’t really help me.

Obstacles to participation

Carl [Time is a barrier?] - Well I don’t think so. And yes I think it’s hard. But I think it’s like any voluntary group that I’ve ever been involved in, it’s always not enough time and other demands. And by having some of the formal processes, such as I’ll take this role on for a given period of time, and involves some personal sacrifice, and then people take that on.

Obstacles to participation

Carl Due to taking on too much … As a result, some of the core people have burnt themselves out. And as a result, you end up with a vacuum.

Obstacles to participation

Carl I’ve never sent a global email – I guess because I’ve never had to. And the thing that bugs me is that these emails ask for the knowledge by close of business today. And I don’t have that time.

Obstacles to participation

Carl Most of the bench is flat out writing proposals, and in the process of doing that is finding explicit knowledge. And if we are lucky, putting it in a place where other people can then use it.

Finding: | Who  | Quote from Evidence |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unhelpful</td>
<td></td>
</tr>
</tbody>
</table>
# Appendix H - Summary of Interviews Carried Out and Cited Data

<table>
<thead>
<tr>
<th>Code</th>
<th>#</th>
<th>Quote</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td><strong>Petra</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Interviewed on 5th March 2001 at 11:15 am. Interview duration was 1:35hr. When I used the knowledge base to find someone with expertise in BCP [Business Continuity Planning], most of the consultants listed had left the company. [Joe] and [Bob] were named all over this stuff, but they left some time ago. So I gave up and asked someone instead.</td>
<td>151</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Most people, including me, go to their immediate network first. This interpersonal system is the way the vast majority of consultants at ABC exchange knowledge. I'd say it accounts for 90 percent of the exchange activity.</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>I'm not sure how it works, but I give [payload knowledge] where I can to the community because individuals within the group have given [payload knowledge] to me. I may not pay them back directly — but over time [Bob] does me a favour. I do [John] a favour and hand over some knowledge, and this chain continues until eventually [John] ends up helping [Bob]. This way, everyone stays happy.</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>It is through a reflexive process, looking at what has worked and what has not worked in the past, and applying that to the present, that our consultants are able to add a lot of value to clients.</td>
<td>213</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td><strong>Phillip</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Interviewed 14th June 2001 at 10:00am. Interview duration was 2:10hr. Most of the knowledge at ABC is in the heads of the consultants. I'd say ninety percent is in this form. Very little knowledge required in solving client problems is written down. Perhaps even ten percent is being generous. Because the stuff that is written down is out of date or of limited use. So ten percent [explicitly stored] would be pretty generous.</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>If you were a guru at using the intranet search process, then you probably would have no problems logging in, searching, finding and downloading what you want. It may not take too long. But not all consultants have those skills.</td>
<td>189</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Nothing I have ever found in the databases is up-to-date or useful to me. The IT solution is a waste of time, so I don't use it anymore.</td>
<td>195</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>You have to know who is who. How to approach people. What channels to use. What not to say is often more important than knowing what to say. Knowing that the CEO strongly believes in star signs and used these to hire people in the past is something that is not written down. But you know not to bring up star signs with any senior consultants, because it makes them uneasy talking about these irrational quirks of the company. Whether it is myth or true, it doesn't matter. It is the reality of the community. It takes time to learn this and you don't learn it from the formal induction process. It's through lunches, coffees, cluster group lunches and informal catch-ups that these things emerge. It took me a couple of years to fully get a handle on it — and even now I make mistakes.</td>
<td>216</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td><strong>Sasha</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Interviewed 14th June 2001 at 2.00pm. Interview duration was 1:50hr. I think the pull model is the dominant model at ABC, and I think that this is because there is more information than you need for any single job, and you want to get to it efficiently.</td>
<td>142</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Pointers are the most important factor and stage in knowledge transfer. I would put it at the top of the list. The reason for that is that it certainly is immediate. And secondly you can get the bits of information that you want. Whereas if you go into a database, you have to read through ten pages to find two bits of information. Whereas if I can ring, and ask somebody the two questions, I can get my information very quickly and efficiently.</td>
<td>147</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>A negative with the pointer system is that people new to the organisation don't have the network for that process to operate.</td>
<td>148</td>
</tr>
<tr>
<td>Code</td>
<td>Quote</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sasha continued</td>
<td>I find, that on three or four occasions I have sent out those (broadcast) emails because I needed the information. I was surprised at the amount of responses. I got far more responses back that I thought I would. And secondly, if you have ever been in that situation, you would always respond to other people. Because you realised how much value it is to you when you need that. Hence if you are someone who has sent out those emails before, you are more inclined to respond to other people. Sometimes when a request goes out, I won’t know the knowledge myself, but I will know someone that does. So I will write back to the requester and say you should contact so and so, because they may not respond. They might not see the email, or might be busy. But if I write back to [Fred] and say call ‘Jo Blow,’ then he can actually ring you directly and get the knowledge that ‘Jo’ has, but wouldn’t have responded to email.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>If for instance you ask a question as to what are the new technology trends in the client company. If there is a room full of people, you will have one person say one thing, and others challenging this saying, ‘No – not in my part of the company.’ So you can get different opinions that are both accurate, but it depends upon their experiences that they are basing their opinion on. It also depends what I want – I will filter this information to come up with this negotiated meaning, where when I fed it back to them, we all agree that my final interpretation is valid, given my context. In the end, it is always up to the receiver to make the decision as to what they choose to walk away with and use or implement.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I then adapted this information to make it suit the purpose. [Source consultant name] gave me the information, and I changed it to suit my specific purpose – which was a major presentation. Once I had the basic information that I needed, I was able to build it up based on my fuller understanding of the end use. I had to use what knowledge I had been able to obtain in the timeframe, and adapt it based upon my own pre-existing knowledge.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Word soon gets out [that you have done this kind of work], and before you know it your mobile [phone] begins ringing with people who need your help.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>You’d go to your network first. It is more likely to give you a result.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>So my preferred method of finding knowledge is using my personal contacts. And I think this is very common at ABC because the other options, like using the database option, are not easy. If that database option were easy, I would use it first. And use the pointers as required. But because the other option is difficult, I don’t use it.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Let’s say I download a presentation. I still change it, sometimes extensively, before using the item again to present it to my client.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>The consultant can only search [the database] based upon the way they think knowledge would be stored in this community. You may need to fill out search engines with specific fields, and leave other fields blank. So that’s how you contextualise what you want and understand. No negotiation goes on, other than I got what I wanted – I’ll change it again to the specific context. This is recontextualisation – you just get an unmodified document, so the first stage negotiation process does not occur. The explicit knowledge store short-circuits the interpersonal process. You choose your method, you reframe the thing, and if it’s not what you want, you look for something else. Once you get it, you translate it and it’s recontextualised.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I think to a degree, it might actually lessen the degree of creativity in solutions. It would provide them with solutions up to a point, but I think it would also create reliance that there is a solution available. There is room for IT, and there is a lot of stuff that can be translated into explicit knowledge. However, realistically, only ten percent of knowledge experienced in a case study can be translated to explicit form.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>One of the big issues for all knowledge exchange, explicit or tacit, is the issue of not knowing how your knowledge is going to be used. This is a big problem for the explicit knowledge store. Whereas if someone sends me an email directly, I know how they will use the information. I could spend a couple of days writing up all of my stuff and putting it into a knowledge base, and no-one will look at it – so why waste my time. So I think with the explicit knowledge base, it is definitely the perception of what will happen to it. It is simply also not a rewarded behaviour.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Sasha continued

