A BOUNDARY PRACTICE PERSPECTIVE ON THE ROLES AND PRACTICES OF BUSINESS ANALYSTS

A Dissertation Submitted in Partial Fulfilment of the Requirements for the Degree of Doctor of Philosophy

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ABSTRACT

This research into the work practices of business analysts (BAs) is motivated by concerns that information systems (IS) failure is potentially related to the challenges in identifying information requirements and bridging the requirements-design gap, that these challenges are related to the perspectives and approach adopted in business analysis, and there is a need for improving our understanding of practice. The aim of the research is to address these concerns by undertaking practitioner-grounded research into the roles and practices of BAs who are expected to bridge the gap between users and IT staff. The intention is to derive insights into the challenges in business analysis and understand the perspectives of BAs, users and IT staff on the knowledge, skills, attitudes, methods, and tools that BAs may require for working with both the users and the IT staff.

The literature review included studies that are concerned with the role of participants (users, analysts, and developers) in business analysis and studies that reflect on the limitations in the perspectives adopted in business analysis. The literature review resulted in the research perspective that takes a pluralist view of organisations, recognises the social nature of work practices, and investigates the tripartite arrangement amongst users, BAs, and developers. In order to seek theoretical guidance for this research perspective, the communities-of-practice (CoP) and boundary practice perspectives were adopted in this research.

Based on the theoretical perspectives two research questions were developed. The first research question - What insights into the roles and practices of business analysts emerge by using a CoP theoretical lens? - had an internal focus, i.e., to view the group of BAs as a CoP and see what insights emerge. The focus of the second research question - What constitutes boundary work in the practice of business analysts? - was on understanding those practices of BAs that are directed towards spanning the boundaries with users and IT staff.

An interpretive research paradigm informed the research design. A multiple case study was conducted in three organisations. Being interested in an interpretive understanding of practices, semi-structured interviews were used for data collection. While the focus was on understanding the practices of BAs, this would have been incomplete without the perspectives of other participants. Thus, I interviewed not only the BAs but also the users and IT staff that interacted with the BAs. Since my interest in the cases was to present a general account of the practices of BAs, I followed suggestions that the data analysis approach should focus on abstraction by coding and categorisation.
The research findings suggest the following implications for boundary practices:

- A boundary practice (a practice designated to connecting other practices) is likely to introduce new boundaries. For example, while BAs are designated to span the boundaries between users and IT staff, the BAs may introduce new boundaries between themselves and the users and the IT staff.

- The ‘boundary practitioners’ (members of a boundary practice) will face challenges not only in connecting practices but also in negotiating the boundaries that appear between them and such practices. For example, BAs will need to span their own boundaries with users and IT staff in order for them to successfully span the user-IT divide.

- Given that boundaries shape communities and practices within the communities reinforce boundaries, the implications noted above raise more concerns for boundary practices. For example, if the pursuit of technical and business knowledge, as opposed to pursuit of analytical skills expected by users and IT staff, becomes the motivating factor for BAs, seeking only technical and business knowledge may become institutionalized in their practices. The resulting practices would further prevent BAs from meeting the expectations of the users and the IT staff.

- The conceptual elements of mutual engagement and joint enterprise in CoP theory may not be that evident in boundary practices. For boundary practitioners, being involved in what matters is not so much a matter of engagement amongst themselves. Their involvement in what matters is more in their boundary engagements – i.e., engagements with the members of the CoP that they connect. The lack of engagement amongst the boundary practitioners would translate into in reduced mutual accountability amongst themselves (i.e., joint enterprise). Instead, the boundary engagement may emphasise relations of mutual accountability with members of CoP that are being connected (i.e., boundary enterprises).

Some of the implications of the research findings for practice are as follows.

- The location of BAs in the organisation structure may influence the practices of BAs. BAs’ closeness or distance from either the users or the IT staff may influence focus of the BAs’ work, the users’ and the IT staffs’ perceived closeness and trust, and the BAs’ legitimacy in spanning boundaries.

- The decisions to appoint subject matter experts in the BA role should be well considered as experts’ excessive familiarity with the business domain may prevent a thorough analysis.
• While the designed or espoused role for BAs may be one of a ‘bridge’, the organisational context may result in BAs’ practices that may not serve as a ‘bridge’. For example, BAs may be ‘protecting’ the technical staff by insulating them from interactions with users. BAs may also tend to ‘protect’ the users from interactions with the IT staff. Therefore, not all BAs’ practices are aimed toward connecting the users and IT staff. While it would be difficult to assert that orientations of boundary practices can be predicted and controlled, there needs to be awareness of such potential orientations and resulting outcomes. In order to meet expectations of their role, BAs are not expected to be experts in business and technical domains. They are likely to better meet the expectations of the BA role if they focus more on their analytical ability and the ability to ask the right questions and enable users to better understand their requirements.

• With the introduction of the BAs as a mediator between the users and IT staff, the situation is more complicated than the view where either of users and IT are seen to have power over the other. The relative influence amongst the BAs, users, and IT staff is likely to influence business analysis practices and outcomes.

• The importance of boundary engagements (i.e., being involved in what matters to the users and IT staff) and boundary enterprises (i.e., relations of mutual accountability with both users and IT staff) for the BAs suggests that the learning strategies of the BAs need to be combined with those of the users and IT staff. Such strategies should not only enable the BAs to learn how to ‘live in the two worlds’ but also enable the users and IT staff to understand the usefulness of formal business analysis activities.

• Although the BAs were aware of the users and IT staff belonging to different ‘worlds’ and speaking different ‘languages’, there was little reflection on how tools, methods, and activities could be sensitively and appropriately adapted in interacting with the users and IT staff. This suggests that the tools, methods, and activities of BAs may lack the capabilities to enable BAs to understand and incorporate the differences between the stakeholders while interacting with the stakeholders.
I wish to acknowledge and thank those who made it possible for me to start and accomplish this doctoral dissertation. Foremost, I would like to express my sincere gratitude to my principal supervisor Professor Judy McKay for giving me the opportunity to pursue my doctoral research under her guidance. I am grateful for the time and effort that she has invested and for the patience she has shown in supervising my doctoral research program. It has been an immensely rich experience for me to learn from her immense knowledge and experience. My sincere thanks also go to my co-supervisor Professor Peter Marshall for his encouragement for trying out new ideas and his challenging comments and hard questions.

Besides my supervisors, I would also like to thank all the other members of the IS research group at the Swinburne University of Technology, RISO (Research into Information Systems in Organisations). The staff and research students in RISO provided an environment in which I could learn and make progress by benefitting from their reviews, critiques, questions, and advice.

Last but not the least, I am very grateful to my family and friends. I would like to thank my wife Chuli. She has been a constant support and shown great patience during the time that I have been working on this research project. I am grateful to my parents, sisters, and brother, who have always supported me in every way to pursue my goals, including this doctoral research. I am most grateful to my friend Anthony who has been a source of daily encouragement, support, and advice for my research project. I would also like to thank Shekhar, Satya, and many other friends who have supported me over the years.
DECLARATION

This dissertation contains no material which has been accepted for the award to the candidate of any other degree or diploma. To the best of my knowledge, the dissertation contains no material previously published or written by another person except where due reference is made in the text of the examinable outcome. The appendix provides a list of peer-reviewed publications that resulted from this research. This dissertation contains material that has been used in these publications.

Rajiv Vashist

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Chapter 1

Introduction

1.1 Introduction

In 1971, ACM Curriculum Committee on Computer Education for Management recognised the need for a specialist liaison role and proposed the information analyst role (Teichroew 1971, p. 577). The information analyst role was proposed to mediate between the users and the system designers and viewed to be more people-oriented and business-oriented in comparison to the systems analyst role that was considered to be more technology-oriented (Kaiser and King 1982). A decade after the proposal, it was still difficult to find organisations with analysts in the mediation role (Kaiser and King 1982). In recent years, however, the situation in organisations has changed with the emergence of the business analyst (BA) in the mediation role. This study is concerned with the roles and practices of BAs.

The professionalisation of business analysis was signaled by the formation of the International Institute of Business Analysis (IIBA) in 2003. The IIBA (2009, p. 3) community defined the work of a BA to involve “work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization and to recommend solutions that enable the organization to achieve its goal”. Business analysis has become central to the work of many Information Systems (IS) practitioners. This liaison work is limited not only to people with the title of BA but is also built into the job titles of business systems analysts, systems analysts, requirements engineers, process analysts, enterprise analysts, business architects, solution architects, management consultants, or any other person who performs various business analysis tasks. The term business analyst is also widely used for professionals undertaking financial analysis.

This research is concerned with BAs who liaise with users and technical information technology (IT) staff, such as designers and developers. The business analysis work for IT systems may be
required for different organisational initiatives. The BAs could be involved in systems
development projects in which they are expected to liaise with IT staff and with business
stakeholders to understand requirements for new information systems. Systems acquisition is
another initiative where BAs may be required to understand requirements and deal with external
systems vendors to implement systems. In many organisations, the maintenance and
enhancement of existing information systems require business analysis work.

Industry research suggests that there is an increasing demand for BAs in organisations (ESI
International 2011, Gautam 2007, Standish Group 2012) and BAs continue to be relatively well
remunerated despite the global financial crisis (Mantica 2010). Job search websites reflect the
nature of this demand. For example, a search on SEEK, a prominent Australian job search
website, shows that amongst the various IT jobs, the demand for business analysis jobs is
second only to developers.

The increase in demand for BAs could be for several reasons. Business analysis has become the
central IT competency for organisations (Hass 2007). BAs are needed to deal with challenges of
excess information and increased business risks (Caldwell 2007). Schreiner (2007) points out
that the increased importance of BAs is due to the organisational need for knowledge and skills
for building and maintaining the bridge between IT and business worlds.

While the demand for business analysis is increasing, there has been little recent research that
seeks to understand the practices of BAs in organisations. The next section answers the question
as to why understanding the practices of BAs could address some concerns that are central to IS
research and practice.

1.2 Research motivation

The following concerns motivated this research on the work practices of BAs:

- IS failure is related to the difficulties in identifying information requirements and bridging
  the requirements-design gap
- There are challenges arising from the perspectives and approach adopted in business
  analysis, and
- There is a need for improving our understanding of practice.

These concerns are discussed next.
1.2.1 **IS failure: Challenges in identifying business requirements and bridging the requirements-design gap**

IS researchers have invested considerable efforts in investigating the problem of IS failure. In researching this topic, studies have used different paradigms (positivist, interpretive, and critical research) (Mukherjee 2008), used different theories such as escalation theory (Keil et al. 1994), configurational theory (Sauer et al. 1997), complexity theory (Mukherjee 2008) and narrative enquiry (Fincham 2002), and focused on the different roles of users (Hirschheim and Newman 1998), systems analysts (Lyytinen 1988), designers (Bostrom and Heinen 1977a), and senior managers (Leibowitz 1999). IS failure has been viewed as a failure of organisations to learn (Lyytinen and Robey 1999). There have been several attempts at categorising IS failure (see Table 1) and, arguably, the most significant shift in perspective was caused by the concept of ‘expectation failure’ (Lyytinen and Hirschheim 1987). Expectation failure defined IS failure as a ‘gap between stakeholders’ expectations expressed in some ideal or standard and the actual performance’ (Lyytinen 1988, p. 46). Most research focused on identifying factors that cause IS failure (e.g., Glass 1998) and reflected a rationalist assumption that if a practitioner deals with these factors, IS failure can be avoided (Bussen and Myers 1997). But now a few IS researchers, viewing failure as ‘expectation failure’, emphasise that IS failure is an evaluation, a judgment involving different stakeholders and it is not an objective concept (Beynon-Davies et al. 2004; Brats and Mitev 2008). IS researchers also suggested that, given that there are multiple perspectives on usefulness of an information system, it is difficult to have a single framework to judge the quality of any information system (Anderson and von Hellens 1997).

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<td>Termination failure</td>
<td>Sauer 1993</td>
</tr>
<tr>
<td>Strategic failure</td>
<td>Grainger et al. 2009</td>
</tr>
</tbody>
</table>

*Table 1.1 Concepts of IS failure*

Despite these research efforts, the IS failure rate has continued to be a cause for pessimism (Goldfinch 2007) and a problem for IS researchers and practitioners (Sauer and Davis 2010). There are concerns that the failure rate of IS projects is higher in comparison to other high technology projects (Yeo 2002). Many business and IT practitioners, as reported in some
surveys, have little confidence in IT projects being successful and anticipate IT projects to fail (Geneca 2011). The Chaos report\(^1\) from Standish Group in 2009 reported IS project failure rates as being the highest in a decade:

*This year’s results show a marked decrease in project success rates, with 32% of all projects succeeding which are delivered on time, on budget, with required features and functions. 44% were challenged which are late, over budget, and/or with less than the required features and functions and 24% failed which are cancelled prior to completion or delivered and never used* (Standish Group 2009).

Although the validity of the findings of the Chaos report have been questioned (Eveleens and Verhoef 2010; Glass 2006), the findings are indicative of the problems with IS projects. The problems of IS failure, however, are not accurately revealed by a focus on IT project metrics like time and budget alone (Sauer and Davis 2010). Project metrics reflect project management performance and tools are now available to enable project managers to adhere to project metrics. Compliance with project metrics, however, may not always translate to system success. The success of IS depends on the extent to which the IS add business value for its stakeholders. Projects that overrun metrics targets may not necessarily be IS failures as they may still go on to provide highly desirable business benefits.

Researchers have attributed some of the challenges in IS projects to problems in requirements analysis. The problem with requirements analysis is seen to be rooted in user’s\(^2\) resistance to change (Hirschheim and Newmann 1998), systems analysts’ perception of their role as rational problem solvers and technical experts (Lytyinen 1988), designers’ inappropriate frames of reference leading to faulty design (Bostrom and Heinen 1977a), and personal characteristics of the designers causing difficulties in interaction with users (Hirschheim and Newmann 1998). Other related concerns are poor organisational intelligence for dealing with complexities of IS development (Lytyinen and Robey 1999) and social, cultural, political and economic issues beyond the issues of technical quality and usability (Bussen and Myers 1997).

IS practitioners themselves have indicated that requirements analysis is poorly performed:

*Defining business requirements is the most important and poorest performed part of systems development* (Goldsmith 2004, p. 1).

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\(^1\) The Standish Group reports on IT project success rates once every two years. The 2011 report suggests an improvement in project success rates.

\(^2\) The term user is used for roles with which the BAs liaise to understand requirements during systems development, systems acquisition, or systems maintenance. The term stakeholder includes not only the users but also other entities that may either influence or be affected by business analysis work.
A relatively recent survey (see Geneca 2011) of business and IT practitioners revealed concerns that IT project failure is rooted in the failure to understand business requirements. In this survey, ‘less than 20% of participants describe the requirements process as the articulation of business need’ (Geneca 2011, p. 5). The findings of the survey raised other concerns about understanding business requirements. For example, the IT practitioners are concerned about the lack of user involvement and the difficulties in managing expectations, understanding, and alignment of different users. The business managers’ perspectives revealed their dissatisfaction with the technical nature of requirements elicitation and analysis.

Many suggestions to address poor user requirements focus on the participants in business analysis. These include changing designers’ perspectives (Bostrom1977 a), developing more theories and methods for systems analysts to help them better understand social aspects of systems development and use (Lyytinen 1988), deriving insights into ways of building users’ trust (Li et al. 2008), and developing a more generalised view of documented requirements to resolve conflicts amongst stakeholders’ requirements (Robinson and Pawlowski 1998).

Understanding user requirements, however, is only one part of the challenge that BAs face. The other part is bridging the gap between user requirements and the design developed by the IT staff. Heeks (2006, p.128) suggests a ‘reality-design gap’ is the gap between ‘current realities’ and the ‘design conceptions’ of the information systems. The extent of this gap is seen to determine the success or failure of systems. Heeks recognises that the stakeholders would have different perceptions of reality and what is required, but chooses to simplify by considering two stakeholders only: users and the designers. The ‘reality-design’ gap is presented by Heeks as a gap between the reality of the users and the design created by the IT staff (see Figure 1.1).

![Figure 1.1 A Gap between users’ reality and IT staff’s design](image-url)
This oversimplification fails to reveal what might be involved in understanding user requirements and arriving at the design. We may need to consider the reality-design gap of both users and IT staff (see Figure 1.2). The challenge of understanding user requirements involves understanding the current realities of the users and their expectations. The IT staff also have their own understanding of ‘what is’ and ‘what is required’. The BAs are expected to work as boundary spanners between the users and IT staff to bridge the requirements-design gap.

Figure 1.2 Business analysis for bridging the gap between users’ requirements and IT staff’s design

Heeks (2006), in analysing the reality-design gaps that are relevant to information systems, mentions that such gaps could be associated with many stakeholders, but fails to highlight an important reality-design gap, that of the BAs. Perhaps we need to investigate the assumption that BAs are able to work without being affected by their understanding of reality and what is required in the given situation. A way forward would be to investigate the practices of BAs as boundary spanners who are expected to understand user requirements and bridge the requirements-design gap through their interactions with the IT staff. The differences in perceptions of BAs, users, and IT staff, may provide us insights into the challenges of business analysis.
1.2.2 Challenges arising from the perspectives and approach adopted in business analysis

While there is an expectation and a perception that BAs act as a bridge between users and IT staff to overcome the requirements-design gap (Evans 2004a; Kaiser and King 1982), BAs’ failure to identify ‘real business requirements’ is still viewed as a major factor leading to IS project difficulty (Goldsmith 2004, p. xvii). This raises the question as to whether there are limitations in the perspectives that underlie the work of business analysis?

Over the years, IS researchers have raised concerns that the dominant view of business analysis is largely rationalistic and results in inadequate conceptions of organisations that IS are required to serve:

A basic problem with [rational-analytic] model based approaches to defining information requirements is that they tend to result in conceptions of the organization as being in a static equilibrium, interacting with an environment which is effectively knowable, objectively verifiable and inconsequentially affected by the action of managers (Boland 1979, p. 261).

Boland argued that such a perspective is not an adequate representation of system analysis and design and ignores social processes that are both impacted upon and benefit from information systems. Boland called for researchers to investigate systems analysts’ methods and their orientation towards users. Research on the use of IS development methods reveals that the reality of practice is far removed from the rationalist notion that practice is largely about using methods that are based on scientific, rational knowledge (Mathiassen and Purao 2002). Empirical research suggests that human behaviour frequently contradicts rational assumptions (Avgerou and McGrath 2007).

Methods and tools seek a particular kind of transformation based on a particular worldview (Checkland and Scholes 1990). The rationalist worldview, through the use of rational methods and tools, is inevitably imposed on stakeholders, resulting in an arguably ‘limited’ analysis. An example of such a worldview is one that is focussed on information but tends to neglect social dimensions (Brown and Duguid 2000). Such a view tries to define all problems in terms of information and data flows. For example, requirements modelling, using entity-relationship diagrams and data flow diagrams, may result in abstractions that leave out important information about the application environment (Ramesh and Browne 1999). The traditional approach to requirements analysis fails to uncover latent information about values and beliefs (Leifer et al. 1994). This results in a failure to derive any relevant insight into the context of the
problematic situation, which may impact ultimately on design decisions and the success or failure of the implemented system.

IS researchers have argued that neglecting the context of requirements may lead to poor IS design (Brown and Duguid 2000). The context influences how data may be interpreted (Boland 1979). This limitation continues with the newer agile IS development approaches (Oats and Fitzgerald 2007). Context-sensitivity is also considered important for system developers, to enable them to cope with their work environment (Mathiassen 1998). In Avgerou’s (2001) discussion on the dangers of separating content and context in IS research, there is the suggestion that analysis of IS as a social-technical system needs to include layers of context: international, national or regional, local, and organisational. This suggests that influences on information requirements are both within and outside the organisation boundary and implies a need for a cultural approach to information systems requirements (Boland 1979). IS researchers have highlighted our limited understanding of how politics and power relations unfold during IS development (Attygalle et al. 2010; Jasperson et al. 2002; Sabherwal and Grover 2010).

The dominant perspective applied in information requirements analysis has been criticised for being based on positivism:

A positivist stance might be appropriate for the technical aspects of computer systems such as measuring speed of performance and efficiency of (computer) memory use. However, it is ill-suited to the social world of humans where computer systems are developed and used (Oats and Fitzgerald 2007, p.423).

Oats and Fitzgerald (2007) argue against the notion of a set of ‘true requirements’ existing independent of the analysts and waiting to be ‘captured’ and suggest the need for adopting an interpretive approach to understanding information requirements.

Adopting an interpretive perspective in IS development has been viewed as a way of addressing many concerns. Mathiassen (1998) suggested that the limitations of technical rationality in a highly collaborative practice of systems development cannot be overcome by individualistic practitioners and called for understanding the stakeholder group dynamics. ISD approaches which embrace an interpretive perspective, like soft-systems methodology (Checkland and Scholes 1990), multiview (Bell and Wood-Harper 2003), and multi-metaphor method (Oats and Fitzgerald 2007) have been suggested. However, in my experience, the adoption of such suggestions in practice is very limited.

3 Boland (1979) equates such an approach to ‘butterfly collecting’.
These concerns about limitations in the dominant perspective adopted in business analysis suggest that we need to foreground the perceptions and worldviews that guide the work of BAs. An improved understanding of work practices of BAs is also significant for addressing the issue of relevance of IS research.

1.2.3 Improve understanding of work practices of BAs

The question of relevance is at the heart of the widely discussed research-practice divide (Benbasat and Zmud 1999; Davenport and Markus 1999; Klein and Rowe 2008; Klein and Hirschheim 2008; Lippert and Anandrajan 2004; Mathiassen and Nielsen 2008; Van De Ven 2007). The view taken on the question ‘should IS research be made more relevant to practitioners?’ drives the practice-relevance debate in IS research. There is a view that considers IS practitioners to be the main consumers of IS research:

Does IS research produce the knowledge that today's IS professionals can apply in their daily work? Does it address the problems or challenges that are of concern to IS professionals? (Benbasat and Zmud 1999, p. 4)

Proponents of this view are concerned that knowledge created by IS academic community rarely translates into usable tools and practices for the practitioner community (Hirschheim and Klein 2003) and this lack of practical relevance creates a doubt about the legitimacy of IS research (Klein and Rowe 2008). Another view proposes that IS research outcomes should have an academic focus to develop students into reflective practitioners (Davenport and Markus 1999) and that it is problematic to assume that academic knowledge can be transferred to practitioners (Beech et al. 2010; Knights and Scarbrough 2010; Zundel and Kokkalis 2010). In this view, relevance is seen as temporary and ever changing (Wieringa and Heerkens 2006) with academics expected to focus on new insights rather than address immediate practical problems (Zundel and Kokkalis 2010). Still another view suggests that, IS being an applied discipline, IS research must meet the demands of both academic and practitioner audiences (Taylor et al. 2010) and realise that theoretical studies have the potential to be useful for practitioners as well (Schneberger et al. 2009).

What is common to all three perspectives is the need to better understand practice and ‘surface practitioner’s (assumptions, knowledge, and expectations)’ about IS phenomena (Singletary et al. 2003, p.46). In order to make research outcomes more relevant to practitioners, IS research needs to overcome the limited understanding of context, problems, and opportunities that concern practice (Benbasat and Zmud 1997). To make research outcomes more useful for
students we need to improve our understanding of practice and integrate that understanding into pedagogy (Mathiassen and Purao 2002).

There are many suggestions from academics for improving understanding of practice. There are suggestions that researchers conduct an applicability check with practitioners about the objects of their research (Rosemann and Vessey 2008), be willing to invest more effort to share research findings with practitioners (Vermeulen 2007), and participate in practitioner-academic forums (Bartunek 2007). Others have suggested the importance of executive education programs and doctoral programs for a better understanding of practice (Klein and Rowe 2008; Tushman and O’Reilly 2007). The problem, however, has become worse over the years (Gill and Bhattacherjee 2009) and very little academic research output is used even by academics themselves (Van de Ven 2007).

One potential outcome of a limited understanding of practice may be that IS academics in the main are not researching topics of interest and concern to practitioners (Lyytinen 1999). The fact the IS academics do this could be interpreted as indicating that academics fail to appreciate the sorts of concerns that vex practitioners and do not fully appreciate or understand the world of practice and the requirements of practice. Research suggests that the published research of IS academics and the published writing and research of IS practitioners in the field of systems analysis focus on quite different areas and this inhibits the training and education of systems analysts (Anandrajan and Lippert 2006; Lippert and Anandrajan 2004). An investigation into the roles and practices of BAs would help address concerns that systems analysis and design curriculum needs to be more effective in preparing future practitioners (Alter 2006; Surendra and Denton 2009).

1.3 Problem statement and research aim

The problem investigated in this research is focused on the concerns that IS failure is potentially related to the challenges in identifying information requirements and bridging the requirements-design gap, there are challenges arising from the perspectives and approach used in business analysis, and that there is a need for improving understanding of work practices of BAs. These concerns and the relationships between them are illustrated in Figure 1.3. In context of this research, the disappointing increase in business value, that is often the outcome of the use of IS, is viewed to result from poor understanding of user requirements and the un-bridged requirements-design gap. These two factors are themselves seen to be rooted in other related factors, such as limitations in perspectives used in business analysis, inadequate tools, methods, and activities, inadequate curriculum for future practitioners, and limited understanding of business analysis practices.
Previous research on the practices of analysts has focussed on issues like the differences in perspective and worldview between users and analysts (Green 1989, Kaiser and Srinivasan 1982), user-analyst relationships (Kaiser and King 1982; Newman and Robey 1992), the analyst’s skills and knowledge requirements (Vitalari 1985), the analyst’s cognitive problem solving behaviour (Vitalari and Dickson 1983), the analyst’s model of the user (Dagwell and Weber 1983), and the difference between novice and expert analysts (Schenk et al. 1998). However, very little research has been done in recent years to investigate the roles and practices of BAs as boundary spanners involved in interacting with both users and IT staff and negotiating issues and differences between them. Extant work has emphasised the user-analyst dimension and largely ignored the analyst-IT developer dimension. Furthermore, there is very little research that investigates the tripartite arrangement amongst the users, IT staff, and BAs.

The aim of the research is to address the problem as outlined above by undertaking practitioner-grounded research into the roles and practices of BAs who are expected to bridge the gap between the users’ requirements and the design proposed by the IT staff. The intention is to derive insights into the challenges faced by the practitioners and to understand the knowledge, skills, attitudes, and methods that may be required for meeting the challenges in working with both users and IT staff.
1.4 Structure of the dissertation

Table 1.2 outlines the structure of the dissertation.

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• Implications for practice  
• Suggestions for future research  
• Reflections on the strengths and limitations of this research |

| Table 1.2 Dissertation structure |

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Chapter 2

Literature Review (I) - Work Practices of Business Analysts

2.1 Introduction

In chapter 1 I discussed three related concerns or issues that motivated this research. The aim of this research is to address these concerns by undertaking practitioner-grounded research into the boundary spanning work of business analysts (BAs). The literature review that was conducted to inform this research is presented in two parts. In this chapter, I discuss the literature on work practices of BAs. The analysis of this literature allowed me to articulate a useful research perspective on the practice of business analysts. In chapter 3, I discuss the practice perspective, communities-of-practice (CoP) perspective, and the boundary practice perspective that were used to seek theoretical guidance for this research.

This chapter is organised as follows. In the first section, I briefly outline the view taken in this research on the work practices of BAs. This section also explains the rationale for selecting a particular body of literature to highlight challenges in the work of BAs. In the second section, I discuss literature that highlights the potential challenges arising from the perspectives and approach adopted in business analysis. The third section is focused on studies on participant groups that are relevant in business analysis. In the last section, I discuss an emergent perspective that is adopted in this research for investigating roles and practices of BAs.

2.2 The Work practices of business analysts

One challenge in discussing what is involved in the work of BAs is that the job titles used in the literature for the analyst’s role vary. The evolution of the analyst’s role has perhaps led to a variety of job titles for the analyst’s role. For example, the job title of ‘systems analyst’ is used for a technology-oriented analyst role (Kaiser and King 1982). It is only with the relatively recent emergence of the title of ‘business analyst’, the analyst role has tended to become more business oriented, as was proposed several decades ago (see Teichroew 1971).
Although my research is concerned with the roles and practices of BAs and that I use the job title of ‘business analyst’ in this thesis, many studies that I rely upon to discuss challenges in business analysis use the job title of ‘systems analyst’. To resolve this issue, I have used the title ‘systems analyst’ only when it is required to retain the integrity of the original work being referenced.

A more substantial issue in discussing what is involved in the work of BAs is dealing with the great diversity in the work of individuals that may have the job title of BA. Such individuals play a role in a variety of organisational initiatives. Further, the business analysis practices are limited not only to people with the title of BA but is also built into other job titles.

This research, however, takes the view that the work of understanding requirements is central to the work practices of BAs (Byrd et al. 1992) and, as outlined in chapter 1, is concerned with understanding the practices of those BAs who liaise with users and the technical IT staff for understanding and delivering on user requirements.

Although the focus on liaison work of understanding requirements provides a scope to the discussion on the work practices of BAs, the liaison work to understand and deliver on requirements has also evolved and broadened over time. In the early views of the systems development lifecycle (SDLC) that viewed systems development as a linear or an iterative progression between problem investigation, analysis, design, development, implementation, and maintenance, the work of understanding requirements is often associated with only the problem investigation and analysis stages. With organisations becoming increasingly mobile, user involvement is expected to increase beyond the initial stage of information systems development/acquisition (Unhelkar 2009). BAs would also be expected to work closely with users during system testing, implementation, training, and maintenance of information systems. The trend of using packaged software led to the BAs being expected to understand requirements within the capabilities of software packages and support software acquisition decisions in organisations. Further, the liaison role may not be limited to understanding requirements in relation to an IT based system, but also extend into other organisational initiatives such as process management and change management.

While the concept of requirements and the work of BAs may have broadened over time, it is the literature on requirements analysis that highlights many challenges and issues that may be endemic in the liaison work of BAs. Thus, I focused on this literature in my review. This
literature highlights challenges that arise in business analysis and includes studies that have investigated the role of various participant groups in requirements analysis.

Given that this research is focused on understanding the BAs’ liaison work of understanding requirements, it was interesting to note various notions about requirements in the literature. ‘Requirements’ can be viewed at the organisational level, as a set of applications to meet the information needs of an organisation, but more commonly the notion is used to refer to the detailed specifications of a particular application (Davis 1982; Watson and Frolic 1993). Some recent views on requirements suggest that literature on requirements largely adopts a mechanistic view and argue for the inclusion of a social perspective on requirements:

*Actors do not exist in isolation. They exist in some shared environment with other actors, and interact with each other. Importantly, we recognize that actors do not only interact with each other physically and behaviorally, but also relate to each other at an intentional level. Thus, their interactions are not predefined sequences of actions and reactions, but are coordinated through their respective wants, desires, and commitments...In a social world, actors can be said to be only semiautonomous, because their actions take into account their relationships with each other* (Yu et al. 2011, p.5).

In this research, a social perspective is adopted in that understanding user requirements and the work of business analysis is viewed as involving different social groups located in organisations. This is the perspective that will be used exclusively in this thesis.

In requirements analysis literature, different labels have been used for the similar activities that analysts undertake in the process of understanding requirements. For example, the work of understanding requirements is identified by various terms such as requirements analysis, requirements determination, and requirements definition (see Table 2.1). While the explanations of most terms discuss similar activities, they emphasise different aspects. Some explanations focus on the role of analysts (Byrd et al. 1992), others on the social construction and negotiation of requirements (Jung et al. 2009; Luna Reyes et al. 2008), and the decision enabling capability of requirements (Havelka 2002). There are some explanations that are stakeholder-centric and highlight the role of participants in the work of understanding requirements. Such explanations highlight the importance of understanding the differences in stakeholders’ perspectives (Lieete 1988), differences in stakeholders’ skills, experiences, and objectives (Luna Reyes et al. 2008), and cooperative learning among the stakeholders (Stallinger and Grunbacher 2001). I adopt the
view that requirements involve a sense-making process among stakeholders, ongoing over time, and not necessarily linear nor orderly (Davidson 2002).

<table>
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<tr>
<th>Terms used to label and discuss the work of understanding requirements</th>
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<tr>
<td>To analyse information requirements is to define what a systems should do? What data should it make available? In what format? And to whom?</td>
<td>Boland 1979, p. 259</td>
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<td>Requirements analysis typically involves an analyst (1) working with end users to establish an understanding of organizational information processing needs (2) developing IS objectives (3) designing and evaluating IS alternatives (4) communicating the results of analyses to superiors, other analysts, and end users and (5) performing a systems audit.</td>
<td>Byrd et al. 1992, p. 117</td>
</tr>
<tr>
<td>Requirements determination (RD) is characterized by ongoing sense-making among stakeholders, and it can be chaotic, nonlinear, and continuous.</td>
<td>Davidson 2002, p. 330</td>
</tr>
<tr>
<td>Requirements definition is the task of gathering all of the relevant information to be used in understanding a problem situation prior to system development.</td>
<td>Greenspan et al. 1982, p. 225</td>
</tr>
<tr>
<td>Requirements determination (RD) defines the features and attributes of an information system (IS) necessary to produce information that is complete, consistent and correct for use in performing certain tasks or making certain decisions.</td>
<td>Havelka 2002, p. 220</td>
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<td>Requirements Analysis is a process in which ‘what is to be done’ is elicited and modeled. This process has to consider different viewpoints, and it uses a combination of methods, tools, and actors. The product of the process is a model, from which a document, the requirements, is a product.</td>
<td>Leite 1988, p. 18</td>
</tr>
<tr>
<td>Defining requirements is an endeavour in which stakeholders with different skills, backgrounds, and objectives negotiate and make sense of the nature of the technology innovation in the context of their work.</td>
<td>Luna Reyes et al. 2008, p. 265</td>
</tr>
<tr>
<td>Requirements emerge in a process of co-operative learning in which stakeholders jointly develop a mutual understanding about the system and benefit from other stakeholder’s experiences and insights. Requirement development is therefore a ‘learning rather than a gathering activity’.</td>
<td>Stallinger and Grunbacher 2001, p. 311</td>
</tr>
<tr>
<td>The requirements process is a thorough exploration of the intended product with the intention of discovering - in some cases inventing - the functionality and behaviour of the product</td>
<td>Robertson and Robertson 2006, p. 2</td>
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Table 2.1 Terms used to label and discuss the work of understanding requirements
2.3 Potential challenges arising from the perspectives and approach adopted in business analysis

Given that BAs’ work of understanding requirements continues to be viewed as both critical and problematic in relatively recent research (Brown and Ramesh 2002; Goldsmith 2004; Meziane et al. 2008; Robinson et al. 2003), investigating the challenges arising in business analysis is important for understanding why information systems fail to support work practices that they are meant to support (von Hellens 1997). The challenges in understanding requirements have been linked to system failures and disappointments:

*Every day we encounter systems that do not do what we want. Many software projects continue to fail at alarming rates. Much of this challenge is attributed to the difficulty of pinning down system requirements - effective ways to determine what people want when they initially conceive of the need for a software system* (Yu et al. 2011, p. 2).

The challenges have been attributed to a variety of factors. In early studies, the problems in understanding requirements were seen to arise from limitations of humans in problem solving and information processing, the variety and complexity of information requirements, and the complexity in user-analyst interactions (Davis 1982). In a more recent study, Brown and Ramesh (2002) discussed the unwillingness of users to provide requirements as another challenge in understanding requirements.

Some scholars argued that these problems are more fundamental in nature and are rooted in the requirements analysis discipline, the discipline being ‘immature’ (Goguen and Linde 1993, p. 153) with the ‘least explored and least satisfactory intellectual foundations’ (Goguen 1994, p. 165). However, progress appears slow, in that concerns about the lack of reflection on both the perspectives used in understanding requirements (Hinds 2008) and the approach used in practice (Hughes and Wood-Harper 1999) continue. In the discussion that follows, I attempt to reflect on perspectives and approach adopted in practice that have the potential to limit the effectiveness of business analysis.

This persistence of difficulties in understanding requirements is argued by some to be a result of the predominant view taken on requirements. In the predominant view on requirements, requirements are seen to exist a-priori and discovered by the analyst, who is seen as a detached observer, and the analysts is then expected to model the discovered requirements for the technical developer (Oates and Fitzgerald 2007). This view on requirements is considered positivist and its assumptions, that requirements exist independent of the observer and the right questioning can elicit such requirements, have been questioned (see Bergman et al. 2002; Goguen 1993; Hughes and Wood-Harper 1999; Oates and Fitzgerald 2007). Many difficulties in
requirements analysis are seen to arise as a result of this predominant view that expects requirements to be objective, stable, and ready to capture and excludes the social and political context from requirements analysis, resulting in the adoption of approaches and methods that may limit effectiveness of the analysis. These challenges are discussed next.

With a positivist view on requirements, the BA may tend to approach requirements analysis with a view to collect objective and stable representations of requirements. Changing requirements have long been the bane of developers, but it is problematic to expect objective, stable, and ‘ready-to-capture’ user requirements and to view changing requirements as undesirable ‘scope-creep’ from problematic users.

There could be several reasons for requirements changing in the real world of practice. The change in requirements could often be due to a gradual process of requirements realisation and requirements clarification (Chudge and Fulton 1996) that is inevitable (Goguen 1993) and that occurs even during the latter stages of IS development (Goguen and Linde 1993). Users often do not understand their own requirements at the beginning of the project (Walz et al. 1993). Perhaps, expediting documentation at beginning of a project then explains concerns that requirements stated in documents often do not reflect actual user needs (Viller and Sommerville 1999a). There are suggestions that changes in users’ requirements can be minimised by not taking the user’s stated or written requirements as the ‘real’ requirements (Hall 1997). Some requirements may not be knowable during the analysis phase and emerge only when the system operates in a particular context (Patel and Hackney 2008). The change in requirements is not only due to a process of increasing user awareness but could also be due to shift in ‘sense-making frames’ of users and other participants in the requirements analysis process (Davidson 2002).

The predominant view on requirements may also result in the use of abstract models in requirements analysis, resulting in the exclusion of the context of requirements and thus presents an incomplete view. Such models lack the capability of levelling out organisational biases and distortions (Hirschheim and Klein 1994). Analysts that use such models may succeed in noting the essence of user’s requirements, but may not be able to understand ‘the subtleties, special cases, and interpretations’ that are important to understanding user’s needs (Potts 1997, p. 102). For example, structured analysis models like entity-relationship diagrams result in abstractions of the applications environment that leaves out contextual details (Ramesh and Browne 2002). Object-Oriented analysis models are argued to be inadequate in representing relationships between different uses of the system (Kanyaru and Phalp 2009). Abstraction in models in itself is not the problem. Abstracting away from the social and political context is the problem (Bergman et al. 2002a; Yu et al. 2011).
Business analysis that leaves out social elements of requirements, focuses on a rational aggregation of needs stated by users, and ignores the situated nature of requirements by leaving out the context of requirements (Goguen 1994). The need for including the social context in requirements analysis has been discussed in the literature (e.g., Goguen and Linde 1993; Tarn et al. 2008; Yu et al. 2011). The ‘social’ expresses the relational aspect among humans (Griswold 2008) and is significant in requirements analysis:

*A system aims to improve the relationship that some actors have with other actors. Rather than focusing on the behavioral properties of software, as in a mechanistic system, we should raise the level of abstraction and ask how the system will advance the relationships that some actors have in relation to other actors* (Yu et al. 2011, p. 1).

Thus, requirements analysis is social in the sense that the requirements of the users are grounded in a social context and the process of determining requirements is itself social (Goguen 1993). It has been argued in the past that there has been inadequate reflection on the social processes within which IS are used (Boland 1979). Some scholars suggested that conflicting requirements arise because the social process of constructing requirements is not managed well (Robinson et al. 2003). The problem seems to continue as relatively recent observations suggest still less attention is paid to requirements analysis as a social process, with research typically adopting an individualistic orientation (Rowlands 2008).

Business analysis that leaves out the political context in understanding requirements also may not be effective, as issues of power and politics have become increasingly relevant with the growing complexity in the practice of understanding requirements (Alastair and Maiden 2011). It has been argued that requirements are constructed in an organisation through a political process that connects problems with solutions (Bergman et al. 2002a). In this view, stakeholder groups, based on their interests and past experience, have a set of solutions and requirements are considered as mappings between these solutions and the problem. Most importantly, Bergman et al. (2002a) assert that the construction of the mapping begins with the solution seeking out problems rather than the other way around. Such political influences have the potential to waste the significant resources invested in IS development (Sabherwal and Grover 2010). Requirements analysis efforts need to deal with political conflict that surrounds the understanding of requirements (Bergman et al. 2002b) and contributes to IS project failures (Goguen 1994). The political context of requirements also contributes to the phenomena of scope creep (Bergman et al. 2002b). The political problems are said to manifest themselves in ongoing requests for system change requests. The role of requirements analyst then includes considering how the stated requirements affect power relationship among the stakeholders.
The difficulties with the approaches used in understanding requirements are also rooted in factors other than the predominant positivist view on requirements. For example, the problems in requirements analysis have also been attributed to the approach being driven by programming paradigms. For example, Castro et al. (2002) highlight how programming paradigms, both structured and object-oriented, results in a mismatch between the representations of the operational environment and IS design:

Their operational environment is understood in terms of actors, responsibilities, objectives, tasks and resources, while the information system itself is conceived as a collection of (software) modules, entities (e.g., objects, agents), data structures and interfaces. This mismatch is one of the main factors for the poor quality of information systems, also the frequent failure of system development projects (p. 365).

In an attempt to improve the match between user requirements and their documented representations, scholars have highlighted that practitioners should avoid using modelling tools meant for understanding requirements for their technical design work (Unhelkar 2005, p. 64).

This perhaps gives some insights into why the methods and tools used in understanding requirements and developing systems have thus far not been totally effective in addressing the problem of meeting user expectations (Lai 2000). Further, excessive structure imposed by the approach used by analysts can be frustrating and inhibiting for users and BAs (Davis 1982). The structure may well provide temporary regularities in work practices but this interferes with the IS development process (Rowlands 2008). Structured methods also neglect the social dynamics of IS development work (Newman and Robey 1992).

Although many of the problems are attributed to a positivist perspective, by contrast, some scholars argue that the need for objective and stable representations of requirements is driven by a practical necessity rather than by a positivist philosophical orientation (Hinds 2008). For example, objective and stable representations of requirements would be required by the software developers who turn such representations into IT artifacts. In investigating this line of argument, one can see why the dominant rational view would be useful despite being criticised for the outcomes that result from its application. Rational philosophy in managing organisational change emphasises dealing with controllable aspects of change (Smith and Graetz 2011), and, when this philosophy is applied to requirements analysis, it provides a structured way to BAs to initiate and control the process of understanding requirements. On the other hand, a focus on social and political contextual elements may be difficult to address directly in the requirements analysis process. The imperatives of working towards agreed upon deliverables, schedules, and budget, may inadvertently result in some mechanistic requirements analysis approaches.
However, if requirements are considered as social and political constructions (Bergman et al. 2002a; Jung et al. 2009; Luna-Reyes et al. 2008) and that there are multiple sets of requirements in an organisational context (Walsham 1993, cited in Oates and Fitzgerald 2007), the challenge that remains for the BAs is to devise and use approaches that enable an effective analysis of such constructions.

In conclusion, it seems that adopting a social perspective coupled with attempting to get an interpretive understanding of the various participant groups involved in understanding and delivering on requirements may be a way forward in dealing with the challenges discussed in this section. Therefore, in the next section, I discuss relevant insights from research conducted on various participant groups that is relevant to the BAs’ work of understanding requirements.

2.4 Research into participant groups relevant to BAs’ work of understanding requirements

Broadly, the following participant groups are involved in business analysis: users, technical staff (designers, developers), and business analysts. The studies relevant to these participant groups can be classified as follows: studies that focus on the individuals in the analyst or systems designer role alone, studies concerned with the interactions between the users and the individuals in the analyst or systems designer role, and studies that are focused on the interactions between the users and the developers (see Table 2.2).
## Table 2.2 Participant focus in requirements analysis studies

<table>
<thead>
<tr>
<th>Participant focus of study</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single participant group focus</strong></td>
<td>Individuals in the analyst or systems designer role</td>
</tr>
<tr>
<td><strong>Focus on two participant groups</strong></td>
<td>Interactions between the users and individuals in the analyst or systems designer role</td>
</tr>
</tbody>
</table>

Two observations can be made about this literature. Firstly, no studies that investigated the tripartite arrangement amongst the users, analysts, and the developers were found. Secondly, the studies do not consistently adopt similar labels for the participants involved in IS analysis and design (Evans 2004a). For example, in Bostrom and Heinen (1997a), the word ‘systems designer’ includes not only systems analysts and designers but all people who are involved in any decision related to design. In Newman and Robey (1992), all systems personnel are referred to as analysts. In a few studies, the systems designer is referred to as a systems analyst (e.g., Boland 1979; Boland and Day 1989). In some studies, the reference to the analyst is a reference to the system developer (e.g., Hirschheim and Klein 1989). This introduces a lack of clarity about the participants targeted in the studies and raises questions as to whether roles like systems analysts, systems designers, and systems developers have been appropriately differentiated for understanding their participation. This lack of differentiation and the use of different terminologies make it difficult to ‘integrate studies and build cumulative theory about IT jobs and IT workers’ (Shaw et al. 2005, p. 9).
Studies focused on individuals in the analyst or systems designer role

In these studies, the analyst’s role is examined for its contribution to the problems in IS analysis and design. In early research, it was suggested that the analyst’s frame of reference could be problematic and may result in poor decision making in requirement analysis (Bostrom and Hienen 1977a). For example, the analysts do not reflect enough on the apparent ‘certainty’ that they attribute to the users.

This literature presents diverse views on how the problems arising from analysts’ practices may be addressed. There is a view that such problems may be avoided by using IS development methods that are reflective of the socio-technical nature of organisations (Bostrom 1977a, b). By contrast, others have argued that IS development methods alone will not be able to address all concerns (Salaway 1997). Changing an analyst’s orientations towards users is often difficult and possible only with increasing education and experience (Dagwell and Weber 1993).

The knowledge and skills needed in carrying out effective requirements analysis have been discussed in the literature. A survey-based study of recruitment advertisements from 230 Fortune 500 organisations concluded that the systems analyst that the industry requires is one with all-round technical and behavioural skills (Lee 2005). Analysts with the appropriate behaviour skills are seen to out-perform their colleagues (Vitalari and Dickson 1983). Business skills, in addition to the technical and soft skills, are also considered important (Benbasat et al. 1980; Satzinger et al. 2009).