14 You know what it is very much like … when I have clothes that I am not wearing anymore, but I know they are good. I have a lot of trouble putting good clothes into a bin at a charity. And I give to charity. But to think that these things that I think are good clothes are going to be treated badly stops me from putting them in there. And I'll give those clothes away to any of my friends that want them, and I'm so happy when that happens.

So it's about having something that is valuable to you, which may not be valuable to anyone else in the world – it's about knowing how it is going to be treated. And I think knowledge is the same thing. So if someone sends an email that wants this knowledge, then good – I've got it and I can give it to him or her. Whereas I'm throwing it into the charity bin if I place it in the database. It's how you feel about something you own. Something that is valuable to you is going to be used and is going to be respected. And I think that has a lot to do with it. It's the value you place on your knowledge.

15 I think you need to write it down for certain types of knowledge, or depending upon how it is going to be used. I think, based upon the type of knowledge, and its use, will determine what needs to be written down. And the majority of it doesn't need to be written down, simply because the cost involved in writing it down in time, and also in maintaining it, and the accessibility of it. The more knowledge you have – you know, it's like a filing cabinet. The more you keep in it, the harder it is to find anything.

16 If I know a lot about the area of interest anyway, I would assume I could find the knowledge through my own means. I go to the community when I want something specific that is beyond my area of knowledge.

17 Most people who you ask for advice or information also feels, not honoured … what's the word … they feel their expertise is recognised. So most people like it. Most people like to be asked for their advice. It's all in the way it's asked.

18 One [reason for participating] is because you want to have the same opportunity afforded to you. So you give because tomorrow you will probably receive something else.