Expert and novice systems analysts are seen to adopt differing approaches to requirements analysis (Schenk et al. 1998). Analysts that are rated highly are seen to spend more time on people and organisational issues (Vitalari 1985). The skills related to collecting information include the ability to decide on the issue of information sufficiency. The analyst’s experience influences the choice of rules the analyst uses to judge when they have collected sufficient information and should stop the process of collecting information (Pitts and Browne 2004).

What is largely missing from the discussion, with the exception of some studies (e.g., Misic 1996; Misic and Graf 2004) is the focus on analytical skills. This implies an assumption that to be effective in the analyst role, one needs to primarily have business and technical knowledge. It is not very clear if the specialist analytical skills are assumed to automatically result from having business and technical knowledge. There is a need to question this assumption by investigating as to what are the skills that the users and developers may expect from the BAs.
While these studies focusing on analysts in isolation provide interesting insights into their work, they leave out critical aspects of their role involving interactions with users and developers.

**Studies focused on interactions between the users and individuals in the analyst or systems designer role**

Many studies have examined the attitudinal and perceptual differences at the user-systems analyst interface. The divide between users and analysts has been discussed in terms of their views on communication, the extent of their focus on user needs, the competence of systems staff, and the development methodologies employed (Kaiser and Srinivasan 1982). Green (1989) examined users and analysts attitude towards different analysis skills:

> Systems analysts value behavioural skills, such as diplomacy, politics, and sales more importantly, while users attribute greater importance to technical skills, such as programming (p. 127-128).

It was interesting to note in Green’s (1989) argument, the assertion that valuing different skills could be a source of conflict between the users and analysts. Although this is now old research and attitudes may well have changed, it would be useful in this proposed research to understand what skills are valued by users and BAs and to what end.

Many years ago Gingras and McLean (1982) examined how system designers’ perceptions of users differ from users’ self-images and how users’ perceptions of designers differ from designers’ self-images, concluding that the perception-self image gap was larger in the former. While it is difficult to make general inferences regarding the perception-self image gap, improved understanding of how such gaps may influence interactions during business analysis may be useful. There is scope for advancing such insights through research that tries to understand the differences in perspectives, if any, between users and BAs.

Urquhart (1999) investigated how organisational, social, and individual issues were intertwined in user-analyst interactions. Interesting findings were presented: the initial framing and discussion of issues will determine how the issues will evolve throughout the user-analyst interaction; whoever initially frames the issue effectively will control their evolution unless the framing is challenged; and the user and analyst bring strong individual influences into the interaction from their education and attitudes. These findings seem interesting because the suggestion that the initial discussion and framing of the issue determines the evolution of the requirements gathering implies that greater awareness of who dominates the initial discussion is
required. Further, there are suggestions that what users state initially may not be close to what they require (Yu et al. 2011).

Some studies have argued that IS development methods are a potential source of problems in user-analyst relations. Beath and Orlikowski (1994) argued that methods have contradicting assumptions about the extent to which users and analysts should be involved in IS projects and the quantum of responsibility that is attributed to the users and the analysts for negative project outcomes. Reformulating Enid Mumford’s ETHICS methodology, Hirschheim and Klein (1994) suggests that IS development methods need to address four concerns: (a) approximation of rational discourse (b) technical concerns of efficiency and effectiveness (c) communicative concerns (d) emancipation (p. 94). Others suggest that IS development methods commercially available to practitioners do not address the problematic user-analyst interface, but that interaction methods grounded in organisational learning and individual action theories could address issues of ineffective interaction (Salaway 1987). These concerns are valid for the entire IS development lifecycle but there is need to understand the differences in perceptions of the users, analysts, and IT staff for the requirements analysis phase.

In one study, namely, Brabander and Edstrom (1977), we find the earliest indication that the analysts work as boundary spanners in their interactions with the users. This study, using Thompson’s (1962) framework for boundary spanning between an organisation’s member and a non-member, proposed a framework for understanding user and systems specialist interaction. The criteria for classifying the nature of interaction was based on whether the interaction is mandatory or optional for the users and systems specialist and whether their interaction is structured by organisational control or is based on heuristics. The framework’s dimensions foreground the importance of structure used in user-analyst interactions but the authors acknowledge that the bi-polar distinctions (e.g., optional-mandatory and heuristic-programmed) do not reflect the nuances of user-analyst interactions.

Although Brabander and Edstrom’s (1977), framework makes an important connection between analysts’ liaison role and boundary spanning, it oversimplifies the work practices of analysts. In my view, following the perspective adopted in the framework is an over-simplification for the following reasons. First, the user and the analyst may not be separated by organisational boundaries and in such cases the basic assumption of the model may not hold true for understanding the work practices of analysts. The boundaries between users and analysts cannot be assumed to be same as the organisational boundaries. Second, the nature of participation of users is not likely to be a simple choice between an optional and a mandatory participation and using structured techniques or rules of thumb. The nature of participation is more complex and likely to vary over time (Davidson 2002). Third, the framework oversimplifies the interactions
by assuming that interactions between user and analyst groups can be represented by a multitude of dyadic user-analyst relationship. I believe that a social perspective is required to understand how a group of analysts work with other stakeholder groups and a social perspective is not an aggregate of one-to-one relationships between user and analyst. A social perspective would allow us to understand how the social configuration of analysts spans boundaries with users and IT staff during requirements analysis.

To summarise, the studies on user-analyst interactions collectively highlight some key issues such as the boundary spanning nature of analysts, the differences that exist between users and analysts, and the problems in the use of IS methods. However, there is relatively little recent research that highlights the differences between the perspectives of users and business analysts in contemporary business analysis practices.

**Studies focused on user and developer interaction**

The differences between users and developers have been well recognised in the literature (Tuffley 2005). The differences have been viewed as a semantic gap arising from differences in their perception of reality (Brabander and Thiers 1984). There are differences in terms of how a problem is framed by the users and the developers (Valusek and Fryback 1985). The differences between users and developers have been discussed as cultural differences: (a) different communities, different languages (b) logic and objectivity orientations (c) different personalities (Shah et al. 1994). Others have adopted an anthropological view and see the differences between users and developers as arising from specialisation (Dingley et al. 2000). Referring to common assumption, beliefs, and understanding held by organisational members about technology as ‘technology frames’, Orlikowski and Gash (1994) suggest that these frames differ for technologist and users and cause difficulty in interactions. Not only do these frames differ but they also shift over the life of the project (Davidson 2002). It has been suggested that users and developers are virtually on different stages of the IS development lifecycle, giving an impression to developers that requirements are frequently changing (Chudge and Fulton 1996).

However, other studies suggest that in some respects the users and the developers may not be very different. There are empirically supported arguments in very early research that the motivational patterns of developers and users do not differ significantly (Ferratt and Short 1986). Relatively recently, some scholars have argued that as the IS project evolves the user and developer group homogeneity reduces and boundaries between user and developer roles become blurred (Millerand and Baker 2010).

In comparison to the studies on user-analyst interactions, the studies on user-developer interactions have focused more on understanding the role of power. Relatively early studies
revealed the power differentials between the IS department and non-IS department (Lucas 1984; Saunders and Scamell 1986). Some interesting insights emerge from these studies. Lucas (1984) reported that IS departments may not always have power over users groups. This was explained as the lack of awareness that non-IS departments had about IS department’s activities and roles. A non-central role of IS in strategic planning was also noted as a reason for lower levels of power for the IS departments. Saunders and Scamell (1986) confirmed the findings and viewed the power balance to be contingent on the IS department’s ability to support current and future organisational objectives. The lack of IS department’s power (Rowlands 2008) can also be inferred from suggestions that developers need to be tactful and seek cooperation from users by using persuasive strategies and retaining users’ good will (Joshi 1992).

By contrast, other studies suggest that IT personnel exercise power over users. Markus and Bjorn-Andersen (1987) make a distinction between users’ perception of IT department’s power and the exercise of power by IT department:

> It is possible, however, for IS professionals to exercise power over users without users perceiving it. In fact, the very lack of users’ awareness of the use of power may indicate an especially effective (i.e., powerful) exercise of it (p. 497).

The source of power asymmetry has been explained by theories of ‘resource dependence’ and ‘strategic contingencies’ (Markus and Bjorn-Andersen 1987). Resource dependence applies as IT personnel own or control IT resources on which users depend. Strategic contingencies theory attributes power to IT department because of its indispensability in coping with environmental or task uncertainty and its influence on the work flow.

Brabander and Thiers (1984), advancing an earlier framework for user-developer interaction (Brabander and Edstrom 1977), suggests mediation as a means to balance the power asymmetry:

> The third party's role is to eliminate the disturbing effect of asymmetry in sanctionary power and of semantic gap upon the exchange of information between the parties (p. 144).

This implies that the BAs may be particularly effective in the ‘bridging’ role if they have the required power for their interactions with users and technical IT staff. There is also a view that mediation between users and developers is neither necessary nor cost effective (Bostrom 1989).

To summarise, the studies on user-IT interactions have highlighted the differences between users and IT and highlighted the role that power may play in the user-IT interactions. However,
there is a need to further investigate the suggestion that introducing BAs in the ‘bridging’ role would be able to eliminate the power differentials.

2.5 An Emergent perspective for investigating work practice of BAs

Having highlighted the potential challenges that may arise due to the perspectives and approach used in business analysis, in this section I will discuss what I consider to be a useful perspective to adopt in investigating the work practices of BAs. The suggested perspective includes the following elements: (a) A Tripartite perspective on work practices of BAs (b) Recognising the social nature of work practices of BAs (c) Focussing on roles and practices of BAs and (d) Acknowledging theory and knowledge that would be useful in understanding work practices of BAs. The discussion that follows is structured around these four elements.

A Tripartite perspective on work practices of BAs

The literature relevant to the participant groups in business analysis - users, BAs, and developers (see Table 2.2) - suggests that there are largely two types of research efforts. First, efforts focused on a single group of participants, either a group of users, or analysts, or of developers. Such research efforts are arguably limited in their potential for providing insights into the business analysis process as they can often provide insights from just one perspective, which, while useful, may not explicate the full complexity of business analysis. Such limitations have been acknowledged in studies. For example, Hanisch and Corbitt (2007) - a study of communication in global requirements analysis - derives insights from data collected from the development team alone and acknowledge this limitation4:

A limitation of the paper is the inability to report the data from the users’ perspectives. While the clients in this case were never considered to be part of the development team, and were not under line control of the Software House, data from the clients would have added a rich dimension (p. 803).

Second, there are efforts focused on two groups of participants, either groups of users and analysts or groups of users and developers. Studies that examine user-analyst relationship, say little about the role that developers may play in influencing user-analyst interactions. This ‘silence’ can be interpreted to be based on the assumption that the developers play little or no role in framing of user requirements and that requirements once ‘captured’ or ‘gathered’ during

4 Pawlowski and Robey (2004a) - a study of knowledge brokering by IT professional- relies solely on IT professionals’ perspective and concedes that a fuller understanding requires the users’ perspective.
the user-analyst interaction can be simply be forwarded to the developers for implementation into a technical systems. As discussed earlier, this is largely based on the view that requirements analysis is a one-time event that results in stable, objective user requirements that can be captured and made available to developers for conversion into a system (Oates and Fitzgerald 2007). Studies that provide useful insights into user and developer perspectives and relationships between the two are silent on the role of the analysts (e.g., Baskerville et al. 2000; Sawyer et al. 2010).

Most of the research has emphasised the user-analyst interaction or the user-developer interaction and there is very little research that examines the analysts-developer interaction. The role analysts play in working together with developers may be also relevant to requirements analysis, especially in terms of the interpretations made on requirements by technical staff, and also because of changing user requirements. Little research on analyst-developer interaction could imply that this interaction is considered unproblematic. For example, studies that discuss difficulties of requirements analysis (e.g., Davis 1982; Ramesh and Brown 2002) focus entirely on the user-analyst interaction. Assertions have been made about user-analyst link being the weakest link in IS design and development process (Joshi 1992) but there is little empirical work that has actually examined the analyst-developer link. While one would expect more direct interaction between users and developers in agile requirements analysis, empirical evidence suggests that direct access by developers to users is rare (Ramesh et al. 2010) and the analyst-developer interaction continues to remain critical in the developers’ understanding of user requirements.

Although the ‘bridging’ role of analysts to address problems such as semantic and power asymmetry (Brabander and Thiers 1984) and the mismatch between users’ environment and IS conception (Castro et al. 2002) is discussed in literature, there is little research effort invested in understanding requirements analysis as involving three participant groups - users, BAs, and developers. Useful insights into the work practices of BAs could achieved by considering the perspectives of all three participant groups:

To a first approximation, three major groups participate in the requirements process: the client organisation; the requirements team; and the development team (Goguen 1993, p. 194).

In my review of the mainstream IS literature, I found no studies that investigate the tripartite arrangement amongst the users, developers, and BAs. This research attempts to address such concerns and looks at the roles and practices of BAs as boundary spanners involved in
interacting with both users and developers, and negotiating issues and differences between the users and developers.

**Recognising the social nature of work practices of BAs**

There are concerns raised about the neglect of social issues in understanding user requirements for the sake of ‘clean’ and more technical requirements (Goguen 1993). Researchers have suggested the need for adopting a multidisciplinary perspective to understand sociology of workplace (Nuseibeh and Easterbrook 2000; Yu et al. 2011). Requirements are viewed as coming from the social system rather than from the minds of the users (Goguen 1993, Cited in Ramos and Berry 2005). This explains as to why some scholars have encouraged the use of anthropological methods in understanding requirements (Hughes and Wood-Harper et. al. 1999; Viller and Somerville 1999a, b). Further, given multiple groups exist in organisations, a social perspective questions a unitary view of organisation - one that considers the organisation as a uniform entity (Goguen 1994).

Such efforts that highlight the neglect of social issues in understanding users have been useful in foregrounding the social nature of information systems but little consideration is given to the idea that not only are the requirements grounded in the social context of the users but the process of requirements analysis is itself social (Goguen 1993). For example, it is argued that one needs to be aware of whose social order is being imposed during requirements analysis when different social configurations are working with each other (Goguen and Linde 1993). Further, scholars have highlighted that a knowledge-based view of information systems includes understanding the social integration mechanisms that are present in organisations (Srivardhana and Pawlowski 2007; Vaast et al. 2006).

Research efforts to consider the ‘social’ are largely focused on the users and have ignored the social issues that relate to the other participant groups. For example, IS researchers still tend to focus on understanding user involvement and user-centeredness in IS development (e.g., Iivari and Iivari 2011; Iivari et al. 2010) but very little is known about the nature of involvement of BAs in IS development. This research takes the view that useful insights can be derived into requirements analysis by understanding the roles and practices of BAs working as a social configuration.
Focus on roles and practices of BAs

The work of BAs for understanding user requirements is discussed in the literature mostly as a process - a sequence of activities or phases that result in understanding requirements for developing or modifying IT-based artifacts. In this literature, activities or phases, although named differently (see Table 2.3), present a process view of requirements analysis. This view could be said to convey a somewhat mechanistic, simplified, and abstracted perspective that reveals little of what might be required in practice. For example, in one such view, requirements analysis is seen as sequence of information gathering, representation, and verification (Brown and Ramesh 2002). The emphasis here is on formal and semi-formal representation (models) and such a view fails to highlight the role of participants’ interpretation in understanding requirements (Goguen 1994).

Studies have used a process perspective to understand requirements analysis. In one such perspective, requirements analysis is viewed as a social process consisting of a sequence of two types of events: encounters and episodes (Newman and Robey 1992; Robey and Newman 1996). Encounters are events of shorter duration like meetings while episodes are events that extend over longer periods in organisational life. This research suggests that patterns of user-analyst relations have consequences beyond the success or failure of an individual project and that individual encounters between analysts and users need to be explored. Another study draws on the technology frames concept to develop a socio-cognitive process model of how frames and frame shifts influence sense-making during requirements analysis (Davidson 2002).

<table>
<thead>
<tr>
<th>Requirement analysis activities/ phases</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information gathering, representation, verification</td>
<td>Brown and Ramesh 2002</td>
</tr>
<tr>
<td>Conceptual design, logical design , validation, specification</td>
<td>Byrd et al. 1992</td>
</tr>
<tr>
<td>Domain analysis, elicitation, specification, assessment, negotiation, documentation, and evolution</td>
<td>Lamsweerde 2000</td>
</tr>
<tr>
<td>Eliciting, modeling and analysing, communicating, agreeing , and evolving requirements</td>
<td>Nuseibeh and Easterbrook 2000</td>
</tr>
<tr>
<td>Requirements development activities- discovering, analysing, documenting and validating requirements</td>
<td>Parviainen and Tihinen 2007</td>
</tr>
<tr>
<td>Requirements management activities- identification, traceability and change management of requirements</td>
<td></td>
</tr>
<tr>
<td>Requirements documentations, requirements discussion, requirements evolution</td>
<td>Potts et al. 1994</td>
</tr>
</tbody>
</table>

Table 2.3   Activities and phases in requirements analysis
However, some scholars have suggested that organisational research needs to move beyond the process perspective. For example, Brown and Duguid (2001) critique the process view and suggest a practice-based view:

> These two aspects of organizations, one process based and the other practice based, not only look from different directions - from outside a process and from within - they also look in different directions for the resources for understanding. From outside, people find meaning in functional explanations. They rely on process-based, cross-functional, longitudinal accounts of why things are done. From inside, people take a lateral view...for them, knowledge comes from fellow practitioners than from cross-functional connections (p. 97).

A process view of organisation is not able to reveal practices and the meaning the practices have for the practitioners.

In this research, therefore, I adopt a practice perspective for understanding the role and ‘practices’ of BAs. Adopting a practice perspective implies an understanding that individuals are enabled and constrained by shared ‘practices’ by which they interpret the world and then behave in accordance with the meaning they derive from their interpretations (Reckwitz 2002, p. 245). With this perspective, I attempt to understand how BAs view their role of working with users and developers.

I wish to contrast the common use of the term ‘practice’ and what adopting a ‘practice perspective’ means in this research. The following definition represents the usage of the term ‘practice’ in requirements analysis literature:

> We consider a requirements practice to be the use of a principle, tool, notation, and/or method in order to perform... activities (Davis and Zowghi 2006, p. 1).

The term practice in requirements analysis literature refers to the act of performing the various requirements analysis activities and a good practice outcome is reduced project cost and improved product quality. Practice is also used in the sense of best practices. For example, in studying the link between requirements analysis and business planning, five practices that strengthened the link were identified: (1) explicating the planning levels and time horizons (2) separating the planning of products’ business goals from research and development resource allocation (3) planning open-endedly with a pre-defined rhythm (4) emphasising whole-product thinking and (5) making solution planning visible (Lehtola et al. 2009). For developing a
requirements analysis process improvement framework, Dorr et al. (2008) distinguish between phases, practices and techniques. Phases are described as abstract activities, practices convey what needs to be done, and techniques describe how it needs to be done.

All such usages of the term ‘practice’ say little about the meaning that requirements analysis has for the BAs. Even research adopting interpretive paradigms may fail to reveal how the BAs view their work. For example, Ramesh et al.’s (2010) work in understanding agile requirements practices adopts an interpretive case study approach but the findings are related to activities and not to the meaning requirements analysis work has for the BAs. The interpretive understanding of practitioner’s work becomes important if one accepts the arguments that the notion of best practices is difficult to arrive at and apply (Marabelli and Newell 2012; Orlikowski 2002). The term ‘practices’, as will be discussed in chapter 3, includes not only activities but also the ‘logic of practice’ that makes the activities meaningful.

**Seeking theoretical guidance**

Like some requirements analysis studies that seek theoretical guidance (e.g., Hanisch and Corbitt 2007; Davidson 2002; Patel and Hackney 2008), this research also uses existing theory and knowledge for developing a research perspective. Given that a useful research perspective for understanding the work practice of BAs would be one that adopts a tripartite perspective on work practices of BAs, recognises the social nature of work practices of BAs, focuses on the ‘practices’ of BAs, this research adopted a practice perspective, more specifically, Wenger’s (1998) CoP and boundary practice perspectives. In chapter 3, I discuss the literature on practice theory and communities-of-practice and boundary practice concepts. Based on this discussion, I develop the research questions that this research proposed to address.

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5 There is no unified practice perspective (Schatzki 2001) and previous IS research has adopted Bourdieu’s theory of practice (e.g., Levina and Vaast 2005a), Giddens’ structuration theory (e.g., Orlikowski 2000; von Hellens et al. 2004), and Brown and Duguid’s (2001) networks of practice (e.g., Vaast and Walsham 2009) and Wenger’s communities-of-practice concept (e.g., Klein and Hirschheim 2008).
Chapter 3

Literature Review (II) - Theoretical Perspectives and Research Questions

3.1 Introduction

In chapter 2, I discussed what might be a useful perspective for understanding the work practices of BAs. In this chapter, I will be discussing the theoretical perspectives adopted for this research. In section 3.2, I outline the approach followed in seeking theoretical guidance discussing the practice perspective in section 3.3, and the Communities-of-Practice (CoP) perspective in section 3.4. In section 3.5, I discuss the boundary practice perspective, and consider IS studies that are relevant to the perspective adopted in this research in section 3.6. Section 3.7 outlines how business analysis can be viewed as a boundary practice that connects the users and technical IT staff. The chapter concludes with an articulation of my research questions.

3.2 Approach to developing the theoretical perspective - BAs as a boundary practice

The theoretical perspective used in this research is based on considerations that emerged during the early part of the research project. Though far from sequential, this process can be illustrated in Figure 3.1.
Figure 3.1 The Process followed in developing and adopting theoretical perspectives
3.3 Adopting a practice perspective

Researchers who adopt a practice perspective share the fundamental assumption that ‘social life is an ongoing production and thus emerges through people’s recurrent actions’ (Feldman and Orlikowski 2011, p. 1240). However, these researchers may emphasise different foci (Feldman and Orlikowski 2011). Some may have an empirical focus on how people act in organisations without using any specific practice theories. Others adopt specific practice theories to understand the relation between the actions people take and structures of organisational life. This theoretical focus is illustrated in IS studies that have adopted Bourdieu’s theory of practice (e.g., Levina and Vaast 2005a), Giddens’ structuration theory (e.g., Orlikowski 2000, von Hellens et al. 2004), and Wenger’s communities-of-practice concept (e.g., Klein and Hirschheim 2008). Although all practice theorists assume there is a relationship between individual actions and social structures, their conceptualisations of this relationship differ (see Feldman and Orlikowski 2011). These different conceptualisations tend to contribute to the polysemy of the practice concept (e.g. Gherardi 2009a; Simpson 2009) and are argued by some to be contributing to the unstable identity of practice theories (Reckwitz 2002). To provide more clarity, scholars have attempted to articulate principles that are common to different conceptualisations (e.g., Feldman and Orlikowski 2011; Schatzki 2001) and position practice theories differently from other theories that explain human action and social order (e.g., Reckwitz 2002). The third group of practice researchers focus on the distinct social ontology of the practice perspective that views organisational reality to be made up of ‘practices’ (Contu and Willmot 2006; Goldkuhl 2006).