19 The answering of context specific questions is the most important factor and stage in knowledge transfer. I would put it at the top of the list. The reason for that is that it certainly is immediate. And secondly you can get the bits of information that you want. Whereas if you go into a database, you have to read through ten pages to find two bits of information. Whereas if I can ring, and ask somebody the two questions, I can get my information very quickly and efficiently.

20 People will try to find the most efficient and effective method in order to minimise the economic cost to them. However, this is intangible and virtually impossible to measure, and the decision occurs at the subconscious level. I think the cost has several factors – one is time cost. This is probably the biggest one.

21 It's very much a time factor. People who want knowledge generally want it immediately in the consulting field. They don't like to wait for knowledge. And that's another factor – the currency of knowledge. As soon as you start writing it down, it is very hard to keep it updated.

22 If I am interested in something, and I only need to find out these bits, the benefit to me in exploring it further is that I gain more knowledge and I become more knowledgeable. That benefit is secondary to the time one always. So I am weighing up time against the benefit of exploring new knowledge in great detail. It's always time.

23 Sometimes you receive information from someone, and you might check it with someone else. This is a validation process that the community makes easier, because if the community thinks it is OK, then you will probably feel comfortable.

24 Being in the company helps you develop a shared understanding of how things get done. It may take some time to get to this point, and the time will vary from individual to individual, because some people would be there in a very short time, and I guess the types of people we employ in this company would get into the middle of the community fairly quickly.

4. Elaine

Interviewed 19th June 2001 at 10.00am. Duration was 1:40hr

1 Often the whole process from end to end takes place over a coffee. We sit in a coffee shop, I discuss my need, the consultant has the knowledge and agrees to give it to me, and I walk out fifteen minutes later with a solution to my problem. Other times, it takes a long time to find a consultant who is able to spend the time with me to give me what I need.
4. Elaine
Continued

I have been here for several years. Over that time, the size and nature of the company has changed. Many people have come and gone, and now I don’t know all of the people at the company. However, the foundations of the knowledge sharing system have remained fairly constant, although it has changed over time to cater for new challenges and problems.

I reciprocate and repay the favour when I can. Eventually it all works itself out and everyone pretty much feels they have got their fair share [of payload knowledge] from the [exchange] system in relation to how much they have put in.

5. Thomas
Interviewed on 20th June 2001 at 12:00pm. Duration was 1:10 hr.

I’m not sure what you are asking. The knowledge I hand over is explicit in the form of words. But there is a lot of subtle and tacit stuff that comes along with these words. Maybe this isn’t tacit exchange at all … Actually, it has to be … I don’t know. Is it? Perhaps you can clarify this for me?

It’s amazing the grapevine around here. I got a call once within two days of finishing with a client, asking me to help out on a similar problem. And I didn’t think many people knew what I’d been up to for the past six weeks. The request was for similar things I’d just finished, so the [requesting] consultant got off easy because I’d [already] done most of the ‘brain work’.

I don’t know how the process works, and I can’t predict what I will get from who. You just trust that somehow things will work out. As long as you are a part of the consulting community you will get the answers you need somehow.

I’ve never logged into the system. I wouldn’t know where to start. I don’t know much about using the internet, so I’d probably just ask someone at the office to send me a file via email. This of course assumes I know where it is. If I don’t know it exists, then I won’t bother looking. I don’t know how.

6. Caroline
Interviewed on 21st June 2001 at 10.30am. Duration was 1:10 hr.

This then goes back into another negotiation stage. This gets put more into the local context of the recipients need. You say, ‘Well this is what I need, but I’m talking about telecommunications, you are talking about banking and finance industry. Is this relevant to me?’ It is then adapted to fit as closely as possible [to my specific payload knowledge need] as you go through the process of receiving this knowledge.

If you watch the experienced guys, you can pick up what they are doing. But they are similar to an artist painting a masterpiece – they confidently move into action using their artistic skill and begin painting a solution for their client, drawing on their full range of skills on their consulting palette. It takes them years to pick this up, and I really wish I could pluck it out of their heads sometimes. But it takes time to learn.

When I have something to add, I find the big bucket in the file structure and copy my document into that spot. If it can go into more than one directory, I will either copy it to both, or choose the most appropriate one that has more relevance.

Often I am only after the table of contents, or a skeleton of what needs to be done. Once I’ve got that I can get on with it, knowing roughly where I am going [because of the roadmap provided by the explicit object]. I don’t usually need the full text. And I will use this outline to create the final report for the client. So yes, I modify it [the explicit object]. Often you wouldn’t call it modify … you’d say I’ve totally recreated the thing with the final text not resembling at all what I started with.