My research draws on all three foci in the following ways. First, it has an empirical focus on understanding activities of BAs, second, it has a theoretical focus in using specific practice theories (CoP and boundary practice concepts) to inform the empirical work, and third, it adopts an ontological position that views organisations as a constellation of practices (Wenger 1998).

Researchers who adopt a practice perspective do not view human action as arising from social norms and goals of individuals. Instead, human action, and resulting social order, is seen to arise from shared ‘practices’ (Reckwitz 2002). In this view the ‘shared’ (the ‘social’) is seen to be located not so much in the minds of individuals, nor in their texts and interactions, but more in the ‘practices’ that are seen to be shared and owned by a community (Reckwitz 2002; Wenger 1998).

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6 There can, however, be different epistemological positions that practice theorist take. Practices can be viewed from two perspectives: from outside and from inside (Gherardi 2009a). Viewing practices from outside implies a focus on patterns and regularities but viewing them from inside involves understanding practices from the practitioners’ point of view.
However, there is no single universally accepted definition of the term ‘practice’ and scholars have ascribed various meanings to the term (see Table 3.1). Some theorists (the humanists) in adopting a practice perspective focus on ‘practices’ as an array of human activities (what people do). Equating ‘what people do’ with practices, however, leads to some fundamental difficulties. It makes it difficult to de-centre individuals and tells us little about ‘practices’ being a shared resource (Chia and MacKay 2007). The focus on ‘practices’ as activities also fails to highlight practice as an epistemology -‘a generative source of knowledge’ (Gherardi 2009a). The enactment of practices is not merely an activity but also a way of knowing. Therefore, some scholars make a distinction between ‘what people do’ and ‘practices’. For example, they use the term ‘praxis’ for ‘what people do’ (Reckwitz 2002, Jarzabkowski et al. 2007) and ‘practices’ are defined as ‘cognitive, behavioural, procedural, discursive, motivational and physical’ resources shared in a social configuration (Jarzabkowski et al. 2007, p.11). They argue against using activities and ‘practices’ interchangeably and view ‘practices’ to include tacit knowledge, skills and pre-suppositions (Chia and MacKay 2007) that are embedded in institutional and organisational contexts (Swan et al. 2007) and include a shared logic for making judgements in matters of ethics and aesthetics (Gherardi 2009b). They argue that it is from these ‘practices’ that activities emerge.

Other practice theorists (the post-humanists) in adopting a practice perspective include material objects in their discussion of practices (e.g., Jonsson et al. 2009; Orlikowski 2006) and emphasise the need to examine the relationality between the social world and materiality and how humans and artefacts align (Gherardi 2009a). The expertise of the practitioners is seen to be depending upon the relationship between practitioner and non-human objects (Cetina 2007).

Recent scholarship across many disciplines has used the practice perspective to understand diverse phenomena. Some of the growing interest in the practice perspective may be explained by assertions that a practice lens is effective for studying contemporary organisations:

*Contemporary organizing is increasingly understood to be complex, dynamic, distributed, mobile, transient, and unprecedented, and as such, we need approaches that will help us theorize these kinds of novel, indeterminate, and emergent phenomena. We believe practice theory, with its focus on dynamics, relations, and enactment, is well positioned to offer powerful analytical tools to help us here* (Feldman and Orlikowski, p. 1240).
<table>
<thead>
<tr>
<th>Practice concept</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice is considered as being complex, unpredictable and collective, and referred to a specific social system.</td>
<td>Schulz 2005, p. 494</td>
</tr>
<tr>
<td>Practices as embodied, materially mediated arrays of human activity centrally organized around shared practical understanding.</td>
<td>Schatzki 2001, p. 11</td>
</tr>
<tr>
<td>Practice as the conduct of transactional life, which involves the temporally-unfolding, symbolically-mediated interweaving of experience and action.</td>
<td>Simpson 2009, p. 1338</td>
</tr>
<tr>
<td>‘Practices’ will refer to shared routines of behaviour, including traditions, norms and procedures for thinking, acting and using ‘things’, this last in the broadest sense.</td>
<td>Whittington 2006, p. 619</td>
</tr>
<tr>
<td>Practice is action informed by meaning drawn from a particular group context.</td>
<td>Cook and Brown 1999, p. 387</td>
</tr>
<tr>
<td>Practice as a way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action.</td>
<td>Wenger 1998, p. 5</td>
</tr>
<tr>
<td>Practice is routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge.</td>
<td>Reckwitz 2002, p. 249</td>
</tr>
<tr>
<td>Practices are discernible patterns of actions arising from habituated tendencies and internalized dispositions rather than from deliberate, purposeful goal-setting initiatives.</td>
<td>Chia and MacKay 2007, p. 217</td>
</tr>
<tr>
<td>Practices provide the behavioural, cognitive, procedural, discursive and physical resources through which multiple actors are able to interact in order to socially accomplish collective activity.</td>
<td>Jarzabkowski et al. 2007, p. 9</td>
</tr>
<tr>
<td>Practice is seen as a meaningful unit of work. It is a meaningful assemblage of human actors (including their intra-subjective and inter-subjective inner worlds), actions, linguistic objects (as utterances and documents) and material objects.</td>
<td>Goldkuhl 2011, p. 4</td>
</tr>
</tbody>
</table>

Table 3.1 Meanings of practice

The analytical power of the practice lens allow us useful insights into the practitioners’ life worlds and these insights may be employed in the education of future practitioners and for making meaningful suggestions to practitioners. (See Table 3.2 for an illustration of the use of practice perspective to understand diverse phenomena.)
<table>
<thead>
<tr>
<th>Area investigated by adopting a practice perspective</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>Chia and Mackay 2007; Jarzabkowski 2007; Whittington 2006</td>
</tr>
<tr>
<td>Use of IT</td>
<td>Levina and Vaast 2006; Mackrell et al. 2009; Orlikowski 1999; Orlikowski 2000; Schultze and Orlikowski 2004</td>
</tr>
<tr>
<td>Boundary spanning</td>
<td>Levina and Vaast 2005 a, b; Lindgren et al. 2008</td>
</tr>
<tr>
<td>Off-shore collaboration / Outsourcing</td>
<td>Levina and Vaast 2008</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>Johannisson 2011</td>
</tr>
<tr>
<td>Learning and knowledge</td>
<td>Fox 2006; Gherardi and Nicolini 2000; Gherardi 2009a,b; Levy 2003; Orlikowski 2002; Orlikowski 2006; Osterland and Carlile 2005; Schulz 2005; Wenger 1998</td>
</tr>
<tr>
<td>Materiality in practices</td>
<td>Orlikowski 2006; Orlikowski 2007; Svabo 2009</td>
</tr>
<tr>
<td>Practice of Theorising</td>
<td>Zundel and Kokkalis 2010</td>
</tr>
<tr>
<td>Decision Theory</td>
<td>Cabantous et al. 2010</td>
</tr>
<tr>
<td>Governance</td>
<td>Smallman 2007</td>
</tr>
<tr>
<td>Virtual Communities</td>
<td>Akoumianakis and Alexandraki 2010</td>
</tr>
<tr>
<td>Consumer culture</td>
<td>Hirschman et al. 1998; Holt 1995; Warde 2005</td>
</tr>
<tr>
<td>Inter-disciplinary practices</td>
<td>Olsen 2009</td>
</tr>
<tr>
<td>Nursing</td>
<td>Reed 2006</td>
</tr>
<tr>
<td>Project/ Program management leadership</td>
<td>Bjorkeng et al. 2009</td>
</tr>
</tbody>
</table>

Table 3.2 Areas investigated by adopting a practice perspective

While adopting a practice perspective has been insightful in organisations studies (Gherardi 2009a), practice theorists argue that there are areas in which practice studies could be improved. First, more engagement is required with the practitioner who is the carrier of ‘practices’ and more understanding is needed of how ‘practices’ unfold (Simpson 2009). This would allow for analysis of agency, creativity, and emergence in practices (Elkjaer and Simpson 2006). Second, although findings of practice based studies may not be able to compete with the generalisation of grand theories, the findings could be promoted as a useful ‘heuristic device’ for practitioners (Reckwitz 2002).

In this research, the practice perspective allows me to view organisations as a constellation of interacting practices rather than viewing organisations as homogenous entities or being restricted to a functional or process view of organisations. This view allows us to recognise the
BAs’ work of understanding requirements as a social process that involves distinct social configurations (the BAs, users, and developers), each with its own practices.

In this research, I follow Wenger’s (1998, p.5) notion of communities-of-practice (CoP) and view practices as shared resources, frameworks, and perspectives that sustain mutual engagement in a CoP. This notion is broad and allows for investigating ‘what people do’, the shared logic for ‘what people do’, and the physical artifacts shared in a group.

In practice-based studies, the concepts of praxis (activities), practices, and practitioners are interconnected and, while an empirical investigation might focus on one of these interconnections, it would not be possible to study one interconnection without referring to the other (Jarzabkowski et al. 2007) (See Figure 3.2). Practitioners are actors who utilise ‘practices’ (Jarzabkowski et al. 2007; Reckwitz 2002) to act and are also ‘carriers’ of such ‘practices’ (Whittington 2006). Any accounts of practice that emerge from taking a practice-perspective are likely to reflect the inseparability of the three concepts of praxis (activities), practices, and practitioners.

Figure 3.2 Three elements of practice theories (Jarzabkowski 2007, p. 11)
3.4  A Communities-of-Practice (CoP) perspective

In this section, I will discuss the CoP concept, outlining its evolution and conceptual dimensions, and will examine criticisms of the concept.

The use of a theoretical lens in this research is based on the suggestion that instead of asking whether a configuration fits the concept of CoP, the CoP concepts should be used ‘to articulate to what degree, in which ways, and to what purpose it is (or is not) useful to view a social configuration as a CoP’ (Wenger 1998, p .122). Therefore, rather than being concerned with judging whether a group of BAs formed a CoP according to some measurable criteria, the CoP concepts were used to improve understanding of the work practices of BAs.

The use of theory in the interpretive paradigm adopted in this research is discussed in chapter 4 and follows suggestions that theory may be used to ‘scaffold’ initial empirical work and later the scaffolds may be removed by researchers to revise and even challenge the extant concepts (Walsham 1995). Therefore, although the theory guided the planning and implementation of this research, it did not constrain the ongoing data collection, analysis and interpretation.

3.4.1 CoP - Evolution and conceptual dimensions

In early definitions, a CoP is defined as a ‘set of relations among persons, activity, and the world over time and in relation with other tangential and overlapping CoP’ (Lave and Wenger 1991, p. 98). The concept was adopted in organisational research, allowing organisations to be viewed as communities of communities (Brown and Duguid 1991, 1998) or as constellations of practices (Wenger 1998). Subsequently, CoP theorists engaged in deeper discourse on practice and identity:

*Being alive as human beings we are constantly engaged in enterprises of all kinds...We interact with each other and with the world and we tune our relations accordingly. In other words, we learn. Over time, this collective learning results in practices that reflect both the pursuit of our enterprises and the attendant social relations. These practices are thus the property of a kind of community created over time by the sustained pursuit of a shared enterprise. It makes sense, therefore, to call these kinds of communities communities of practice* (Wenger 1998, p. 45).
The shared practices within the community are seen as a way of learning for the community members. Thus, practice is seen as an epistemology that emphasises knowing-in-action.

In the literature, a CoP is discussed in two ways. First, it is used to talk about the knowledge management mechanisms (CoP) that organisations developed to complement the existing structures for managing organisational knowledge (Wenger and Snyder 2000). This use of the term can be seen in the literature that typically prescribes principles and models for designing CoP in organisations (Juriado and Gustafsson 2007; Loyarte and Rivera 2007; Wenger et al. 2002).

Second, CoP is discussed as a specific practice theory and this is the way the concept is employed in my research. CoP theory has been used to understand how an organisation is made of various communities (Brown and Duguid 1991; Wenger 1998) and how practice creates epistemic barriers among these communities (Brown and Duguid 2001; Cohendet et al. 2001). It allows a new perspective to understand practitioners’ lifeworlds (Klein and Hirschheim 2008; Klein and Rowe 2008).

The conceptual dimensions of CoP perspective (Wenger 1998) provided me with a way to inform my empirical work for understanding the practices of BAs. In order to understand these dimensions, I discuss what is meant by ‘practices’ in the CoP concept and how these practices are related to a community, i.e. to a social configuration.

In Wenger’s (1998) classification of practices, some practices are easily observable while others are implicit in nature (see Table 3.3). The classification is very inclusive and includes both, ‘what people do’ and the shared logic for ‘what people do’. The observable practices include not only ‘what people do’ but also foreground material objects such as the tools and documents. The implicit practices emphasise more on the ‘logic of practice’, that is, the shared resources in a social configuration that guide the activities of its member.

<table>
<thead>
<tr>
<th>Practices</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observable</td>
<td>‘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’</td>
</tr>
<tr>
<td>Implicit</td>
<td>‘Implicit relations, tacit conventions, subtle cues, untold rules of thumb, recognisable intuitions, specific perceptions, well-tuned sensitivities, embodied understandings, underlying assumptions, and shared worldviews’</td>
</tr>
</tbody>
</table>

Table 3.3 A Classification of practices (Wenger 1998, p. 47)

The central assertion in the CoP theory is that both implicit and observable practices belong to a social configuration. To illustrate the relationship between the practices and the social configuration, Wenger (1998) analysed these practices by using three conceptual dimensions,
mutual engagement, joint enterprise, and shared repertoire (see Figure 3.3). The first dimension (mutual engagement (ME)) explains that actions of individual become meaningful as result of engagement among individuals in a social configuration. The second dimension (joint enterprise (JE)) explains that as a result of mutual engagement, the members of a social configuration arrive at a shared purpose or joint enterprise. This purpose need not be stated explicitly and results in “relations of mutual accountability” (p. 78). The third dimension, shared repertoire (SR), includes tools, methods, and activities that are shared by the members of the community.

Figure 3.3 Three dimensions of practice as property of a community (Wenger 1998, p. 73)

For simplicity, subsequently in this thesis, Figure 3.3 will be abbreviated, as depicted in Figure 3.4 below.

Figure 3.4 The Notation used for a CoP

Organisational researchers adopt different perspectives on understanding organisational practices. For example, some researchers may consider organisations as one homogeneous entity with uniform practices. The other dominant view is the functional view of the organisations, in which functional departments are considered homogeneous. The CoP
perspective allows us a third perspective by which organisations can be viewed as a constellation of CoP. The boundaries of CoP are not seen to necessarily correspond with typical functional boundaries (Pan and Leidner 2003; Wenger and Snyder 2000; Wenger et al. 2002) and thus may not match with the boundaries created by organisational structures.

### 3.4.2 Criticisms of the CoP Concept

The CoP concept has been criticised for its use in relation to a professional community that does not need joint practices as the basis for community formation (Cox 2005). The use of the term community in the CoP literature is also criticised (Roberts 2006). In a comparative study of four seminal works (Lave and Wenger 1991, Brown and Duguid 1991, Wenger 1998, and Wenger et al. 2002), Cox (2005) noted basic differences in the conceptualisation of key concepts such as community, learning, power, change, formality, and diversity. Such differences were seen as a source of confusion.

However, as discussed earlier, although researchers share a common assumption about the relationship between recurrent actions and social structures in adopting a practice perspective, they may take different theoretical positions regarding the nature of the relationship. Further, practice researchers may emphasise different meanings of the term ‘practice’. While this diversity may be seen by some to contribute to the unstable identity of the practice lens (Reckwitz 2002), other scholars are more tolerant towards the diversity:

> A commitment to a practice theory does not mean a single theoretical position on the question of knowledge and knowledge sharing, or even one definition of “communities of practice” (Osterlund and Carlile 2005, p. 96).

Another criticism of the CoP concept is that it cannot simply represent all kinds of knowing-in-action (Amin and Roberts 2008; Iverson and McPhee 2008) and management learning (Fox 2000). Amin and Roberts (2008) emphasise that the original conceptualisation (Lave and Wenger 1991) was based on craft-based knowing, but there are other knowing-in-action, such as professional knowing and high creativity knowing, that may not be conceptualised using the CoP concept. There are concerns about validity of applying the concept to social configurations that are different in terms of size and spread (Roberts 2006). These concerns would be valid if the theoretical development of the CoP concept remained restricted to craft-based communities or to communities of a particular size. In contrast, since its original conceptualisation, the CoP concept has been developed from research into organisational settings (e.g., Wenger 1998). However, these are legitimate observations that call for further reflections and development (or
rejection) of the concept in new contexts. For example, in this research, rather than accepting that all conceptual proposals of the CoP concept are valid for business analysis as a boundary practice, I see an opportunity to develop the boundary practice concept through empirical investigation.

One of the most frequently occurring concerns of critics is that CoP theory does not address the issue of power in the community (Fox 2000; Cox 2005; Roberts 2006; Levina and Vaast 2005a). To me, it appears more of a disagreement about what constitutes power. Wenger (1998), instead of viewing power in terms of conflict, agreement, and possession, believes that ‘power derives from belonging as well from exercising control over what we belong to’ (p. 207).

Although the CoP lens is adequate to understand specific practices, it is argued to be inadequate to understand corporate culture (Fox 2000). Wenger (1998), however, like other scholars of work practices (e.g., Orr 2006), is opposed to viewing organisations as a unified whole:

*Some configurations, large and small, cannot be usefully treated as a single CoP. That treatment would gloss over the discontinuities that are integral to their very structure.*

*They can profitably be viewed as constellations of practices* (Wenger 1998, p. 126)

In conclusion, while the weaknesses of the CoP concept provide opportunities for future research to advance understanding of practices in various contexts and different types of communities, the strength of its conceptual dimensions of mutual engagement, joint enterprise, and shared repertoire, clearly outweigh the criticisms. As argued earlier, business analysts work in organisations that may be viewed as communities within communities. Therefore, these dimensions effectively serve as sensitising concepts for the research into the roles and practices of BAs.
3.5 Boundary practices

Wenger (1998) argues that any organisation, independent of its size, is not homogeneous in its practices and, rather than being viewed as a single CoP, it can be seen as being made up of a *constellation of practices* (see Figure 3.5). Wenger (1998) suggests that organisational CoPs do not exist in isolation and share amongst each other a history, working conditions, artifacts, and members, and compete for the same organisational resources. The CoPs are connected by the activities of members (boundary spanners) and by artifacts such as processes and material objects (boundary objects) (see Figure 3.6).

**Figure 3.5 Organisation as a constellation of practices**

**Figure 3.6 Boundary spanners and boundary objects as connections amongst CoP**
Wenger (1998) asserts that over a period of time a practice may form around these connections. There are three ways in which connections can become a practice: peripheries, overlaps, and boundary practices (see Figure 3.7). Peripheries allow non-members legitimate access to the community, without expectation of any engagement in the CoP. Overlaps are results of direct and sustained interactions between two communities. Boundary practices have a specific goal:

*To deal with boundaries and sustain a connection between a number of other practices by addressing conflicts, reconciling perspectives, and finding resolution* (Wenger 1998, p. 114).

**Figure. 3.7 Three types of connections provided by practice (Wenger 1998, p. 114)**

This research adopts the boundary practice perspective that supports a tripartite perspective on the practices of BAs who are designated to connect users and the IT staff. In so doing, we can investigate what is involved in the BAs’ interactions with the users and IT staff.

Although Wenger (1998) introduced the boundary practice concept, there is very little research in the CoP literature or in other practice-based studies that has systematically applied the boundary practice concept (Email from E. Wenger, 9th May 2010). Even in recent studies that use the term ‘boundary practices’, the use of the term boundary practice does not emphasise the tripartite view inherent in Wenger’s (1998) boundary practice concept adopted in my research. For example, Ramsten and Saljo (2012, p. 35) define boundary practice to involve ‘a temporary encounter between members of two different practices, each grounded in their own economy of meaning’. Wenger’s (1998) boundary concept not only suggests three or more practices but also emphasises a more persistent interaction between the practices. Given that there is limited literature on boundary practice concept, in the sections that follow I discuss relevant literature on boundary spanning research.
3.6 Boundary spanning

I intend to adopt the boundary practice perspective in which the activities of individuals in a social configuration (boundary spanning) and their use of artifacts (boundary objects) serve to connect other practices. I will first give an overview of boundary spanning and boundary object (BSBO) research and then focus on the boundary spanning literature.

Defining the concepts: Boundary spanning and boundary objects

Although there are diverse viewpoints on the precise origins of the boundary spanning concept (Kimble et al. 2010), there seems to be an agreement that the concept has its origin in two theories: open systems theory and role theory (Johnson and Duxbury 2010). The open systems perspective views organisations as open systems with clear boundaries across which organisations receive inputs and discharge outputs (Thompson 1962). Role theory defines a boundary spanning role as one in which it is critical for the occupant of the role to interact with someone located in a different organisational system (Katz and Kahn 1966, cited in Johnson and Duxbury 2010, p. 30). The two perspectives are reflected in one of the earlier usage of the term:

*Complex purposive organizations receive inputs from, and discharge outputs to, environments, and virtually all such organizations develop specialized roles for these purposes. Output roles, designed to arrange for distribution of the organization's ultimate product, service, or impact to other agents of the society thus are boundary-spanning roles linking organization and environment through interaction between member and non-member* (Thompson 1962, p. 309).

An analysis of various definitions of boundary spanning suggests that there is no single, widely accepted definition of boundary spanning (see Table 3.4). Different definitions focus on occupational boundaries (Amedore and Knoff 1993), on perceptions and thoughts (Ankney and Curtin 2002), on the importance of emotions (Bacharach et al. 2000), and in a study of off-shoring, several types of boundaries (operational, social, and knowledge) were identified (Krishnan and Ranganathan 2009).
### Definitions of Boundary Spanning

<table>
<thead>
<tr>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boundary spanning occurs when school personnel cross the formal or informal professional or occupational boundaries that exist in their work environments to interact with other professionals, resources, or agencies.</td>
<td>Amedore and Knoff 1993, p. 343</td>
</tr>
<tr>
<td>Boundary spanning is the complete set of activities necessary to build support for the embryonic product, shape the demands of others, and coordinate the product’s development with other groups.</td>
<td>Ancona and Caldwell 1990, p. 120</td>
</tr>
<tr>
<td>Boundary spanning clarifies the perceptions, thoughts and needs of the different groups to each other.</td>
<td>Ankney and Curtin 2002, p. 230</td>
</tr>
<tr>
<td>Boundary management thus implies choosing boundary management tactics, the set of tactical decisions actors make about their emotional investment in other actors.</td>
<td>Bacharach et al. 2000, p. 706</td>
</tr>
<tr>
<td>Boundary spanners are literally persons who bridge the gap between their organization and external ones.</td>
<td>Barcellini et al. 2008, p. 560</td>
</tr>
<tr>
<td>Boundary spanning units are defined as any group or department whose primary responsibilities are to deal with parties outside the organization, such as clients, suppliers, and research institutions.</td>
<td>Callahan and Salipante 1979, p. 26</td>
</tr>
<tr>
<td>Team boundary spanning viewed as a shared team property which originates in the experiences, perceptions, attitudes, values, cognitions, or behaviours of team member.</td>
<td>Klein and Kozlowski 2000, cited in Joshi et al. 2009, p. 733</td>
</tr>
<tr>
<td>Knowledge boundary spanning is defined as activities that facilitate locating and accessing external knowledge and incorporating it with functional and technical expertise within the organization; Social boundary spanning activities comprise monitoring the external environment, building support, identifying trends and influencing the external environment, to further the ISD project objectives; Operational boundary spanning is defined as routine interactions between the client and vendor teams to coordinate task assignment, resource allocation and managing changes to project scope between the client and vendor teams.</td>
<td>Krishnan and Ranganathan 2009, p. 226</td>
</tr>
<tr>
<td>Boundary Spanners are persons who operate at the periphery or boundary of an organization, performing organizational relevant tasks, relating the organization with elements outside it.</td>
<td>Leifer and Delbecq 1978, p. 40-41</td>
</tr>
<tr>
<td>Boundary spanning can be seen as the activity of making sense of peripheral information that is perceived relevant to expanding the knowledge at the centre of a given organizational context.</td>
<td>Lindgren et al. 2008, p. 643</td>
</tr>
<tr>
<td>Team boundary spanning is defined as behaviors intended to establish relationships and interactions with external actors that can assist their team in meeting its overall objectives.</td>
<td>Marrone et al. 2007, p. 1424</td>
</tr>
</tbody>
</table>

**Table 3.4 Definitions of boundary spanning**

In context of my research, I am adopting the view that boundary spanning by individuals in a boundary practice is motivated by the intention of bringing about a connection between two practices (Wenger 1998).
The boundary object concept emerged much later from a study by Star and Griesemer (1989), who proposed that boundary objects are objects that, together with standardisation of methods, are critical to translating between the diverse viewpoints held by the stakeholders. For example, shared information systems may serve as boundary objects when they organise interconnections amongst organisational units (Pawlowski and Robey 2004a).