7. Carl
Interviewed on 26th June 2001 at 5.00pm. Duration was 1:40 hr.

They go into an organisation, they take in what’s there, they bring with them their own knowledge, and then they call on their own networks to pull in the bits they need to get the job done.
My experience is that it typically happens when you are out on a project. Actually at different stages of the project. You might be up for a project, or being interviewed for a project, and you might think, 'I need to bolster up my knowledge on this aspect that the client may want.'

Or you might actually be out on a project, and you get to a certain bit and you think, there must be a better way of doing this. This is another trigger. The other one that I'd say is a variation of this – you get stuck. They are the reactive triggers.

There is evidence though that there are other people that are just thinking 'Well strategically I'm interested in working in a particular field, so I'll actively go suss out some information on it and position myself, you know, whether I want to pursue it, so that I can move into that area.

I do use, not greatly, my own personal searches and knowledge. I have a professional library of books at home, built largely on recommendations of my colleagues internally, and others externally to the organisation that have worked in my field. They will tell me the big books that they have found useful. Which I find really useful. So that is my number one stop. That and the people.

I go to a person. My experience has always been face to face is the best. Go to somebody that knows something. Second is by phone. And absolutely last would be email direct to a person that I have a relationship with. I would also ring people who I had been recommended by my network as a knowledge carrier.

…I'm looking for information, and the context of how to use the information, which is why I find people useful. And they can either give it to me, or point me to other people who may have it.

I think people are really effective because they contextualise the information. If I was doing a global search on a dumb database, I might come up with an answer, but how do I interpret the answer, and ask all of these other questions that I hadn't even thought to ask in the first place.

I see people putting out global broadcast emails, requests for info. Personally I find them quite annoying, but the people that do that have found that it's been quite effective. This is because it generated five or ten responses from people that they otherwise wouldn't get if they had targeted a particular person. So I guess that behaviour is reinforcing.

I just find it annoying to get them. They have a nuisance factor. Especially when you are off site, and you might have fifty messages, and none of them are particularly relevant to you, and you have to make time to open the message and read it. It's annoyance value.

…and I guess going back to those email ones – I've never sent a global email – I guess because I've never had to. And the thing that bugs me is that these emails ask for the knowledge by close of business today. And I don't have that time.

You will look for some pointers, and you will try to identify a guru, or use an email to ask some people how do I find their knowledge. You will then take one or two hops before you go into what has been called the negotiation stage. So this doesn't happen immediately. You have to call someone, and you have to sound them out – are they the person with the knowledge? If not, they will hop you to the next person. So, in this stage there is something about finding the knowledge or finding the right person. And this is partly a validation step.

I send out information, and if you have any questions, and if you are a good recipient, you reply it in your own words, reflecting the content and the feelings that I am expressing. This way you understand what you are asking. And then we can come back to the answer. But the first stage is making sure you understood the message as sent by sending it back. This negotiation allows you to very quickly hone down to the context specific knowledge that you are looking for.
<table>
<thead>
<tr>
<th>Code</th>
<th>#</th>
<th>Quote</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Carl Continued</td>
<td>9</td>
<td>Because I am an intelligent person on the other side, I can say, “Yes I understand what you want, and I can give you this.” However, I can also say, “You are much better off doing this, which is a quantum leap from what you’ve asked.” Which is where the intelligence comes in as opposed to a dumb database. Database you can’t do that. The opposite may be true – rather than needing War and Peace, I might only need two paragraphs to stick into a client report. They adapt the knowledge at the source, based upon the perceived need of the recipient. After the negotiation, they think, “I think Bob wants this”, so they change it at the source based upon the needs of the recipients.</td>
<td>160</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>10</td>
<td>The need to transfer knowledge is recognised … and they then go through a similar thing with the mental model translation. They adapt the knowledge at the source, based upon the perceived need of the recipient. After the negotiation, they think, “I think Bob wants this”, so they change it at the source based upon the needs of the recipients.</td>
<td>167</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>11</td>
<td>When you have got this [knowledge], the person that handed over the knowledge leaves the [knowledge handover] scene, unless there is further negotiation [to take place], and you then adapt it further to the specific context that you are trying to use it for. I need to modify it for my client and place it into this context.</td>
<td>173</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>12</td>
<td>Once you have done this, you then implement the knowledge. You use it. It then comes a part of your own tacit knowledge base. You’ve done it. You’ve picked up that tacit knowledge. Fiddled with it somehow. Internalised it somehow. The premise here is that you are not going to go back through the same process if something similar comes up again.</td>
<td>172</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>13</td>
<td>To me, there is a big difference between information and knowledge. And to me, it is being able to do something based upon information. The use of information is knowledge. So reading a book, listening to people tell me their experiences, and going through case studies, is not knowledge. I’m going to have to do it before it becomes something that I know. So, particularly with business transformation stuff, there are a lot of nuances. For instance, how you would set up a room, furniture, and tone of voice. I mean so much stuff that is useful to have actually another person in to help you reflect back on what worked and didn’t work.</td>
<td>175</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>14</td>
<td>Ninety percent of payload knowledge exchange occurs through knowing and using people. This involves building your networks, and knowing key people and what they can do and what background they have got.</td>
<td>184</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>15</td>
<td>And the [explicit] database internally is really poor in terms of weakness of data and context. Really it’s full of basic stuff, and generally if they are simple problems, I can solve them myself. If they are complex problems, then I still need a person that can contextualise it for me. So either way, a database driven solution doesn’t really help me.</td>
<td>191</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>16</td>
<td>I don’t think people here would place much stock in codified information held in databases. They probably don’t think it’s rich enough, and the context is not there.</td>
<td>192</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>17</td>
<td>There is a certain pride that when you codify the knowledge, you remove a lot of the thinking that goes with it. And what I mean by that, ABC consultants to me … one of the things that they pride themselves on … is they are flexible and adaptable. And to a certain extent, they have to survive on their own. So they go into an organisation, they take in what’s there, they bring with them their own knowledge, and then they call on their own networks to pull in the bits that they need to get the job done. And it’s customised. And it seems to be relatively effective.</td>
<td>192</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>18</td>
<td>Who knows? Let’s say you made the switch now to the super dooper database thing. You build on it, get more methodologies, and how to go about things. You wonder whether subsequent generations of consultants would become dependant on it, and thinking goes out the door, and you would end up with the situation in ten years time where they don’t really understand what they are doing. And they follow something religiously because this is what you do, and we’ve been successful, and we have a track record using that methodology, and in fact we’ve even gone one step worse. We’ve sold that methodology. That is what we are doing to client X. And then they are locked in – everything is locked in. Even though it’s not the focus of that particular context, and how you would solve that problem. It’s beyond me really how this would work.</td>
<td>193</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>19</td>
<td>There is a place for searching databases – for professional articles and all the rest. So to ignore them is not the answer. I support the fact that you always need to have a face-to-face system, where you know who is who, and who to go for that specific information, and the value add that they can do. The database can’t do this. Having more money for more computers would not change this. IT would not help.</td>
<td>195</td>
</tr>
<tr>
<td>Code</td>
<td>#</td>
<td>Quote</td>
<td>Page</td>
</tr>
<tr>
<td>------</td>
<td>---</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>7. Carl Continued</td>
<td>20</td>
<td>One of the advantages is that the knowledge that comes in [from consultants] is current. You don't have problems with outdated knowledge.</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>In this company, the payoff of this network organisation, basically I can get on projects that I don't have to have had demonstrated experience, so I can stretch a bit. I can call on these other people who also have a vested interest in me succeeding. If the company succeeds, they succeed. And I think this is a good model just in terms of thinking about the knowledge management and exchange stuff. This loose network of independent consultants that you share with more fully than you would if they were totally independent, because you have an interest in them succeeding.</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>Reciprocating is an important point. Psychologically there is an immediate payoff. Someone is grateful that you've done something for them. And they give it back to you, as opposed to dumping it in some database.</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>Sometimes it's hard to exchange the complex and subtle [payload] knowledge. However, it is far easier from within the consulting community at ABC than trying to do this with someone outside the company. It is definitely not a case of a simple and painless exchange – it takes effort and commitment.</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>The projects are very demanding, and if you don't have a very good reason then you would never, I don't think, invest the amount of time and energy necessary to actually learn or give something.</td>
<td>211</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>I guess my first recourse would be to try to answer the question myself. Work out an approach, and then maybe validate with other people, or ask them if they have a better approach. For this reason, this process can validate my own knowledge with peers. Going a little bit further, I go to network meetings, just to see what people put up. There is no specific agenda or question in my head. I just go in there trawling.</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>To a certain extent, you narrow down your target, so I might ask a certain person about Business Process Reengineering, just because of an off-the-cuff type comments that you encompass – you might think, she might be worth listening to, whereas another person, when they talk, you might think 'well – they don't seem to be terribly sophisticated in that field', so I won't ask them. Based upon language and the way they talk about the topic, you make a judgement of where they sit.</td>
<td>215</td>
</tr>
<tr>
<td>8. Adam</td>
<td>Interviewed on 27th June 2001 at 12.30pm. Duration was 1:40hr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>… relates to everything that everyone experiences during their assignments and interaction with clients, and as a result of interactions with other consultants. Skills that they learn can then be recontextualised when they are on assignment. The relationships that they develop.</td>
<td>132</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Consulting involves a lot of subtle knowledge – knowledge of the type that I cannot explain unless you ask me how to solve a problem. I can then recall times I used consulting skills to solve these problems, and often I can allude to these subtle skills when explaining my methods to other consultants when I have been asked a question.</td>
<td>134</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>When I am on the bench [not assigned to a client], my business manager sometimes asks me to help out some other consultant who is out on site with a client. They may need some research done, or a report written. Maybe they need something urgently because things are falling apart. I often do not know all of the answers, and I will try to find the knowledge required to help out that consultant, working behind the scene for a client.</td>
<td>141</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>You then go through a translation process of contextualising the request so that someone else can understand it, based upon your perceptions of the people who are going to give you the knowledge; you modify your request to try to hit the target pretty much spot on.</td>
<td>155</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>A negotiation process follows, where you talk about what it means. The meaning of the message is confirmed here as it evolves from the interactions with each other.</td>
<td>159</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>People throw their hat into the ring, and people walk away affected by what each other has said.</td>
<td>159</td>
</tr>
</tbody>
</table>
After learning something from a company presentation (for example), you recontextualised this with your community. You will get together, and will have your opinions on what was said, and everyone has plenty to say. This is a case of recontextualising that this was said, and I think this means... After taking into account your understanding of the present context of the original remark. This discussion puts all of the opinions into a melting pot, and a common understanding of what the original information means to the community is negotiated and confirmed in these small groups. This is the main way tacit knowledge is passed around – small groups carrying out these informal discussions – over coffee, in corridors, at company functions, over lunches.