**Boundary spanning and boundary object research- An Overview**

Boundary spanning and boundary object research has been undertaken in several disciplines (See Appendix 4.1 for references to the studies in various disciplines). It has been advanced largely by researchers in the management discipline where a body of earlier significant work (e.g., Aldrich and Herker 1977; Leifer and Delbecq 1978; Leifer and Huber 1976) has been further developed into seminal contributions (e.g. Ancona and Caldwell 1990). Other significant contributions have come from sociology of workplace (e.g., Star and Griesemer 1989) and education and learning research (e.g., Wenger 1998). BSBO research in the IS field is relatively nascent but has progressed and been advanced within the field (e.g., Levina and Vaast 2005a; Pawlowski and Robey 2004a; Levina and Vaast 2008; Lindgren et al. 2008).

The application of the boundary spanning and boundary object concepts in a wide range of research areas suggests the theoretical usefulness of the concepts in different contexts. (See Appendix 4.2 for references to the studies in different areas). For example, in the area of innovation and new product development, BSBO research has discussed issues like boundary spanning role types (Ancona and Caldwell 1990) and understanding knowledge differences at boundaries (Carlile 2002; Carlile 2004). Although the role types discussed in this literature are useful in a particular context, scholars have argued that using them to study boundary spanning in different empirical contexts may not be useful (Johnson and Duxbury 2010). In this research, therefore, an attempt is made to not use any role classification from the literature to understand the roles and practices of BAs.

The application of BSBO concepts that is directly relevant to this research is in the areas of IS development and systems acquisition where boundary spanning has been discussed to understand requirements definitions (Gallagher et al. 2004), information systems design (Gasson 2006), emergence of organisational boundary spanning competence in practice (Levina and Vaast 2005a), and knowledge transfer from enterprise systems team to users (Volkoff et al. 2004). The concepts have also enabled scholarship of knowledge brokering by IT staff (Pawlowski and Robey 2004a). IT outsourcing and off-shoring scholars have emphasised the
complexities of multiple and overlapping boundaries (Levina and Vaast 2008) and suggested research agenda to address such challenges (Krishnan and Ranganathan 2009). Although some of these studies have used practice theories (e.g., Levina and Vaast 2005a; Gallagher et al. 2004; Volkoff et al. 2004), there is scope for future scholarship to explore boundary practices in these different contexts.

The BSBO literature deals with different boundary types (See Appendix 4.3 for references to studies that investigate different boundary types). Initial BSBO research concentrated on the boundaries between organisations and their environment (e.g., Aldrich and Herker 1977; Leifer and Delbecq 1978) and later the importance of spanning intra-organisational boundaries was recognised by researchers (e.g., Ancona and Caldwell 1990; Barley 1996; Carlile 2002; Pawlowski and Robey 2004a; Wenger 1998). Some studies emphasise both internal and external boundaries (e.g., Hepso 2008; Levina and Vaast 2005a). Some researchers highlighted boundaries between professional and occupational communities (Bechky 2003; Kimble et al. 2010), boundaries across projects and programs (Elbanna 2010; Ratcheva 2009), and cultural boundaries (Levina and Vaast 2008; Mason 2005).

However, boundary spanning research takes boundaries as a given. New insights are likely to emerge if these boundaries are located empirically. The conceptualisations of boundaries need to take note of suggestions that boundaries are socially constructed (Heracleous 2005), dynamic (Heracleous 2005; Zietsma and Lawrence 2010) and contain characteristics that come to the foreground only in the experience of people at the boundaries (Diamond et al. 2004). Conceptual articulation may not hold true in certain contexts (Shailer 1993) and it is only in a specific empirical context that one can define and locate a specific boundary (Aldrich and Herker 1977). Therefore, in this research, conceptual work in boundary is complemented by empirical work in understanding differences in perspectives and expectations between BAs, users, and IT staff that may be indicative of a boundary between the participant groups. In the context of this research, the relevant boundaries are those that BAs would be required to span in their work as intermediaries between the users and the technical IT staff.

### 3.6.1 Characteristics of boundary spanners

Identifying characteristics of boundary spanners is a central objective of some of the studies. A boundary spanning individual is viewed as one who is well connected internally as well as externally (Tushman and Scanlan 1981a). Levina and Vaast (2005a) suggested that legitimate and possibly peripheral participation (Lave and Wenger 1991), legitimacy to negotiate, and inclination for boundary spanning as the attributes of effective boundary spanners. Levina and
Vaast (2005a) discussed the interplay between boundary spanners and boundary objects and noted that boundary spanners were able to reflect on the usefulness of existing artifacts and create and promote new artifacts. In situations where boundary spanning involves cross functional collaboration, boundary spanning effectiveness has been linked with individual’s prior functional experience and degree of integration with the project (Ancona and Caldwell 1990). A study of boundary spanning between users and designers in an open-source software community identified five characteristics of boundary spanners: cross participation in both communities, cohesion among boundary spanners, centrally positioned between two communities, and active, distinct, and adaptive contribution (Barcellini et al. 2008, p. 568). Boundary spanners were seen to be simultaneously participating in the online user and designer communities. Their contributions were ongoing, directed towards both users and design community, and adapted to the needs of each community.

Although these characteristics for effectiveness are useful in highlighting what might contribute to effective boundary spanning, the following explain the view taken in this research on the effectiveness of practices. First, I am aware that practice theorists have argued against the notion of ‘best practices’ and that practices cannot simply be transferred between different contexts to achieve the same effect:

\[
\text{A view of knowing as enacted in practice does not view competence as something to be "transferred," and suggests that the very notion of "best practices" is problematic. When practices are defined as the situated recurrent activities of human agents, they cannot simply be spread around as if they were fixed and static objects. Rather, competence generation may be seen to be a process of developing people's capacity to enact what we may term "useful practices" - with usefulness seen to be a necessarily contextual and provisional aspect of situated organizational activity (Orlikowski 2002, p. 253).}
\]

This suggests that it may not always be appropriate to ‘import’ a view of competence from outside a practice as the practices are situated within a given context (Marabelli and Newell 2012). Second, I am aware that insights that may emerge about characteristics of boundary practices (involve three parties) may be different to the characteristics proposed for effective boundary spanning that involves two parties.
3.6.2 The Role of boundary spanners

The work on classification of boundary spanning role, in both conceptual studies (e.g., Aldrich and Herker 1977; Thompson 1964) and empirical studies (e.g., Ancona and Caldwell 1990; Johnson and Duxbury 2010; Tushman and Scanlan 1981a), has used a variety of dimensions to classify the boundary spanning role (See Table 3.5). For example, it has used attributes such as informational versus representational responsibilities (Aldrich and Herker 1977), the nature of activities (Ancona and Caldwell 1990; Johnson and Duxbury 2010), communication abilities (Tushman and Scanlan 1981), and direction of brokering (Friedman and Podolny 1992).

Aldrich and Herker (1977) discuss two types of roles for boundary spanners: informational and representational. Informational roles enable the exchange of information between the organisation and its environment while the representation role links the organisational structure to the environment. These ideas were further elaborated by Tushman and Scanlan (1981a), who classified the informational role of boundary role persons as internal stars (people strongly connected inside the organisation), external stars (people strongly outside the organisation), and boundary spanning individuals (people strongly linked both internally and externally). Their research concluded that informational boundary spanning was only accomplished by boundary spanning individuals.

<table>
<thead>
<tr>
<th>Roles</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information processing and representational roles</td>
<td>Aldrich and Herker 1977</td>
</tr>
<tr>
<td>Internal stars, external stars, boundary spanning individuals</td>
<td>Tushman and Scanlan 1981a</td>
</tr>
<tr>
<td>Ambassador, scout, guard, coordinator</td>
<td>Ancona and Caldwell 1990</td>
</tr>
<tr>
<td>Relationship building, shaping, intelligence gathering, delivering,</td>
<td>Johnson and Duxbury 2010</td>
</tr>
<tr>
<td>coordinating/negotiating, guarding, information gathering,</td>
<td></td>
</tr>
<tr>
<td>representing, intermediary</td>
<td></td>
</tr>
<tr>
<td>Gatekeepers and representatives</td>
<td>Friedman and Podolny 1992</td>
</tr>
<tr>
<td>External representation, internal influence, service delivery</td>
<td>Battencourt and Brown 2003</td>
</tr>
<tr>
<td>Information acquisition and control, domain determination and</td>
<td>Jemison 1984</td>
</tr>
<tr>
<td>interface, physical input role</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.5 Classifications of boundary spanning roles
A widely discussed typology considers boundary roles to be undertaking four types of activities: ambassador, guard, scout, and task coordinator (Ancona and Caldwell 1990). Ambassadorial responsibility was described to be political in nature and required the boundary spanning individual to identify sources of oppositions and threats in higher levels of management and then work towards getting their support. Task coordination activities required the boundary spanner to coordinate with other groups or functions who are contributing to new product development. Scouts activities served to acquire general information about market, competition, and technology. The role of the guard was to reduce information outflow from the team and hence reduce external dependence.

Ancona and Caldwell’s (1990) classification of boundary spanning roles in new product development team was applied and extended in a recent study of expatriates as boundary spanners (Johnson and Duxbury 2010). The result was a typology for the boundary spanning role of expatriates (shaping, intelligence, information gathering, representing, delivery, intermediary, relationship, coordinating and guarding). The authors make a critical point that a typology developed in one context may only partially capture the dimensions of boundary roles in another context. This research accepts this view and suggests that role types for a particular boundary spanning context need to be empirically derived in that context (Jemison 1984). Therefore, in this research into role and practices of business analysts, theoretically derived role types have not been imposed on the analysis.

3.7 IS studies relevant to the adopted perspectives

In this section, I elaborate on some IS studies that are relevant to the research perspective adopted in my research.

3.7.1 Practice perspective in IS research

The diversity in practice theories adopted by IS researchers (Schatzki 2001) is reflected in the different theories that have been used. For example, IS scholars have used Giddens’ structuration theory (e.g., Orlikowski 1999; Schultze and Orlikowski 2004), Bourdieu’s theory of practice (e.g., Levina and Vaast 2005a; Levina and Vaast 2008), communities of practice lens (e.g., DeSanctis 2003; Klein and Hirschheim 2008), and Orlikowski’s technology-as-practice lens (Andersson and Lindgren 2010) to research a diverse range of topics (See Table 3.6).
One of the earliest uses of the practice perspective was to study the use of technology in organisations using Giddens’ structuration theory (Orlikowski 1999, 2000):

Structures of technology use are constituted recursively as humans regularly interact with certain properties of a technology and thus shape the set of rules and resources that serve to shape their interaction. Seen through a practice lens, technology structures are emergent, not embodied (Orlikowski 2000, p. 407).

Orlikowski (2000) questioned the views that technologies embody structures (rules and resources) (DeSanctis and Poole 1994; Orlikowski 1992) and stabilise after development as a result of community negotiations. In adopting the practice perspective, the elements of technology are not seen to constitute rules and procedures. It is only when these elements are routinely enacted in social practices that they acquire the status of rules and resources.

IS scholars have highlighted that practice perspective may be useful for understanding differences between communities that arise due to differences in practices. The CoP perspective has been used to understand the state of the IS discipline and the different paradigmatic communities within the discipline (DeSanctis 2003; Hirschheim and Klein 2008). Levina and Vaast (2008) used Bourdieu’s practice theory to highlight boundaries that arise due to differences in country and organisational contexts in off-shore software development projects.

<table>
<thead>
<tr>
<th>Area investigated by adopting a practice perspective</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of IT</td>
<td>Andersson and Lindgren 2010; Orlikowski 2000; Schultze and Orlikowski 2004</td>
</tr>
<tr>
<td>Off-Shore collaboration / Outsourcing</td>
<td>Levina and Vaast 2008</td>
</tr>
<tr>
<td>IS discipline</td>
<td>DeSanctis 2003; Klein and Hirschheim 2008;</td>
</tr>
<tr>
<td>Learning and Knowledge management</td>
<td>Gallagher et al.2004; Levina and Vaast 2005 a; Marabelli and Newell 2012; Orlikowski 2002; Orlikowski 2006; Osterland and Carlile 2005; Pawlowski and Robey 2004a; Volkoff et al. 2004;</td>
</tr>
<tr>
<td>Materiality in practices</td>
<td>Orlikowski 2006; Orlikowski 2007; Svabo 2009</td>
</tr>
<tr>
<td>Boundary spanning</td>
<td>Gallagher et al.2004; Levina and Vaast 2005 a, b; Levina and Vaast 2006; Lindgren et al. 2008; Pawlowski and Robey 2004a; Volkoff et al. 2004;</td>
</tr>
</tbody>
</table>

Table 3.6 Areas investigated by adopting a practice perspective in IS research
This research presents an opportunity to consider the potential differences in ‘practices’ between the three participant groups (BAs, users, and IT staff) in business analysis.

IS researchers have also advanced philosophical notions associated with the practice perspective. In using the term ‘knowing-in-practice’, Orlikowski (2002) advanced the ‘practice-as-epistemology’ perspective and argued that knowledge and practice are mutually constitutive. Instead of treating knowledge as either a thing to be captured, stored, and transmitted (Objectivist reification) or as a mental disposition (subjectivist reduction), Orlikowski considers knowledge is enacted in practices. The analysis suggests that practices enable knowing required for negotiating boundaries (temporal, geographic, social, cultural, historical, technical, and political) in organisational work.

There are other IS studies that highlight issues related to learning and knowledge management in context of boundary spanning competence (Levina and Vaast 2005 a), knowledge brokering by IT professionals (Pawlowski and Robey 2004a), knowledge transfer between enterprise system team and users during ERP implementation (Volkoff et al. 2004), and learning between system development community of practice and user community of practice during ERP implementation (Gallagher et al. 2004).

In the IS literature, one can also see the post-humanist emphasis on materiality in theorising about ‘practices’. In this view, the ontological separation of material from social actors is considered problematic in both, understanding of organisational knowledge (Orlikowski 2006) and in the use of technology (Orlikowski 2007). Orlikowski (2006) argues that knowing is not only emergent in routine practices, embodied as tacit knowing and experiences, and embedded in situated contexts of life and work, but also materially ‘scaffolded’ through physical objects, biological structures, spatial contexts, and technological artifacts. Orlikowski posits an alternative view of sociomateriality of practices:\footnote{Reckwitz (2002) discussed how practice theory is a type of cultural theory as both are opposed to the view that social norms and individual motivations guide human action and social order. The focus on the material in practice theory provides another conceptual link between practice theory and cultural theories. The cultural theorists also focus on material in conceptualising culture. For example, culture is defined as ‘everything that people have, think and do as members of the society’ (Ferraro 2002, p. 19).}

\textit{Materiality is integral to organizing, positing that the social and the material are constitutively entangled in everyday life. A position of constitutive entanglement does not privilege either humans or technology (in one-way interactions), nor does it link them through a form of mutual reciprocation (in two-way interactions). Instead, the
social and the material are considered to be inextricably related - there is no social that is not also material, and no material that is not also social (Orlikowski 2007, p. 1437).

In my research, the notion of materiality in the practice of BAs is closely related to some of the elements of the shared repertoire of the BAs, those elements that possess a material nature. However, BAs being a boundary practice and expected to interact with different stakeholder groups in organisations, it would be interesting to investigate the ‘social’ nature of the material objects that are used in these interactions. For example, do the documentation and tools that the BAs use in their interaction with users, become viewed as ‘shared’ (social) between the users and BAs or do they remain shared amongst the BAs alone. The ‘sharing’ between different practices would also help us to improve our conceptual understanding of the boundary object concept. Given that material objects may have both, stabilising and destabilising effect on practices (Svabo 2009), the extent to which documentation and tools influence the practices of BAs, users, and IT staff may also be relevant to business analysis.

3.7.2 IS research directly relevant to the adopted boundary practice perspective

IS studies on boundary spanning have largely been in the area of knowledge management. Research has addressed challenges arising due to cultural differences in knowledge management systems (Mason 2003), globalised digital libraries (Mason 2005), and global IT sourcing (Levina and Vaast 2008), for example. While ICT influence on boundary spanning practices has been researched in depth (e.g., Levina and Vaast 2005a, b; Levina and Vaast 2006), there are concerns that scholarship in this direction has not made a distinction between the influence of different types of technologies on boundary spanning (Lindgren et al. 2008). Other studies have focused on understanding knowledge transfer and learning between organisational units (e.g., Gallagher 2004, Pawlowski and Robey 2004a, Volkoff et al. 2004). Research has also examined boundary spanning knowledge integration across professional boundaries (Kimble et. al 2010; Mork et al. 2008).

Relating more directly to the work practices of BAs, research has been conducted into issues relating broadly to IS development. In IS design, boundary spanning research has revealed how boundary objects exist in the form of organisation metaphors and membership definitions (Gasson 2006) and software based simulations (Fleischmann 2006). Elbanna (2010) argued that nature of IS project boundaries in practice are different from the current conceptualisation that see projects as isolated units of analysis.
Boundary spanning studies tend to adopt innovative or work practice perspectives (Lindgren et al. 2008). An innovation perspective views practices as aimed at seeking information from the environment and combining it with existing knowledge to bring about innovation. A work practice perspective, on the other hand, considers boundary spanning to situate information in the local work practices. In the work practice type of studies, IS scholars have used a practice perspective to make a significant contribution in boundary spanning research. In studying how organisational competence in boundary spanning emerges in practice, Levina and Vaast (2005a) suggested that practices of individuals who are nominated to boundary spanning positions and those who actually become effective boundary spanners were not necessarily similar and only a few of the nominated agents became effective boundary spanners.

A practice lens has also been adopted to understand nature of boundary spanning practices. Levina and Vaast (2006) differentiate boundary spanning practices on the basis Bourdieu’s modes of practice production: ‘embodiment’ and ‘objectification’. Embodiment represents habitual production of practices by individuals that depend heavily on inter-personal relationships and on embodied memories. Practice production in this mode is a matter of routine without an explicit realisation among actors that they are engaged in producing and reproducing practices. Practice production by objectification involves formalising and making explicit relations among actors that would be involved in production and reproduction of practices. Artifacts, both material and conceptual, are an outcome of these relations, persist beyond a particular interaction or context and thus do not rely solely on embodied individual memories and inter-personal relations.

The four studies that are directly relevant to this research on the roles and practices of BAs are similar in their interest into the area of managing knowledge (see Table 3.7). For example, they have motivations to investigate the importance of transfer of knowledge (Pawlowski and Robey 2004) and integration of diverse expertise (Levina and Vaast 2005a) in organisations.
Motivations for the study | Purpose of the study | Theoretical guidance | Findings |
---|---|---|---|
**Levina and Vaast 2005a** | Understand organisational practices that integrate diverse bases of expertise and therefore are a source of competitive advantages | Understand (a) how organisational competence in boundary spanning emerges (b) how individuals fulfil their boundary spanner roles and (c) how IS facilitate boundary spanning | Bourdieu’s Practice Theory | Boundary spanners-in-practice (a) become a legitimate, but possibly, peripheral, participant in the practices (b) have legitimacy as negotiators on behalf of the field whose interest they have to negotiate (c) develop an inclination for boundary spanning (d) reflect on objects in each field and reflect on their utility in context of the new field (e) create new artifacts and attempt to establish their new identity within the context of the new joint field, and (f) establish local usefulness and symbolic usefulness of the artifacts they are promoting as boundary objects. |

**Pawlowski and Robey 2004a** | Understanding knowledge transfer within organisation | Examine IT professionals understanding of the conditions, activities, and consequences of their role as knowledge brokers | Boundary spanning and situated learning literature | • Identify the role of information systems as boundary objects for knowledge transfer; Identify brokering practices  
• Suggest that (a) brokering practices need to be understood in context of structural condition of organisational boundaries and (b) the consequences of knowledge brokering by IT professionals is the transfer of knowledge between organisational units: between IT and users, and the transfer of business knowledge among users in different business units. |

**Volkoff et al. 2004** | Successful ERP implementation depends upon successful knowledge transfer between the enterprise systems team and user | Examine the knowledge transfer process between the enterprise system team and user communities during an ERP implementation and, by focusing on the barriers encountered, to identify mechanisms for overcoming them | CoP | Identifies the emergence of a power user CoP that enable knowledge transfer between the enterprise systems team and users. |

**Gallagher et al. 2004** | Knowledge sharing between users and developers required for successful projects | Understand learning between users and IT professionals working together on ERP projects | CoP | Identify themes around which tensions need to be resolved between the users and developers for learning to take place. |

Table 3.7 IS studies directly relevant to boundary practice perspective adopted in this research
The studies differ in the context in which they investigate related phenomena: how boundary spanners’ competence emerges in practice (Levina and Vaast 2005a), the role played by IT professionals as knowledge brokers between users and IT and between business units (Pawlowski and Robey 2004a), knowledge transfer mechanisms between ERP team and users (Volkoff et al. 2004) and learning between system developers and user communities (Gallagher 2004).

The theoretical guidance sought in these studies is similar to my research. In a study of knowledge transfers involving IT professional (Pawlowski and Robey 2004a), boundary spanning concept and the notion of situated learning were used in the absence of any appropriate theory. Other studies used specific practice theories to understand various organisational practices. For example, Bourdieu’s practice theory is used to view engineers and marketers as belonging to distinct fields of practice and engaging in spanning boundaries for new product development (Levina and Vaast 2005a). The CoP theory is used to understand knowledge transfer from the ERP team to the users (Volkoff et al. 2004) and mutual learning between system developers and users (Gallagher et al. 2004). In my research, however, it was not only a case of overlap (Wenger 1998) of two practices that were involved in spanning boundaries, but boundary spanning was to be viewed in a tripartite arrangement where BAs were designated to connect the users and IT staff. Therefore, the boundary practice concept was used together with the CoP concept (Wenger 1998).