For instance, the practice manager came along to a certain lunch with very firm views on some processes that were being carried out in the company at that time. Through the discussion, which was animated at times, he had to question this process and recontextualise it, asking whether it was appropriate if several of his peers did not agree with his evaluation of how things were currently done.

Context is everything in this [consulting] business. If it [the payload knowledge] doesn't suit the client organisations, its current 'here and now' focus, the politics on site, and then the personality and preferences of what the direct client wants to see, then forget it. That's why the databases are no good to me. They are generic. People do a much better job of hitting the specific contextual stuff to provide me with what I need.

Through participating in a group, you learn the knowledge sharing process, which is never written down, and often varies from individual to individual. Because you have exchanged knowledge, and been through the negotiation process several times before with a person or with groups of people, you learn the 'game' of how to have this negotiation on demand when you need it in relation to payload knowledge. You learn to have a beer first, or a coffee – and you learn that buying coffee is the accepted way of getting consultants out of the office or client site to participate in the process. It is all very subtle stuff, and it is part of the community norms, and the way things happen. This is an essential part of knowledge exchange.

Interviewed 2nd July 2001 at 11:00am. Duration was 1:00 hr.

I didn't realise I do that much thinking about transferring knowledge. I just do what is asked and expected of me. I don't make forced decisions – it seems natural. And everyone else is doing the same thing.

I think it is a joke to think you can put this type of knowledge into a database. I don't know why they bother trying. Because no one ever goes there to find an answer. And I can't be bothered putting things in because I know if someone wants it, they will find me.
<table>
<thead>
<tr>
<th>Code</th>
<th>#</th>
<th>Quote</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Francis</td>
<td>1</td>
<td>The whole package of [payload] knowledge is much bigger than what actually gets said in words [during the exchange process]. Somehow a process takes place where we use common ground to funnel the whole meaning such that we each are confident the full amount of content has been understood.</td>
<td>155</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Consultants hold a lot of power. They are easily able to withhold agreement [to participate] in the knowledge exchange. Sometimes I know the consultant has the knowledge, but they bump me and give some nice reason why they are not able to help. It can take a lot of emails and phone calls to get someone to give you something – especially if you are new [to ABC].</td>
<td>166</td>
</tr>
<tr>
<td>12. Robyn</td>
<td>1</td>
<td>Often times I go and find [payload] knowledge for other consultants who need it. It is not for my client, or for my own needs. I know how to get this [payload] knowledge; so I chase it up for them as a favour to allow them to get their work done for their client.</td>
<td>141</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>I reflect on things after the job is done to see if there was a better way of doing things. Quite often I can find a lot of things I could have done better, or I can see some potential areas for improvement next time. I’ll focus on theese things for the next time I do something similar, or pass them on, where I can, to others if asked – so they don’t have to make my mistakes again.</td>
<td>174</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>I enjoy helping people in my specialist areas. Through doing this, I become more marketable since the consultants I help will probably bring my name up when asked if they know anyone who is a guru in this field or that.</td>
<td>202</td>
</tr>
<tr>
<td>13. Hayden</td>
<td>1</td>
<td>I can’t get the real story of how to carry out the implementation of the method except through a discussion with the other ABC consultants. They know how to communicate this to me efficiently.</td>
<td>143</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>I find it annoying that consultants use this email request as a first stop. Everyone knows that you should do your homework yourself, and only resort to others when you get stuck. Most of the emails I’ve seen recently do not have much evidence of any background work being done. So I hit the delete key and do not respond.</td>
<td>149</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>I still look for pointers to items stored on the knowledge base. This is similar to the process I use if I am going to use the face-to-face process. Pointers still get me to where I want to go faster, even in the databases.</td>
<td>188</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>I don’t want to waste my time reading rubbish. At least in the face-to-face system, you get to validate via your knowledge of the person and their standing in the community as to the value of the information to you. You can take into account rigour and credentials in the person giving you the knowledge.</td>
<td>193</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>I don’t want to waste my time reading rubbish. At least in the face-to-face system, you get to validate via your knowledge of the person and their standing in the community as to the value of the information to you. You can take into account rigour and credentials in the person giving you the knowledge.</td>
<td>215</td>
</tr>
<tr>
<td>14. Tara</td>
<td>1</td>
<td>If you asked me what this [artistic and indefinable] component of the payload knowledge is, I couldn’t tell you. It’s the knowledge required to understand from the big picture point of view where you are trying to get to, and to use your intuition to get there.</td>
<td>134</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>I exchange all types of knowledge with my colleagues. If you want an example of a time I exchanged knowledge, I’ll talk about the job related stuff that I do to complete tasks for my client. This is probably the most important knowledge to ABC anyway. It pays the bills.</td>
<td>138</td>
</tr>
</tbody>
</table>
14. Tara
Continued

3 Being a consultant means being a part of the profession. Knowing what's what and who's who. To not participate or to participate without anything to contribute would be the fastest way to lose face in
the company. I don't think you get too many chances.

4 Some of them [emails] annoy me, but others explain their genuine need. I know what it feels like to be on site alone with nobody to turn to. If this is the case, and the consultant has done the right thing by
giving it a go first, I'll reply.

5 I don't think about it. I suppose I do go through all these stages, but as far as I'm concerned, I'm just going for a coffee and a chat with a colleague to help them out.

6 By working with this company I have learned to become a consultant. I didn't set out necessarily with this as an outcome [goal]. But after a few years of working with and around my co-workers, I've picked
up the art of how to feel comfortable within stressful situations, how to make a client feel comfortable in stressful situations, and how to get on with the job of removing the stressful situations. If you ask me
now what these skills are specifically, I couldn't tell you. You'd just have to watch me and figure it out for yourself.

15. Keith

Interviewed 10th August 2001 at 10:30am. Duration was 3:25hr.

1 No. Knowledge does not get pushed out that often here. Consultants don't wait around for knowledge to fall into their laps. Consultants always put the knowledge they need from where they think they can
get it. Sometimes there might be some relevant knowledge sent out from time to time that I might need later on. But this is rare. Very rare. If I want something, I go out and find it. And this is the case
everywhere at ABC.

2 Clients pay the high daily rate for us to end their pain quickly. They want someone with knowledge, or someone who can get the knowledge quickly, to help them solve their problems.

3 I find there is a lot of [payload] knowledge that is artistic and indefinable. You need to know how to be a good consultant to deliver solutions. You find out this intangible knowledge from your peers [in the
consulting community of practice] as they hand over knowledge to solve your problems. Along with the technical content comes their experience in how things actually get done to achieve results.

4 Usually I need payload knowledge after being sent out on assignment. Being selected to carry out a job does not necessarily mean you have all of the knowledge. This for me is the most common way the
need arises to find [payload] knowledge.

5 Depending upon your skill level of using different mediums, you will go to different exchange methods. It depends upon the notion of efficiency – from when. If you took ten years to build up your internet
search skills, then to you it would be very efficient over the short term to find something through this search process. However, someone new to the internet would avoid it like the plague, or find someone
like the internet guru to do the search for him or her. This is the same with the knowledge sharing processes at this company. If you have a good network, and you have been here a while, you will use your
network. If you are new, and also new to consulting as a role, you will probably use email broadcasts, or go through a personal and longer search process to find your own resources. If it takes too much
effort, you will ignore it.