It is also interesting to note how boundary spanning individuals and boundary objects are viewed in these studies. Based on empirical findings, scholars argued that being nominated was not a necessary and sufficient condition for effectiveness of boundary objects and boundary spanners (Levina and Vaast 2005a). In another study, IT professionals (those that are involved in design, implementation, and maintenance of information systems) were viewed to be in a position to act as ‘bridge’ for knowledge transfer in organisations and to create IT systems that act as boundary objects (Pawlowski and Robey 2004a). In another study, power users are seen to act as a bridge between the ERP implementation team and users (Volkoff et al. 2004). By contrast, in my research, which is based on the assumption that there is a ‘divide’ between the IT staff and the various stakeholder groups, the focus is on the ‘bridging’ capabilities of BAs.

These studies highlight the importance of investigating boundary spanning practices in different contexts. These studies have investigated boundary spanning in the use of intranet for knowledge sharing between professionals in company headquarters and its geographically distributed sales team (Levina and Vaast 2005a), between an internet consulting firm and its client in an inter-organisational IS development projects (Levina and Vaast 2005a), by IT professionals in a federated organisational structure (Pawlowski and Robey 2004a), and during
ERP implementation (Gallagher 2004; Volkoff et al. 2004). These studies have highlighted the importance of identifying contexts where the differences between perceptions and expectations of stakeholder groups in IS related phenomena may need to be acknowledged and addressed. The practice of BAs in the tripartite arrangement with users and IT staff is an example of one such context.

These studies make significant contributions in the field. Levina and Vaast (2005a) discuss the conditions under which boundary spanners-in-practice emerge and relate to boundary objects. Although there was a large volume of literature on boundary spanning prior to this, there was little explicit focus on practices of boundary spanners and how effective boundary spanner are likely to relate with boundary objects. They also highlighted the importance of boundary spanning competence for gaining competitive advantage. In relation to my research, significance of their findings is enhanced by the virtue of their research being guided by a practice theory (Bourdieu’s practice theory).

Pawlowski and Robey (2004a) make significant contribution to boundary spanning literature in IS research in the following ways. First, in the light of opportunities and challenges of knowledge management within organisation, they foreground the need for a theoretical framework for understanding knowledge brokering within organisation. Second, although they maintain the discussion on conditions and consequences of knowledge brokering, they also bring into discussion the practices of brokering. Their findings imply that investigation of boundary interactions may reveal roles for people involved in boundary interactions that they may not be primarily designated to undertake. For example, IT professionals do not only design, develop, and implement systems, but in certain contexts be instrumental in transferring knowledge within organisations. In my research, attention is given to similar insights into the roles and practices of BAs.

The CoP perspective adopted in boundary spanning research made significant contributions. Volkoff et al. (2004) allowed significant insights by adopting a ‘community’ view of organisations. When the two communities need collaboration, the authors suggest that a ‘bridge’ between two CoP will be needed. The perspective of CoP as a ‘bridge’ is very relevant to boundary spanning studies and can be extended to contexts other than knowledge transfer during ERP implementation. In this research, the context is work practices of BAs. The CoP perspective in Gallagher (2004) contributes to boundary spanning research by conceptualising the inter-community efforts as a process of learning.

The contributions made by these studies also suggest some areas where research would be useful to further improve our understanding of boundary spanning. While Levina and Vaast’s
(2005a) perspective of joint-field, like Wenger’s (1998) notion of overlap, allows an understanding of how professionals from diverse fields integrate their knowledge, we need an improved understanding of how boundary practices (with an objective of acting as a ‘bridge’ between two or more groups) (Wenger 1998) work. We need to investigate how the practices of boundary practices might be different from boundary spanning practices where the ‘bridging’ role is not that emphasised. Unlike the boundary spanner, members of boundary practices are mediating between two other parties in which they are non-members. In my research, by adopting a tripartite perspective, I intend to advance boundary spanning scholarships from boundary spanning in overlaps to boundary spanning in boundary practices (Wenger 1998). Since my literature review and interaction with scholars in the field (Email from E. Wenger, 9th May 2010) suggest that there is very little research across disciplines that has systematically applied the boundary practice concept, this research is also an opportunity to advance an improved understanding of boundary practices.

The investigation into practices of IT professionals in ‘bridging roles’ may also be improved in future research. For example, generalising IT professionals as one class of practitioners (e.g., Pawlowski and Robey 2004a) may only partially reveal the reality of practitioners’ work. Future research needs to take a perspective that allows for role differentiation in terms of IT staff’s boundary spanning work. In this research, the term ‘IT staff’ is used for staff in the IT department with whom the BAs are required to interact in order to deliver services and IT artifacts for the users. In order to avoid generalisation, the description of the participants in each case would provide details on the participants in the IT staff roles. Further, a study of boundary spanning or brokering is likely to be more useful when perspectives of all participants are discussed and differences are made explicit. In my research, an attempt is made to foreground the differences in perceptions and expectations of participant groups involved in business analysis. This was expected to provide insights into many of the challenges that BAs face in contemporary organisations in the ‘bridging role’.

Based on the discussion on CoP and boundary practice concept, in the next section I discuss the research questions.

3.8 The Research objective and research questions

I previously defined a boundary practice as one that deals with “boundaries and sustain(s) a connection between a number of other practices by addressing conflicts, reconciling perspectives, and finding resolution” (Wenger 1998, p. 114). Business analysis can be viewed as a boundary practice that provides a connection between the users and the IT staff (see Figure
3.8). For example, the BAs are involved in interacting with the users to understand the business requirements (amongst other things). They also need to interact with the technical IT staff to interpret requirements and ensure artifacts acquired and/or developed meet these requirements. Thus, their role is to provide a connection between the users’ requirements and the artifacts developed by the IT staff.

![Diagram of Organisation boundary, Joint enterprise (JE), Mutual engagement (ME), Shared repertoire (SR), Users, BAs, IT Staff]

**Figure 3.8 Business analysis as a boundary practice**

In this research, the CoP and boundary practice concepts were adopted for several reasons. First, the conceptual elements in the CoP concept allowed an explicit focus on the ‘practices’ of BAs. Second, these concepts allow us to view organisation as a constellation of interacting practices rather than a single entity which is homogenous with respect to practices. Third, the tripartite view adopted in this research to investigate the work of BAs, is supported by the boundary practice perspective. Fourth, the CoP concept is suitable for studies in organisational settings as it was developed in organisational settings and has been widely applied as a theoretical lens in such settings (Brown and Duguid 1991, 1998, 200; Cohendet et al. 2001; Creplet et al. 2001; Garrety et al. 2004; Iverson and McPhee 2002, 2008; Mutch 2003; Vaast 2004). One could thus argue that it is theoretically robust, and has been deemed effective for pursuing research not dissimilar in type to that proposed in this thesis. Fifth, the discourse on understanding practices has paid little attention to boundary practices, and the choice of the boundary practice perspective provides opportunity to further investigate and understand the nature of boundary practices.

The CoP and boundary practice concepts are used in this research for understanding the work of BAs in two related ways that allowed for developing two research questions. First, by using the CoP concept I aim to build understanding of the nature and extent of engagement that occurs amongst the BAs. This formed the basis of the first research question that had a within-group
focus. Second, by using the boundary practice perspective, I aim to investigate BAs’ work of connecting the users’ requirements with the design and development efforts of the IT staff. This became the basis of the second research question that focused on the boundary work of BAs. Thus, the broad, overarching objective for this research can be stated as follows:

*To gain understanding of the roles and practices of BAs by using the communities-of-practice and boundary practice perspectives.*

From this objective, I have articulated two research questions.

**Research Question 1: What insights into the roles and practices of BAs emerge by using a CoP theoretical lens?**

Wenger (1998) suggests that instead of asking whether a configuration fits the concept of CoP, the CoP framework should be used ‘to articulate to what degree, in which ways, and to what purpose it is (or is not) useful to view a social configuration as a CoP’ (p.122). The first research question, rather than being concerned with judging whether or not a group of BAs meets the criteria to be deemed a CoP, is therefore concerned with understanding the work practice of BAs by using the three dimensions of the CoP framework—mutual engagement, joint enterprise, and shared repertoire. The dimensions of the CoP framework were used to operationalise this research question for empirical work. Although the framework informed my initial empirical work, the subsequent data collection and analysis was not constrained by the CoP framework to allow for an interpretive understanding of practitioners’ perspectives.

**Research Question 2: What constitutes boundary work in the practice of BAs?**

The second research question is concerned with understanding the work practices of BAs as a boundary practice that acts as a bridge between the users and the IT staff. Investigation of BAs’ boundary work will focus on the following:

- **Understanding boundaries involved in the work of BAs:** A boundary has been defined as the differences in perceptions and expectations of people in social configurations, which come to the foreground only in the experiences of people at the boundaries (Diamond et al. 2004). I intend to adopt this definition throughout this research. Understanding boundary spanning needs to be preceded by understanding the boundaries that are involved (Oliver and Montgomery 2005). Given this, I will attempt to understand the boundaries that BAs span in interacting with users and IT staff. Understanding these boundaries has the potential to provide insights into challenges that BAs face in identifying “real business requirements” (Goldsmith 2004, p.xvii) and in satisfactorily bridging the “reality-design” gap (Hecks
Understanding the differences in perceptions and expectations of BAs, users, and IT staff that might be indicative of boundaries between them, could provide insights into why many challenges persist in understanding and delivering on user requirements.

- **Understanding the level of awareness BAs have about differences that might exist among the users and IT staff:** A practice perspective suggests that practices within an organisation are likely to differ in many ways. These differences in practices are a source of inter-practice boundaries (Wenger 1998). I tried to understand whether the BAs were aware of the differences in the perceptions and expectations of the users and IT staff and of using different approaches in interacting with them.

- **Understanding BAs’ dealings with users and IT staff:** Communicating across practice boundaries not only requires BAs to be aware of differences between users and IT staff but requires them to engage in ‘perspective taking’ (Boland and Tenkasi 1995) communication with users and IT staff. The boundary practice work is investigated to understand how BAs interact and negotiate boundaries with both users and IT staff.

In summary, the focus of the two research questions can be illustrated by figure 3.9. The first research question will provide insights into BAs’ interactions with each other, their understanding of the BA role, the tools, processes and documentations that they promote and use. The second research question will provide insights into the challenges the BAs face in their interactions with the users and IT staff. The operationalisation of research questions is discussed in chapter 4.

![Figure 3.9 Research question focus in the research perspective](image-url)
Chapter 4
Research Methodology and Design

4.1 Introduction

In this chapter, I will discuss the design of the research based on the following understanding:

Research design involves deciding upon all the various components of a research project: your philosophical assumptions, your research method, which data collection techniques you will use, your approach to qualitative data analysis, your approach to writing up (Myers 2009, p. 19).

These elements of research design were incorporated in the research framework that was used in the planning and implementation of this research (see Figure 4.1). In this chapter, the discussion is based on the elements of this framework as follows. First, I will reflect on research paradigms and their philosophical assumptions and justify the adoption of the interpretive research paradigm in this research. Second, I will discuss the selection of the case study method. Third, I will discuss the following key elements of the case study method: definition of the case, multiple case study design, case selection, strategies for data collection and analysis, and the approach to presenting the research findings.
4.2 Research paradigms and their philosophical assumptions: Positivism and critical research

The term research paradigm refers to a set of philosophical assumptions (basic beliefs) that constitute a worldview and guide research (Guba and Lincoln 1994). Although scholars have used different nomenclature in discussing the research paradigms, they are consistent about discussing the two main assumptions implied by research paradigms: ontology and epistemology. Ontological assumptions refer to beliefs about the nature of physical and social reality. More specifically, these assumptions answer the question: ‘What is the form and nature of reality and, therefore, what is there that can be known about it?’ (Guba and Lincoln 1994, p. 108). Epistemological assumptions refer to beliefs about what it means to know (Crotty 1998), or what is the relationship between the researcher and what is there to be known (Guba and Lincoln 1994, p. 108). The ontological and epistemological assumptions implied by the three
widely discussed research paradigms (interpretive, positivist, and critical) are briefly discussed next.

Researchers in the positivist paradigm hold an ontological belief that ‘reality’ exists independent of our minds whether we are consciously aware of it or not. Different terms used to describe this belief are naïve-realism (Guba and Lincoln 1994), external realism (Walsham 1995) and realism (Crotty 1998). The epistemological belief held in this paradigm suggests that facts and researcher’s values are separate (Walsham 1995). Meaningful reality is seen to exist apart from the operation of any consciousness (Crotty 1998, p. 8). The term used for this epistemological position is objectivism (Crotty 1998; Guba and Lincoln 1994). The findings from positivist research are considered to be true (Guba and Lincoln 1994) and empirically testable (Orlikowski and Baroudi 1991).

There have been several criticisms of the positivist paradigm, however. Guba and Lincoln (1994) discuss the many criticisms of the basic assumptions implied by the positivist paradigm. First, they questioned the positivists’ claim for objectivity in seeking universal laws by both, verification and falsification of hypotheses. The claim to objectivity is based on the positivists’ assumption that the ‘facts’ they gather are separate from the theoretical framework that is being used. The positivists claim for objectivity does not hold as ‘facts can be viewed only though a theoretical window’ (Guba and Lincoln 1994, p. 107). Second, Guba and Lincoln argue against the positivist assumption of a single ‘truth’ that can be determined by collecting facts. Instead, they argue that the same set of facts can be explained by different theories and there is no single truth. Third, Guba and Lincoln argue that not only are facts ‘theory-laden’ but also ‘value-laden’. The values of the researchers cannot be separated from the facts and the positivists’ claims to objectivity are difficult to understand. Fourth, the positivists’ assumption of a neutral observer is criticised and it is suggested that the researcher influences the phenomena being investigated.

Although exploration of phenomena using diverse paradigms, including positivism, can be fruitful (Lee and Dennis 2012; Orlikowski and Baroudi 1991), the criticisms suggest that the positivist paradigm was not appropriate for this research. In this research, I am interested in understanding business analysis by viewing it as a social practice that involves three distinct social configurations: BAs, users, and technical IT staff. The positivist paradigm which has been effective in studying natural phenomena may not be adequate for understanding social phenomena (Blumer 1969). The positivist paradigm may fail to highlight the ‘intricacies in the embedded social processes’ (Srivastava and Teo 2006, p. 195) that are involved in business analysis and other organisational work. Further, as discussed in chapter 2, many problems associated with requirements analysis are arguably grounded in assumptions that are positivist.
In the predominant view on requirements, requirements are seen to exist a-priori and discovered by the analyst, who is seen as a detached observer. Such methods and techniques are said to leave out emotional and cultural elements of requirements (Goguen 1994). Therefore, a positivist few on the work of business analysis was not considered appropriate.

The critical research paradigm, viewed by some IS scholars as an emerging and potentially important research paradigm (Myers and Klein 2011), implies the ontological belief that reality is historically constituted (Orlikowski and Baroudi 1991) and shaped by social, political, cultural, economic, and gender values (Guba and Lincoln 1994). From this belief follows the understanding that individuals have the potential to change their material and social realities. While critical researchers share with interpretive researchers the epistemological belief that fact and values cannot be separated, the critical researchers differ from the interpretive researchers in two ways. First, they go beyond merely interpreting the social world to also critique the material conditions of domination and oppression in the social world. Second, researchers in the critical paradigm take it upon themselves to highlight oppressive social practices (Myers and Klein 2011; Orlikowski and Baroudi 1991).

For this research, however, the critical research paradigm was not seen as appropriate. The research focus is primarily on understanding or gaining insight into the practices of BAs. Social critique was not fundamental to planning and implementing this research. Further, there was no intent of transforming practices involved in business analysis by individual emancipation and by improving social configurations and social theories.

4.2.1 Justification for interpretive research paradigm

Researchers adopting the interpretive research paradigm hold ontological beliefs that reject the view that reality exists independent of the mind. This belief, called relativism, considers that reality is constructed by humans (Orlikowski and Baroudi 1991) and reality is what one makes of it (Crotty 1998). There are, however, different views on how one ‘makes’ his/her own reality. There is one view, termed internal realism, in which reality is seen as an inter-subjective construction by means of shared human cognition (Walsham 1995). In another view, termed idealism, each person constructs his or her own reality (Walsham 1995) and reality is seen to be confined to one’s mind (Crotty 1998). The epistemological beliefs held by interpretive researchers suggest that research findings and the values of the researcher cannot be separated (Guba and Lincoln 1996; Walsham 1995). I follow Crotty (1998) in making a distinction between two epistemological beliefs that can be employed in the interpretive research paradigm—constructionism and subjectivism. While both suggest that meaning is not ‘out there’ to be
discovered, they suggest different beliefs. Constructionism is a belief that research findings are constructed through researcher’s engagement with the world. However, subjectivism considers meaning is created by the researcher and imposed on the object of research.

The interpretive research paradigm was adopted in this research for understanding the practices of BAs. Interpretivist research emphasises understanding the studied phenomenon rather than trying to explain it (Charmaz 2006) and is appropriate for understanding the thoughts and actions of actors in organisations (Klein and Myers 1999). The assumptions of the interpretive research paradigm are appropriate for the research objective and research questions that this research is attempting to address. As discussed previously, my research objective was to gain an understanding of the roles and practices of BAs from the inside (from the point of view of practitioners). The two research questions discussed in chapter 2 focused on insights that result from investigating a group of BAs as a CoP and a boundary practice. I acknowledge that the research findings would be shaped by the theoretical lens and, in so doing I imply the interpretivist assumptions of theory-ladeness of findings. Further, my review of the literature helped me towards constructing my worldview of business analysis. In this view, business analysis is seen as social process involving three social configurations: BAs, users, and IT. This worldview influenced not only the planning and implementation of the research but also the findings of the research. Therefore, I acknowledge that the research findings are shaped by the researchers’ worldview and, in so doing I imply the interpretivist assumptions of value-ladeness of findings.

Scholars have highlighted the problems of complexity in the nomenclature of terms used to discuss paradigms and their implied philosophical assumptions (Brand 2009; Crotty 1998) and the need to simplify the discussion on philosophical assumptions (Chalmers 1999). To explain the position I adopted in this thesis, I will rely on Crotty (1998) (see Figure 4.2). To explicate my ontological position on the researched phenomena, I do not claim that there is a single ‘reality’ about the practices of BAs. Instead, in considering that there are multiple realities and no single ‘truth’ about the practices of BAs, I imply the ontological position of relativism. This is distinct from both the ontological positions of realism and idealism. Realism implies that a single ‘truth’ or ‘reality’ exists independent and outside of the researcher’s mind. Idealism implies that there is no reality outside of the mind and reality is constituted only by researcher’s ideas. Social constructionism explains my epistemological position that enshrines a belief that my understanding of the practices of BAs and the related research findings are ‘not discovered but constructed’ (Crotty 1998, p. 42). In this research, it is only through engagement with the participants that I was able to construct an understanding of their work practices. The word ‘social’ implies that understanding of the phenomena is influenced by social influences on the
researcher and the participants. The meaning that I attributed to the participants’ responses are shaped by my worldview, which is itself shaped by the social configurations that I am a part of. Clearly, this view is different from the objectivist epistemology that considers knowing as a process of discovering meaning that exist a-priori, ‘apart from the operation of any consciousness’ (Crotty 1998, p. 8). More significantly, social constructionism is not to be confused with subjectivist epistemology in which meaning is not constructed by the engagement between the researcher and the research phenomena, but is imposed by the researcher on the object of research.

![Figure 4.2 Interpretive research paradigm and its assumptions (Based on Crotty 1998).](image)

**4.3 Selection of research method**

A research method is a way of implementing the research design by selecting, collecting, organising and analyzing data (Blakie 2010). Scholars have explored the relationship between research paradigms and research method. There is a view that a research method is paradigm neutral and the researcher’s paradigmatic assumptions are reflected in the implementation of the research method (Myers 1997) and use of theory (Charmaz 2006). For example, the case study method may be used in both positivist (e.g. Eisenhardt 1989) and interpretive (e.g., Walsham 1995) or critical research. There is a contrasting view which suggests that some research methods enshrine certain philosophical assumption. For example, survey research method and laboratory experiments are usually considered appropriate for positivist research. In this research, I adopt the view that there should be alignment between the selected research paradigm, research method and the purpose of the study (Holden and Lynch 2004).

A number of frameworks categorising research methods for IS research, together with criteria for their selection, have been discussed in the literature (Galliers 1993; McKay 2002). In all such frameworks, the purpose of the study is highlighted as one of the criteria for selecting a
particular research method. Galliers (1993) suggests that selection of the research method is informed by the object of the study determined by whether the study is focused on individuals, organisation/group, or society, and if the study is concerned with understanding technology or methodology. Shanks et al. (1993, cited in McKay 2002) assert that a research method should be selected after considering, whether the study is exploratory, descriptive, or explanatory.

The selection of research method for this research followed two steps. In the first step, following McKay (2002), I compared the method selection criteria from Galliers (1993) and Shanks et al. (1993) with the characteristics of my research. This research is characterised by the objective of understanding ‘practices’ that are shared by a group of BAs. Secondly, the study is concerned with BAs’ ways of doing thing and the logic implied in their practices. Thirdly, the goal of the research is exploratory due to its concern for understanding the work of BAs as a boundary practice. Finally, the research was primarily an empirical investigation that is intended to provide a practice-based account of the work of BAs.

In the second step, I used the characteristics of my research to justify selection of the research method. This influenced my decision to consider case study method as an appropriate method for the research (see Table 4.1).

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<thead>
<tr>
<th>Characteristics of Research</th>
<th>Theorem Proof</th>
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<th>Field</th>
<th>Experiment</th>
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Table 4.1 Selection of research method in this research (Y=yes, P=possibly) (Based on McKay 2002)
4.4 The Case study method and its key elements

Case study method has been defined in different ways (see Table 4.2). From these definitions I have developed the following understanding. Case study method is focused on understanding the phenomena as it relates to a particular, contemporary context (Yin 2009) or circumstances (Stake 1995), and generally does not involve studying some phenomena historically. For example, the definitions emphasise understanding the phenomena of interest within a single setting (Eisenhardt 1989) and the particularity of a single case (Stake 1995). This, however, may be followed by cross case comparisons and developing a more abstract understanding of the phenomena (Stake 1995).

Case study is an appropriate choice for ‘practice based problems where the experiences of the actors are important and the context of action is critical’ (Benbasat et al. 1987, p. 369). I intend to understand the BAs’ perception of their reality and case study has the ability to allow us to investigate this ‘reality in considerably greater detail’ (Galliers 1991, p.334). The case study method aims to generate better understanding of a phenomenon in its complex, social, physical and situational real world. A case study provides ‘details, richness, and completeness’ (Flyvbjerg 2011, p. 301). It presents a ‘real’ story with which researchers and practitioners can identify. Previously, I noted limited empirical work and theorising on boundary practice. The case study method is appropriate for areas where theory and understanding have not been well developed (Darke et al. 1998). It will allow us to study the practice of BAs without predetermining the various aspects of the phenomena (Cavaye 1996).

Despite the widespread use of case study method in several disciplines and its appropriateness for my research, I do acknowledge the challenges associated with using the case study method. For example, as highlighted by Liamputtong (2009, p.188-189), there are perceptions that case study research method is non-rigorous and often poorly designed. Liamputtong also added that the term ‘case study’ has been used differently in many disciplines, adding to the confusion about case study research method. Potter et al. (2010) highlighted some practical challenges in managing personalities and political differences in implementing case study research.
Case study method definitions

<table>
<thead>
<tr>
<th>Case study method definitions</th>
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<tr>
<td>The case study is a research strategy which focuses on understanding the dynamics present within single settings.</td>
<td>Eisenhardt 1989, p. 534</td>
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<tr>
<td>Case study method is an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident.</td>
<td>Yin 2009, p. 18</td>
</tr>
<tr>
<td>Case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances.</td>
<td>Stake 1995, p. xi</td>
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<td>The case method: a) does not explicitly control or manipulate variables b) studies a phenomenon in its natural context; c) studies the phenomenon at one of a few sites; d) makes use of qualitative tools and techniques for data collection and analysis.</td>
<td>Cavaye 1996, p. 229</td>
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<tr>
<td>Use of the case method is one characteristic of case research. In addition, case research aims for in-depth understanding of the context of a phenomenon. Case research investigates a predefined phenomenon, but does not (though may) define a priori constructs and relationships. Case research aims to contribute to knowledge by relating findings to generalisable theory.</td>
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<tr>
<td>A case study is defined as a detailed, intensive study of a particular contextual, and bounded, phenomena that is undertaken in real life situations.</td>
<td>Luck et al. 2006, p.104</td>
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Table 4.2 Definitions of the case study method

4.4.1 Understanding ‘the case’ in this research

What then is a case? It is difficult to give a full answer to the question, since almost anything can serve as a case and that a case can be simple or complex...Thus the case may be an individual, or a role, or a small group, or an organisation, or a community, or a nation. It could also be a decision, or policy, or a process, or an incident or event of some sort, and there are other possibilities as well (Punch 1998, p. 150-152).

In order for the researchers for claiming validity for their knowledge claims, defining the case in case study research is important. Case study researchers have highlighted the importance of understanding the case (the object of the research) in case study research:
Researchers will call anything they please a case study, but more the object of the study is a specific, unique, bounded system, the greater the usefulness of the epistemological rationales (Stake 2008, cited in Liamputtong 2009, p.192)

Defining a case is thus a very important epistemological issue as it defines the boundaries of the phenomena about which the researcher is making knowledge claims (Stake 2005). I followed Stake’s (2005) guidelines in identifying what constituted a case in this research:

A case is a noun, a thing, an entity; it is seldom a verb, a participle, a functioning. Schools may be our cases...Training modules may be our cases—amorphous and abstract, but still things, whereas “training” is not. Nurses may be our cases; we usually do not define “nursing activity” as the case...With these cases we find opportunities to examine functioning, but the functioning is not the case. Even when our main focus is on a phenomenon that is a function, such as “training,” we choose cases that are entities. Functions and general activities lack the specificity, the organic character, to be maximally useful for case study (p. 1-2).

The ‘case’ should provide the researcher an opportunity to study the phenomenon of interest in its bounded context (Miles and Huberman 1984, cited in Punch 1998). The case may be viewed as a system that is bounded by time, place, event or activity and these boundaries may help the researcher decide as to how case study data collection can be limited (Luck et al. 2006). In this research, the case is bounded by space, by a particular organisational setting.

Case study researchers need to limit the case by defining the context and activities included in the case (Baxter and Jack 2008). I was interested in understanding the practices of BAs who were involved in understanding user requirements and liaising with the IT staff to deliver on those requirements. While the focus was on understanding the practice of BAs, an attempt at understanding a boundary practice would be incomplete without the perspective of users and IT staff that were involved in interactions with BAs. Although the phenomena of interest in this research is the roles and practices of BAs, I followed Stake’s (2005) suggestions for specificity and considered the case in this research to be a group of BAs employed in the same organisational unit to work with users and the technical IT staff (see Figure 4.3). In this research, the term ‘users’ is used for organisational stakeholders with whom the BAs interact as part of their business analysis activities. The term ‘IT staff’ is used for staff in the IT department with whom the BAs are required to interact in order to deliver services and IT artifacts for the users. The description of the participants in each case would provide details on the participants in the user and IT staff roles.
4.4.2 Multiple case study design

The case study may be of the following three types (Stake 2008). It may be an intrinsic case study, an instrumental case study, and/or a multiple case study (Stake uses the term “collective case study”). An intrinsic interest in a case means that the researcher is interested in some specific aspects of a particular case: in other words, the case itself is of intrinsic interest, and there is little interest in learning about some general phenomena. The researchers have an instrumental interest in a case when they are interested in understanding the case to learn something about some general phenomena and therefore the case is ‘instrumental’ in bringing about that learning. A multiple case study is an instrumental case study, in which more than once case is selected by the researcher. In this research, I have taken a design decision to have a multiple case study design to pursue my instrumental interest in understanding the roles and practices of BAs. A multiple case study design enables improved insights into and a multifaceted understanding of the phenomena being investigated (Liamputtong 2009, p. 193).

In this research, depending upon the selection of cases, there could be at least two basic variants of the multiple case study design. First, multiple cases could be selected from within the same organisation. Second, multiple cases could have been selected from different organisations. The design decision was to select cases from different organisations to allow for understanding of the phenomena in different organisational contexts. The practice perspective adopted in the research foregrounds the situated nature of practices, and therefore, I was interested in
understanding how BAs in different organisations work in their unique situated environments. Recognising the situated nature of practices, a multiple-case design was adopted to investigate practices in multiple organisations.

**Case selection**

Because of the challenges of managing a multiple collective case study research by a single researcher (Stake 2008) and the need for an ‘integrated, holistic’ understanding of the case (Liamputtong 2009, p. 199), the number of cases was limited to three. The criterion for selecting an organisation was that the organisation gave me easy access to investigate the practices of BAs who were located in the same organisation unit and were working with users and IT staff. Case selection in an interpretive, qualitative study is explained by Diefenbach (2009) and exemplified in the study by Pawlowski and Robey (2004a):

> If the findings shall be generalised qualitatively...then there is no methodological need whatsoever for quantitative representativeness or that the unit of investigation was selected ‘objectively’. What is needed is assurance that the site and unit of investigation are suitable for the type(s) of problem(s) that shall be investigated...It is the unit of investigation that counts, not the way how it was identified (Diefenbach 2009, p. 879).

> The primary criterion for selecting ManDisCo as the study site was its potential to support an investigation of knowledge brokering practices by IT professionals. ManDisCo was not selected as a typical or representative organization from which to generalize, but rather for its potential to generate understanding of the knowledge broker role (Pawlowski and Robey 2004a, p. 651).

Selection of the three cases, therefore, was based on the opportunity they provided for me to gain insights into the work practices of BAs (Stake 1995).

**4.4.3 Data collection strategy**

The discussion on the data collection strategy comprises three parts. The first part considers the choice of semi-structured interviews as the appropriate data collection method for this research. The second part makes explicit how the research questions were operationalised. The third part demonstrates how the interview protocol was developed.
Data collection method: Semi-Structured interviews

In order to answer my research questions, I collected qualitative data using semi-structured interviews. Johnson and Duxbury (2010) explain as to why qualitative data collection is an appropriate method, where the interest is in obtaining context specific understanding of the phenomena of boundary spanning:

*Cases can employ qualitative methods, quantitative methods or both. In instances where the primary objective is exploratory, a qualitative method is recommended to expand the scope of investigation and allow the emergence of context-specific patterns. Our study, therefore, relied on a series of interviews with expatriates in the field to obtain detailed accounts of their boundary activities for analysis* (p. 32).

Therefore, in order to understand the roles and ‘practices’ (what they do and the ‘logic’ of practice) of BAs within a group and how they span boundaries with users and IT staff in an organisational context, qualitative data was collected through interviews. The interview method was appropriate to explore the feelings, experiences, and the ‘worlds’ of the research participants (Kvale 2007). Liamputtong (2009, p.42) explains it simply: ‘If we wish to learn how people see their world, we need to talk with people’. The interviews with the BAs, users, and IT staff gave me access to their perceptions of the roles and practices of BAs.

Although case study researchers have suggested that triangulation of data collection methods is useful for improving data credibility (Baxter and Jack 2008; Yin 2009), I relied on interviews as the single data collection method. The different data collection methods have different focus and strengths (Meijer et al. 2002) and the selection of the interview method as the single data collection method was guided by my focus on participants’ perceptions, feelings, and experiences. This design decision was taken in order to investigate roles and practices of BAs from inside (participants’ perceptions) and not from outside (as an observer) (Gherardi 2009a). I was interested in going inside so that I could get some insights into the challenges and issues that arise in business analysis from the perspective of the BAs, users, and IT staff. This led me to select interview as the data collection methods.

The choice of interview as a method to collect qualitative data is consistent with many studies of boundary spanning work data (See Table 4.3). Among these studies, there are studies that have relied primarily on interviews (e.g., Kimble et al. 2010; Pawlowski and Robey 2004a; Volkoff et al. 2004).
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<th>Reference</th>
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</tr>
<tr>
<td>Ethnography</td>
<td>Bacharach et al. 2000</td>
<td>yes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Barley 1996</td>
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<td>yes</td>
<td>yes</td>
<td></td>
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<tr>
<td></td>
<td>Carlile 2002</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Ehrlich and Cash 1999</td>
<td>yes</td>
<td>yes</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Gasson 2006</td>
<td>yes</td>
<td>yes</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Levina and Vaast 2006</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>O’Mahony and Bechky 2008</td>
<td>yes</td>
<td>yes</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Bechky 2003</td>
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<td>yes</td>
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<tr>
<td></td>
<td>Mork et al. 2008</td>
<td>yes</td>
<td>yes</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Grounded Theory</td>
<td>Fleischmann 2006</td>
<td>yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Tyler and Stanley 2001</td>
<td>yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action Research</td>
<td>Lindgren et al. 2008</td>
<td>yes</td>
<td></td>
<td></td>
<td>yes</td>
<td></td>
<td>yes</td>
</tr>
</tbody>
</table>

Table 4.3 Data collection methods used in boundary spanning research
Operationalising the research questions

In chapter 3, I articulated the research questions. In this section, I will discuss how these were operationalised for the empirical work.

**Research Question 1: What insights into the roles and practices of BAs emerge by using a CoP theoretical lens?**

The term *insight* refers to the capacity to gain an understanding into a phenomenon, in this case an understanding of the roles and practices of BAs. As discussed previously, the research assumes there are multiple realities and therefore insights into the phenomena are based on my interpretation of the participants’ responses. The term *role* refers to the ‘function assumed or part played’ (Oxford Dictionaries Online 2012) by BAs and as discussed in chapter 3, *practices* are viewed as shared resources, frameworks, and perspectives that sustain mutual engagement in a group (Wenger 1998, p. 5). The CoP lens used to inform the empirical work consisted of the three dimensions of practice - mutual engagement, joint enterprise, and shared repertoire (Wenger 1998). These conceptual dimensions were used to gain an understanding of the roles and practices of BAs.

**Research Question 2: What constitutes boundary work8 in the practice of BAs?**

Organisations are viewed as a constellation of CoP (Wenger 1998) and my focus is on three groups, users, IT staff, and BAs. In doing so, I am following other IS studies where users and technical IT staff are viewed as CoP (e.g., Gallagher et al. 2004; Pawlowski et al. 2000; Volkoff et al. 2004). Any work activity of BAs that involves interactions within their own group is considered a practice within the BAs’ community, and similarly, any work activity of BAs that involves dealing with individuals or groups of users or individuals or groups of IT staff will be regarded as boundary work. For example, gathering requirements from users or discussing technical limitations of the systems with IT staff would be examples of boundary work.

**Developing the interview protocol**

Yin (2009) suggests that in case study research, questions can occur at multiple levels. Figure 4.4 illustrates how this suggestion was used in this research to understand the questions at multiple levels and develop the interview protocol.

---

8 I am using the terms boundary work and boundary spanning work interchangeably.
Figure 4.4 The Five levels at which questions may be asked in case study research

1. What are the questions asked of the entire study?

2. What questions can I ask of each case?

3. What questions can I ask the participants?

4. What questions/insights become relevant in the emergent findings across cases?

5. What questions /insights, beyond the planned scope of the study, become relevant in conclusions and making recommendations?

Questions for cross-case analysis across case 1, 2, and 3

Emergent considerations /questions, for example:
- What might be the implications of BAs’ location in the organisational structure on their practices?

Questions, the researcher needs to be mindful of during interviews and data analysis
I started with considering questions that would be asked of the entire study. The questions at this level were the two research questions that this research is concerned with. Next, I considered questions that would be asked in an individual case. For questions at this level, I followed Walsham’s (1995) suggestion that theory should guide the initial empirical work in interpretive case studies. Based on the CoP and boundary practice perspectives, case level questions were developed for each of the two research questions. Finally, for each of the case level questions, I considered what would be the interview questions that could be asked of the BAs, users, and IT staff.

Yin (2009) suggests that although the verbal line of enquiry follows the interview questions, researcher should be mindful of questions at the other four levels (entire study, case level, cross-case comparison, and normative conclusions and recommendations). As data collection and analysis progressed, new questions and avenues for seeking insights emerged at two levels. First, there were questions that arose from comparing findings across the cases. For example, how the status of BAs differed across the three cases and how this might influence their practices? Second, as the research moved towards drawing implications and making recommendations, questions with broader implications were raised. For example, what might be the implications of BAs’ location in the organisational structure on their practices?

Appendix 1.1 provides the mapping between the research questions and the interview questions used in this research. Appendix 2.1 includes the interview guides used to initiate data collection from BAs, users, and IT staff.
4.4.4 Data analysis strategy

In this section, I will first discuss the unit of analysis for this research. Then, I will discuss issues that were fundamental to the selection of the data analysis strategy. Finally, I will elaborate the data analysis strategy followed in this research.

4.4.4.1 The Unit of analysis

By adopting a CoP perspective in this research, a deliberate design decision was taken to conduct empirical work with groups of BAs and the users and IT staff they interact with rather than to study individual BAs. Therefore, the unit of analysis (UOA) was a group of BAs and its practices. The data collection involved eliciting perceptions about the practices of BAs from individuals who were either part of the group of BAs or were users and IT staff who interacted with the BAs.

4.4.4.2 Issues fundamental to the selection of the data analysis strategy - Interpretive research paradigm and instrumental case study research

Two issues were central to the formulation of the data analysis strategy: the use of theory in interpretive research and an instrumental interest (Stake 1995) in the selection of cases (see Figure 4.5).

Walsham’s (1995) suggestion on how interpretive studies could use theoretical concepts without being constrained by them has been adopted in this thesis:

To create an initial theoretical framework which takes account of previous knowledge, and which creates a sensible theoretical basis to inform the topics and approach of the early empirical work…[but also] preserve a considerable degree of openness to the field data, and a willingness to modify initial assumptions and theories [resulting in] initial theories being expanded, revised, or abandoned altogether (p. 76).
Walsham (1995) suggests that interpretive studies should use theories to ‘scaffold’ the research and once theories have served their purpose of informing the research they could be ‘removed’. Orlikowski and Baroudi (1991) highlight that interpretive research focuses on themes and categories emerging from the researcher’s exposure to the phenomena:

\[
\text{The interpretive researcher avoids imposing externally defined categories on a phenomenon...the interpretive researcher attempts to derive his or her constructs from the field by in-depth examination of and exposure to the phenomenon of interest. The categories and themes that emerge out of this approach are intended to closely couple those relevant to the study's participants (p. 15).}
\]

Although the concepts of CoP and boundary practice were used to frame the research perspective and inform the empirical work, during initial data analysis, I attempted to remain open to field data and tried not to be constrained by the theoretical concepts. Therefore, I attempted to avoid using any predefined theoretical codes in my data analysis strategy.
However, I was inevitably sensitised to various notions and concepts due to my acquaintance with the CoP and boundary practice perspectives. Thus, the CoP and boundary practice perspectives somewhat influenced assigning codes to data, constructing categories from the codes, and merging categories into themes. Once I had completed the initial categorisation of the data and an articulation of initial findings, I then explicitly revisited theoretical concepts to account for any theoretical grounding of the research findings (Goldkuhl and Cronholm 2003).

Stake’s (1995) suggestion that the data analysis strategy should follow the researcher’s interest in the case was also influential. An intrinsic interest in the case means that a particular case of itself of interest to the researcher. Direct interpretation of data (interpretation without creating categories by abstraction) is recommended for intrinsic case studies, as efforts at categorising data would take the focus away from details of the case. However, my interest was an instrumental interest where the multiple cases enabled insights into the roles and practices of BAs. When the researcher has an instrumental interest in the case, abstraction by categorisation is argued to be an appropriate strategy (Stake 1995) and this was the approach adopted in this research. More specifically, I used coding and categorisation techniques that are discussed in Charmaz’s (2006) with the aim to ‘to see this world as [the] research participants do - from the inside’ (Charmaz 2006, p. 14) and assume that theorising ‘offers an interpretive portrayal of the studied world’ (Charmaz 2006, p. 10).

The data analysis can be viewed to be occurring in two steps. First, a within-case analysis of each of the three cases, and second, a cross-case analysis by considering the findings across all three cases (Creswell 2007, cited in Liamputtong 2009). In the next section, these will be discussed in detail.
4.4.4.3 Data analysis approach – Within-Case analysis

The process followed for within-case analysis is illustrated in Figure 4.6.

Initial coding

This involved line-by-line coding for an interview transcript by moving through each line of data and assigning a code that summarised and accounted for a piece of data. The codes were established on the basis of my interpretation of participants’ meanings and actions (Charmaz 2006, p. 49) and I followed suggestions to use gerunds as far as possible for the initial codes. Table 4.4 is an example of how the initial codes were assigned. The text ‘So, the aim for me at least in the short to mid-term is about accumulating a variety of experience in the work’ was interpreted and coded as the BA ‘valuing variety in BA role’. As I progressed through the interview transcripts, more was revealed to me to update initial codes that I had assigned to a particular line of transcript.
Focused coding

In this phase, the transcripts with the initial codes were re-examined to decide which initial codes made the most sense to explain larger segments of data. For example, as indicated in Table 4.5, from the five initial codes, two codes were selected as focused codes based on the understanding that these two codes explain a larger segment of data.

The focused codes generated from case 1 were available to be used for focused coding in the subsequent cases. New focused codes were used where required. Please see appendix 2.1 for a sample interview transcript with initial and focused codes and appendix 2.2 for the list of focused codes from the 3 cases.

**Excerpt from a BA interview transcript**

<table>
<thead>
<tr>
<th>Excerpt from a BA interview transcript</th>
<th>Initial codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have a career path from here or anything you aspire towards?</td>
<td>Feeling new to the role</td>
</tr>
<tr>
<td><strong>Well, in terms of business analysis I am aware that I started doing BA work only three or four years ago and the different organisations defined business analysis with different terms and they also have different requirements by way of experience using methodologies, language, systems in order to be able to have their staff meet the requirements of the actual business analysis role. So, the aim for me at least in the short to mid-term is about accumulating variety of experience in the work and I suppose having done the job only once before, I was only a BA in the eyes of my former employer. Now I’m a BA in the eyes of two and I have literally doubled my usefulness as a BA and am working towards sort of I guess a more generic definition of what a BA is because I have met the requirements of two organisations now to fulfil that role and it’s very, very different work between the two.</strong></td>
<td>Variation in BA definition</td>
</tr>
<tr>
<td></td>
<td>Valuation in expectation from BAs</td>
</tr>
<tr>
<td></td>
<td>Valuing variety in BA role</td>
</tr>
<tr>
<td></td>
<td>Building image as a BA</td>
</tr>
</tbody>
</table>

Table 4.4 An Example of using initial coding during data analysis
Do you have a career path from here or anything you aspire towards?

Well, in terms of business analysis I am aware that I started doing BA work only three or four years ago and the different organisations defined business analysis with different terms and they also have different requirements by way of experience using methodologies, language, systems in order to be able to have their staff meet the requirements of the actual business analysis role. So, the aim for me at least in the short to mid-term is about accumulating a variety of experience in the work and I suppose having done the job only once before, I was only a BA in the eyes of my former employer. Now I’m a Business Analyst in the eyes of two and I have literally doubled my usefulness as a BA and am working towards sort of I guess a more generic definition of what a BA is because I have met the requirements of two organisations now to fulfil that role and it’s very, very different work between the two.

Variation in expectations from BAs

Building image as a BA

Table 4.5 An Example of using focused coding during data analysis

Memo writing: Raising codes to categories

Next I began to make progress towards constructing an abstract understanding of the roles and practices of BAs. Memo writing was undertaken in case 1 to consider which of the many focused codes could be raised to a higher level of abstraction as conceptual categories, as advised by Charmaz:

First, assess which codes best represent what you see happening in your data. In a memo, raise them to conceptual categories for your developing analytic framework—give them conceptual definition and analytic treatment in narrative form in your memo. Thus, you go beyond using a code as a descriptive tool to view and synthesize data (Charmaz 2006, p. 91).
This guideline for raising focused codes to categories was implemented by considering the possibility of each code being a category. I evaluated each focused code (from this point onwards referred to as ‘code’) for its capacity to rise above the level of description and provide us with a more general understanding of the phenomena. It was possible that a single code provided us an abstract understanding about some aspect of the practices of BAs. In many cases, however, several codes were put together to see if one code could become the category while the other codes supplemented its data set to allow for abstraction. The following steps illustrate how this was achieved:

**Step 1.** The codes were organised into eight groups by placing together codes that appeared to be similar (see Appendix 2.3 for the eight groups of codes). This sorting of codes was influenced by the adopted CoP and boundary practices perspectives. The sorting served two purposes. First, it made it easier to initiate the process of evaluating and comparing codes in order to recognise potential categories and second, it gave an order to writing memos. Considering the large number of focused codes and associated data sets, the manageability achieved through sorting was much needed.

**Step 2.** Each code was considered for its potential to be treated as a tentative category and a decision was made as to whether the code could be seen as a ‘container’ for other code(s). As suggested in Charmaz (2006), for each code that was raised to a category, memos were written. The memos consisted of narrative statements that enabled elaborating the category in terms of its characteristics, the conditions and context in which the category arises, is maintained, or changes, its consequences, its relationships with other categories. For each category, I also identified questions that could be considered in future data collection.

Table 4.6 is an example of how each category was summarised in memos. The category - *BAs’ understanding of their role* - was constructed from related focused codes. The understanding of the role was seen to be characterised by nearness to an IT role or business role. This understanding appears to be influenced by background, skills, and nature of interactions of BAs and is likely to influence the nature of trust that exists amongst the users, BAs, and the IT staff. I identified questions for future data collection that would relate to BA’s understanding of their role. For example, is there a relationship between BAs’ understanding of their role and the BAs’ seeking a variety in their work experience? As the memo writing progressed, I could see that BAs’ understanding of their role was related to the category named ‘valuing variety in the BA role’.