6 I get a lot more pulling my knowledge from people than databases. I can get the full rich meaning of things handed over by word of mouth. I find the database stuff really shallow, unless all you need is
something simple. If you need something simple – then fine. Use databases. For complex stuff, and specific [contextual] knowledge, people can give a lot more.

7 I have become known as a [IT System] security guru at the company now. I didn't start out that way. I just did a few jobs using several reports as a guide sourced from the [explicit ABC] databases, and
word got around. That's the way it works around here. People seem to know what you have done from the grapevine, and call you if required.

8 By participating in the community's knowledge exchange systems, you find out the unwritten rules of the game. Where do you go to find the good [payload] knowledge? What [payload knowledge] should
you not go anywhere near? How do I get things in a hurry? You learn the subtle skills from the other consultants so that you can get what [payload knowledge] you want.

9 You have to do your homework first. [Source] consultants expect that you have done a reasonable amount of work before you come to them [for payload knowledge].
<table>
<thead>
<tr>
<th>Code</th>
<th>#</th>
<th>Quote</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Keith Continued</td>
<td>10</td>
<td>I don't know why anyone uses the [explicit knowledge] databases at ABC. I can think of nothing more boring. I'd rather have a few drinks and have some fun whilst getting hold of the knowledge required. Everyone works this way at ABC. If you don't, you will not obtain much [payload] knowledge from the others. They like wine, beer, coffee and food to stimulate the process. And probably in that order.</td>
<td>219</td>
</tr>
<tr>
<td>16. Owen</td>
<td></td>
<td>Interviewed 15th August 2001 at 7:00pm. Duration was 1:30hr</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>If I'm on site, and something comes up, then I will go find the context specific stuff I need from wherever that is and grab it. It's no good getting generic stuff that does me no good. I draw down [pull] the stuff that is immediately relevant to me, my client and to the situation I am faced with.</td>
<td>129</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>One thing I often hand over is the methodologies I use. I use my past experience in each of the consulting processes I have used so that I can help others in similar situations.</td>
<td>133</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>I'll skip what I've been doing in the [ABC main] office for the past few months then. Prior to that, I had a client who needed to implement a system, and they had no idea. I mean – really no idea. I can use that as an example of payload knowledge, because we got paid a lot of money in the end to fully implement their system. And I needed help from others in ABC to get the job done.</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>People will try to find the most efficient and effective method in order to minimise the economic cost to them. However, this is intangible and virtually impossible to measure, and the decision occurs at the subconscious level. I think the cost has several factors – one is time cost. This is probably the biggest one. The other one is, for example, if I am interested in something, and I only need to find out these bits, the benefit to me in exploring it further is that I gain more knowledge and I become more knowledgeable. That benefit is secondary to the time one always. Hence I am weighing up time against the benefit of exploring new knowledge in great detail or using my own library and other stored resources. It's always time.</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>You condense the full understanding of the problem, including your spin on what is really going on based on your years of experience, into a fifteen-minute exchange with the potential source of [payload] knowledge. The other [source] consultant can then contribute their ‘value-add’ from their own experiences of similar problems they have had.</td>
<td>155</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>I prefer the interpersonal [knowledge exchange] process because I can get what I need quickly and easily from people. They know what you are talking about, and I can easily understand the responses. The fact we both work as consultants for ABC means we can get stuck straight into the exchange - because we know how to talk to each other in consulting speak.</td>
<td>169</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>No one uses the [explicit knowledge] databases at ABC. Hardly anyone contributes, and even less consultants use the knowledge that is already stored there. I have tried before and found what is there to be essentially useless for solving my problems – so I haven't been back. If I want something now, I find someone with the knowledge.</td>
<td>182</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Even though the explicit knowledge store has the right information in it, it is usually difficult to find, it is categorised/distorted in the wrong location, or contains incomplete work. It is much easier asking someone who uses the explicit knowledge base to locate what you want and email it to you. This is what I do to save time.</td>
<td>187</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>I have access to a full range of professional journals online through my university enrolment. I enjoy searching through this comprehensive list of titles, and finding interesting and different articles. It is not much use for payload knowledge often times, as it is too generic. But I don't mind killing an hour or two of my time surfing through these articles, and printing a couple off to read when I get a chance.</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>At ABC, everyone knows that the way to get [payload knowledge] is to do it in a socially enjoyable situation. Nobody wants to sit in front of a computer when it is not required. There is not social etiquette dictating that I must contribute and retrieve documents from the [explicit] database. However, just ask five consultants in the office right now about how knowledge is exchanged at ABC, and they will tell you [that it is the clear social etiquette that] knowledge is served with beer or coffee.</td>
<td>218</td>
</tr>
</tbody>
</table>