Appendix 2.4 provides examples of memos that were written for the categories.
### Category: BAs’ understanding of their role

<table>
<thead>
<tr>
<th>Focused codes</th>
<th>Understanding BA role/work; Relating role perception to background; Clarifying BA role to stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics</td>
<td>The BAs have a role to interact with both IT department and business. In that context they are always evaluating their role in relation to the two.</td>
</tr>
</tbody>
</table>
|                | • Role understood as IT role  
|                | • Role understood as business role |

| Conditions in which the category arises, is maintained, or changes | • Understanding influenced by background and skills  
| | • Understanding influenced by nature of work and interactions |

| Consequences | It positions the BAs somewhere on the bridge between the IT department and business. The distance from the two might influence the nature of trust that exists in the two relationships. |

| Emerging questions that are relevant to the category | • Is there a stage in the BAs’ career where this understanding of the role is more important?  
| | • How does the understanding influence their interaction between the two?  
| | • Is there a relationship between their understanding of the role and seeking a variety in work experience? |

| Related categories | • Valuing Variety in the role |

**Table 4.6 An Example of summarising a memo for a category**

I constructed 32 categories in analysing case 1. Table 4.7 gives the list of these categories that were raised from the codes by writing memos. These categories were used for subsequent cases, which allowed for effective cross-case analysis. These categories were organised under five themes to present the result of within-case analysis (see Table 4.9).
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>BAs’ understanding of their role</td>
</tr>
<tr>
<td>2.</td>
<td>Valuing variety in BA role</td>
</tr>
<tr>
<td>3.</td>
<td>Acting as a conduit</td>
</tr>
<tr>
<td>4.</td>
<td>Being a diplomat</td>
</tr>
<tr>
<td>5.</td>
<td>Attaching importance to BA role</td>
</tr>
<tr>
<td>6.</td>
<td>Job satisfaction in the BA role</td>
</tr>
<tr>
<td>7.</td>
<td>Combining individual and team work</td>
</tr>
<tr>
<td>8.</td>
<td>Difficulty in allocating work in team</td>
</tr>
<tr>
<td>9.</td>
<td>Complying with team</td>
</tr>
<tr>
<td>10.</td>
<td>Putting clients before Team needs</td>
</tr>
<tr>
<td>11.</td>
<td>Seeking Clarity in All Interactions</td>
</tr>
<tr>
<td>12.</td>
<td>Viewing IT and user interactions as separate</td>
</tr>
<tr>
<td>13.</td>
<td>Using documentation</td>
</tr>
<tr>
<td>14.</td>
<td>Disliking not having adequate knowledge</td>
</tr>
<tr>
<td>15.</td>
<td>Having common understanding with BAs within the team</td>
</tr>
<tr>
<td>16.</td>
<td>Understanding work style of other BAs in the team</td>
</tr>
<tr>
<td>17.</td>
<td>Learning from each other</td>
</tr>
<tr>
<td>18.</td>
<td>Learning informally</td>
</tr>
<tr>
<td>19.</td>
<td>Aspiring for formal learning</td>
</tr>
<tr>
<td>20.</td>
<td>Comparing with BAs external to the team</td>
</tr>
<tr>
<td>21.</td>
<td>Speaking two languages</td>
</tr>
<tr>
<td>22.</td>
<td>Classifying user issues</td>
</tr>
<tr>
<td>23.</td>
<td>Understanding differences in user requirements</td>
</tr>
<tr>
<td>24.</td>
<td>Managing user expectations</td>
</tr>
<tr>
<td>25.</td>
<td>Dealing with lack of user involvement</td>
</tr>
<tr>
<td>26.</td>
<td>Dealing with attitude of IT staff</td>
</tr>
<tr>
<td>27.</td>
<td>Seeing status difference with IT staff</td>
</tr>
<tr>
<td>28.</td>
<td>Using tools for BA work</td>
</tr>
<tr>
<td>29.</td>
<td>Using processes in BA work</td>
</tr>
<tr>
<td>30.</td>
<td>Supporting users</td>
</tr>
<tr>
<td>31.</td>
<td>Frustrations in conduit role</td>
</tr>
<tr>
<td>32.</td>
<td>Working on alignment</td>
</tr>
</tbody>
</table>

**Table 4.7 List of categories constructed from codes**
4.4.4.4 Data analysis approach – Cross-Case analysis

The aim of the cross-case analysis was to move the discussion from the situational enquiry into local operational practices to a more abstract knowledge useful for general practice and the research community (Goldkuhl 2011, p.1). Although I did not intend to attribute broader, more general explanatory power to the theoretical account, I considered Walsham’s (1995) suggestion that generalisations can be drawn from interpretive case studies. In discussing the philosophical basis for abstraction and generalisation in interpretive field studies, Klein and Myers (1999) suggest that:

Intrinsic to interpretive research is the attempt to relate particulars as may be described under the principle of contextualisation to very abstract categories; unique instances can be related to ideas and concepts that apply to multiple situations (p. 75).

In the cross-case analysis, the categories and insights from the three cases were compared. The aim was not to verify findings from one case in the other cases, but to note any significant patterns and insights relevant to BAs’ roles and practices. The summary of categories from within case analysis served as the starting point of comparing the findings across the cases. Table 4.8 is an example of the template that was used to record the summary of findings for each category from the three cases. As the analysis advanced through the second and the third case, notes were taken to record any emerging areas on which the cases could be compared. These templates allowed me to understand as to which of the initially developed categories were emphasised in the all the cases (See Table 4.9, \(\checkmark\) indicates if a category is emphasised in a particular case).
Category: Understanding work style of other BAs

<table>
<thead>
<tr>
<th>Uni1</th>
<th>Expressmail</th>
<th>Company X</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Understanding practices from established members to the newer members is considered an important process</td>
<td>No focused codes</td>
<td>• A diplomatic challenge in dealing with the weaknesses and strengths of other BAs</td>
</tr>
<tr>
<td>• BAs were also aware that different members of the team would have different style of work and different strengths and weaknesses</td>
<td></td>
<td>• Individual BAs adopt their approaches to those of their peers in the team and engage in negotiation to achieve this</td>
</tr>
<tr>
<td>• Uniformity in ‘language use’ may not be effective within the team of BAs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Why wasn’t it important or emphasised in Expressmail? Was it due to reorganisation or due to the size of the organisation? No interactions beyond the project on an ongoing basis?

Table 4.8 The template used to support cross-case comparison

During the cross-case comparison, I made a note of categories that could be merged in order to raise the analysis to a more abstract level. It became apparent that some categories would have little potential for representing a conceptual understanding of the phenomena even when considering empirical data from all three cases. The category ‘comparing with BAs external to the team’ is an example of one such category. There were some categories that could provide a conceptual understanding only when merged with other related categories. The categories ‘learning informally’, ‘learning from each other’, and ‘aspiring for formal learning’ are examples of such categories. Such categories were noted as candidates for merging for articulating a theory of business analysis as a boundary practice.
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Case</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Uni 1</td>
<td>Expressmail</td>
</tr>
<tr>
<td><strong>BAs’ understanding of their role</strong></td>
<td>BAs’ understanding of their role</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Valuing variety in BA role</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Attaching importance to BA role</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Job satisfaction in BA role</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Comparing with BAs external to the team</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Practice work within the group of BAs</strong></td>
<td>Combining individual and team work</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Difficulty in Allocating work in the team</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Using documentation</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Having common understanding with BAs in the team</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Understanding work style of other BAs in the team</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Complying with team</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Learning from each other</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Learning informally</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Aspiring for formal learning</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Using tools for BA work</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Using Process in BA work</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Boundary role perspective</strong></td>
<td>Acting as a conduit</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Being a diplomat</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Putting clients needs before team’s needs</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Seeking clarity in all interactions</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Viewing IT and user interactions as separate</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Speaking two languages</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Work on alignment</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Frustrations in the conduit role</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Interactions with users</strong></td>
<td>Classifying users issues</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Understanding differences in user requirements</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Managing user expectations</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Dealing with lack of user involvement</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Supporting users</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Interactions with IT staff</strong></td>
<td>Dealing with attitude of IT staff</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Seeing status difference with IT staff</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 4.9 Understanding the emphasis of categories in the analysis of the three cases
4.4.4.5 Data analysis approach – Business analysis as a boundary practice

This section outlines the approach taken to explicitly revisit the theoretical perspectives during the analysis after the initial articulation of findings. This analysis focused on understanding the nature of boundaries that BAs face in their work and discussing business analysis as a boundary practice.

The Tripartite perspective – Understanding boundaries in the work of BAs

I analysed the categories in the three cases to consider the potential differences in perceptions and expectations of BAs and users and BAs and the IT staff, and from that to consider the potential boundaries that BAs may face in their work.

A General account of business analysis as a boundary practice

While I was still dealing with individual cases, I avoided raising categories to a higher level of abstraction to be more perceptive to the empirical details of individual cases. But now to get a more general account of the roles and practices of BAs as a boundary practice, I compared the empirical details associated with the some of the categories that were relevant for this discussion and then merged and reorganised these categories under two themes: BAs as boundary practitioners and Practices within the boundary practice of BAs. These two themes were used to articulate a theory of business analysis as a boundary practice. Table 4.10 lists the themes and indicates how categories were merged under these themes.
<table>
<thead>
<tr>
<th>Original categories</th>
<th>Merged categories</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAs’ understanding of their role</td>
<td>The nature of BA role</td>
<td></td>
</tr>
<tr>
<td>Attaching Importance to BA role</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acting as a conduit</td>
<td>Boundary practice perspective</td>
<td>BAs as boundary practitioners</td>
</tr>
<tr>
<td>Viewing IT and user interactions as separate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speaking two languages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being a diplomat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working on Alignment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Putting clients’ need before team needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeking clarity in all interactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combining individual and team work</td>
<td>Work allocation</td>
<td></td>
</tr>
<tr>
<td>Difficulties in allocating work in the team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complying with the team</td>
<td>Shared understanding</td>
<td>Practices within the boundary practice of BAs</td>
</tr>
<tr>
<td>Having common understanding with BAs in the team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding the work style of other in the team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning informally</td>
<td>Learning</td>
<td></td>
</tr>
<tr>
<td>Learning from each other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspiring for formal learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using tools for BA work</td>
<td>Tools, documentations, and processes</td>
<td></td>
</tr>
<tr>
<td>Using processes for BA work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using documentation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.10 The Themes used for discussing business analysis as a boundary practice
4.4.5 Strategy for writing the results

The results of the data analysis are reported in chapter 5, 6, and 7. In this section, I will outline the approach for writing the results of within-case analysis of each of the three cases (chapter 5), the cross-case analysis (chapter 6), and the analysis of business analysis as a boundary practice (chapter 7).

Writing up the cases

In order to present insights from the within-case analysis, in chapter 5, each case study has been written up as follows:

- **Background to the case** - Case study researchers suggest that researchers need to understand the case as it occurs in its context and that the context shapes both, the activities of the case as well as the experience and interpretation of the activities (Stake 2005). We therefore discuss some of the information related to the organisation such as the nature of its operations and products and services and the location of ‘the case’ in the organisation structure.

- **Information about the research participants** - The data was collected through conducting semi-structured interviews that involved the BAs, users, and IT staff. Each participant’s designation in the organisation and the role they played has been included in the write-up.

- **Discussion of results** - The initial discussion of results in the case study involves the perspective of BAs. This is followed by understanding the perspectives of the users and IT staff respectively.

My data analysis interestingly in a broad sense confirmed the arguments of Zietsma and Lawrence (2010) who suggested that the work in a community is of two types, practice work and boundary work. This therefore became a useful organising logic for writing up the cases. Practice work has an inward focus and is directed at the work within the community. The first research question is concerned with ‘practice work’ as it focuses on understanding BAs’ work practices that have an inward focus. In order to answer the first research question for each of the three cases, I organised the categories that represented an inward focus into two themes: BAs’ understanding of their role and Practice work within the group of BAs (see Figure 4.7).

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9 In accordance with the ethics protocol that guided this research, in each of the three case studies, I have used pseudonyms for participants, organisations, departments, and names of various systems and withheld information to ensure that the organisation and the participants could not be identified in the discussion.
By contrast, boundary work is directed at the boundaries with other communities and is the focus of the second research question which is aimed at understanding the practices of BAs that are directed towards the boundaries with users and IT staff. In order to answer the second research question for each of the three cases, I organised the appropriate categories into three themes: *Boundary role perspective*, *Interactions with users*, and *Interactions with IT staff* (see Figure 4.8). Therefore, for each case, I deal first with the two themes on practice work, followed by the three themes on boundary work.
In order to make explicit the contribution of a particular category in discussing a case, the format shown in Table 4.11 was used to summarise the five themes in the three cases. The summaries are in Appendix 2.5 and form the basis of the discussion of the five themes for the within-case analysis in chapter 5.

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| **BAs’ understanding of their role** | Understanding BA role/work; Relating role perception to background; Clarifying BA role to stakeholders | • Understanding influenced by background, nature of work and interactions  
• Role ambiguity  
• Client relationship management |
| **Valuing variety in BA role** | Valuing variety in BA role; Variation in BA definition; Building image as a BA; Valuing new work opportunity | • The BAs are aware of the fact that undertaking a variety of work is important for them.  
• Seek variety to get diverse work experience and that it improves self-image |

Table 4.11 An Example of summarising a theme

After discussing the five themes that illustrate the BAs’ perspectives in a case, the perspectives of users and IT staff who interacted the BAs are discussed. Comparing and contrasting the perspectives of the BAs with those of the users and the IT staff led to interesting insights into the differences that persist in the tripartite arrangement. Given that these insights seemed significant to not only business analysis but also to understanding of boundary practices in general, they are discussed in chapter 7 titled *Business Analysis as a Boundary Practice*. Therefore, the little overlap between chapter 5 and chapter 7 has been deliberately built into the structure of the thesis.

**Writing up the cross-case analysis**

In chapter 6, the results of the cross-case comparison are discussed. The comparison was guided by the five themes used to write up each case and the write-up of the cross-case comparison is based on the same five themes:

- BAs’ understanding of their role
- Practice work within the group of BAs
- Boundary role perspective
Interactions with users
Interactions with IT staff

Writing up analysis of business analysis as boundary practice

In Chapter 7, I will return to some of the relevant ideas from the boundary practice perspective and other relevant literature to discuss the results of my research. I first discuss the boundaries that BAs may face in their interactions with users and IT staff. The discussion is written under the following sub-sections:

- Differences in perspectives between BAs and users: This section focuses on discussing potential differences in perceptions and expectations between BAs and users. These differences are summarised and viewed as being indicative of a potential boundary between BAs and users.
- Differences in perspectives between BAs and IT staff: This section focuses on discussing potential differences in perceptions and expectations between BAs and IT staff. These differences are summarised and viewed as being indicative of a potential boundary between BAs and IT staff.

This is followed by the discussion on business analysis as a boundary practice under the following two themes:

- BAs as boundary practitioners
- Practices with the boundary practice of BAs

The last step in the analysis is to discuss the results in relation to the adopted theoretical perspectives. In this discussion, I return to the literature on CoP and boundary practice perspectives with the ‘willingness to [question and] modify initial assumptions and theories’ (Walsham 1995, p. 76). This is written up under three sections. In the first section, I discuss the findings in relation to the CoP concept. The second section outlines my position on the boundary practice concept. The last section discusses the efficacy of the boundary practice perspective in my research.
4.5 Validity in interpretive research

There are many meanings associated with the term ‘validity’ (Winter 2000). The criteria for determining validity is different for research conducted under the different research paradigms (Lincoln and Guba 2000), and different procedures to establish validity may be suitable for different paradigms (Creswell and Miller 2000).

In this interpretive research, the following idea of validity is considered:

*Are [the research] findings sufficiently authentic (isomorphic to some reality, trustworthy, related to the way others construct their social worlds) that I may trust myself on acting on their implications?* (Lincoln and Guba 2000, p. 274)

This understanding makes clear that validity is a judgement made on findings and inferences (Maxwell 1992). It is the process of interpretation, rather than a particular method, that needs to be judged for validity (Lincoln and Guba 2000). For interpretive case study research, Klein and Myers (1999) explains that validity is a measure of the credibility and clarity that is associated with the researcher’s reasoning used in arriving at results and drawing conclusions.

There are two views on judging the validity of interpretive research. One view recommends the use of testable criteria. For example, Lincoln and Guba (1986) proposed various criteria for ‘judging interpretations’. On the basis of the criteria used to establish rigor in the positivist research (internal validity, external validity, reliability, and objectivity), Guba and Lincoln (1986) suggested a parallel set of criteria used to establish the trustworthiness (credibility, transferability, dependability, and confirmability) of interpretations. Lincoln and Guba (1986) recognised that these criteria are somewhat incomplete because, in seeking parallelism with the criteria for positivist rigor, the criteria tend to deal with concerns that would be important to positivists. For example, the criteria focus on the methodology and largely ignore the influence of context. Given the ontological and epistemological assumptions embedded in the interpretive paradigm, Lincoln and Guba (1986) considered what criteria could be used to judge the quality of findings from interpretivist research. The answer to this question led to the criteria for establishing authenticity of interpretive research - fairness, ontological authentication, educative authentication, catalytic authentication, tactical authenticity.

However, scholars with a different view argue that using pre-defined criteria for validity may not be appropriate. For example, Rolfe (2006) asserts that there is no need for an external set of criteria for judging interpretive research as each ‘study is individual and unique, and that the task of producing frameworks and predetermined criteria for assessing the quality of research studies is futile’ (p. 304). Rolfe (2006) suggests that a reflexive account by the researcher
should be the basis of judging quality of research. Mauthner and Doucet (2003) discuss the imperatives of reflexivity for interpretive studies:

*Research which relies on the interpretation of subject accounts can only make sense with a high degree of reflexivity and awareness about the epistemological, theoretical and ontological conceptions of subjects and subjectivities that bear on our research practices and analytic processes* (p. 424).

The view taken in this research is based on the assumption that although no single predefined set of validity criteria is sufficient to judge a unique instance of interpretive research (Rolfe 2006), for others to have more confidence in my research findings, it would be useful to discuss some of the issues highlighted by the criteria, and to make explicit the philosophical assumptions and theoretical orientations that guided this research (Mauthner and Doucet 2003). Therefore, I will discuss some issues in relation to the two validity ‘measures’ discussed in Lincoln and Guba (1986), trustworthiness and authenticity (see Table 4.12).

**Trustworthiness**

To ensure *credibility* in this research, an attempt was made to discuss the case settings for the three case studies and provide information about the research participants. Further, the theoretical perspectives informing the research have been discussed. The coding technique used in data analysis focused on understanding the participants’ representations and accordingly establish the codes for participants’ responses. The acknowledgement by the IS community about the appropriateness of the theoretical perspectives and resulting theoretical accounts of roles and practices of BAs can also be seen to contribute to the theoretical validity of my research (Maxwell 1992).

Although the issue of triangulation has been considered in the research, triangulation was not the basis of decisions related to the research design. Miles and Huberman (1994) suggest that there are triangulations of five kinds: of data sources, theories, data type (qualitative/quantitative), researchers, and methods. First, data source triangulation is implied by the decision to not only interview BAs but also consider the perspectives of users and the developers. Second, I used a single theoretical perspective to inform the research but I was open to other theories in discussing the findings. Third, my research interest was served best by qualitative data as the research questions were not aimed towards ‘measuring’ any aspect of the phenomena being studied. Fourth, the data analysis was done by one researcher in the research project, but was open to questioning by reviewers, supervisors, and other researchers. Fifth, as discussed earlier, I used interviews as the single method to collect qualitative data.
<table>
<thead>
<tr>
<th><strong>Validity</strong></th>
<th><strong>Validity criteria</strong></th>
<th><strong>Meaning</strong></th>
<th><strong>Techniques/procedure to ensure validity</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credibility</strong>&lt;br&gt;(parallels internal validity)</td>
<td></td>
<td>The settings, participants, theoretical framework are adequately stated and a reasonable match between the representations constructed by participants and those attributed to the participants by the researcher</td>
<td>Prolonged engagement, Persistent observation, Triangulation, Peer de-briefing, Negative case analysis, Member checks</td>
</tr>
<tr>
<td><strong>Transferability</strong>&lt;br&gt;(parallels external validity or generalisability)</td>
<td>The degree to which the interpretation of the researchers may be applied by others to understand other settings</td>
<td>Thick descriptive data about the context</td>
<td></td>
</tr>
<tr>
<td><strong>Dependability</strong>&lt;br&gt;(parallels reliability)</td>
<td>The transparency of a process, that is, the process is trackable and documentable and hence open to scrutiny by other researchers</td>
<td>External audit of process</td>
<td></td>
</tr>
<tr>
<td><strong>Confirmability</strong>&lt;br&gt;(parallels objectivity)</td>
<td>The extent to which the research data can be traced back to their source, and judgements and assertions made about the data are logical and coherent, and may be confirmed by an expert other than the researcher</td>
<td>External audit of the product-data and reconstructions</td>
<td></td>
</tr>
<tr>
<td><strong>Fairness</strong></td>
<td>The extent to which participants’ constructions and underlying values are represented and presented in a balanced way</td>
<td>Present different value and belief’s systems represented by a conflict over issues Negotiation of recommendations with stakeholders</td>
<td></td>
</tr>
</tbody>
</table>
Validity

<table>
<thead>
<tr>
<th>Validity criteria</th>
<th>Meaning</th>
<th>Techniques/ procedure to ensure validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ontological authentication</td>
<td>The extent to which individual participants grow through the research experience</td>
<td>No specific procedure suggested.</td>
</tr>
<tr>
<td>Educatice authentication</td>
<td>The extent to which there is an increase in the shared understanding of the whats and whys of various expressed constructions</td>
<td></td>
</tr>
<tr>
<td>Catalytic authentication</td>
<td>The extent to which action is stimulated and facilitated by the research process</td>
<td></td>
</tr>
<tr>
<td>Tactical authenticity</td>
<td>The extent to which participants are empowered to act throughout the research process</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.12 Validity criteria for interpretive research (Based on Lincoln and Guba1986)

The next criterion is *transferability*. In undertaking a multiple case study, the intention was to have a multi-faceted understanding of the practices of BAs. There was no intention of generalising research findings across the cases. To the contrary, the research was informed by understanding that practices are situated in contexts and likely to differ. Others may use my *interpretations* to understand other settings. Following Klein and Myer’s (1999) principle of contextualisation, I have provided as much detail as possible about the settings and individuals so that others can make decisions about applicability of findings in other contexts. For *dependability and confirmability*, the research design has been discussed in detail in this thesis to ensure transparency of the process followed in this research. The research process and many of the resulting findings have been presented to disinterested reviewers in the IS community.

**Authenticity**

To ensure *fairness*, I have attempted to present the perspectives of BAs, users, and IT staff in a balanced way to ensure fairness in my interpretive accounts. The discussion on understanding boundaries between the three stakeholders groups in chapter 7 includes presenting their different
expectations and perceptions in relation to the work practices of BAs. Although I cannot claim ontological and educative authentication with certainty, my interactions with the BAs, users, and IT staff would have allowed them to see the perspectives of each other. This was especially true when some potential differences in perspectives became apparent to me. There were some research participants who became more interested in the study than others and interacted even beyond the formal interviews. The research aims were not oriented at providing participants stimulus to act or to empower them. Therefore, *catalytic authentication* and *tactical authenticity* are not claimed in this research.

In the following chapters, I will discuss the results that emerged from implementing the research design that has been outlined in this chapter.
Chapter 5

Analyses of the Cases

5.1 Introduction

In this chapter, I discuss my analysis of the three case studies to highlight insights into the roles and practices of business analysts (BAs). The following format is used to discuss the three case studies:

- Background to the case: This includes information about the organisation, its operations, and structure. The background information is presented in a way to ensure that the identity of the organisation and participants is not revealed.
- Information about the research participants: This describes the roles and responsibilities of individuals who participated in the interviews.
- The BAs’ perspective: As outlined in chapter 4, the discussion of results that relate to the BAs’ perspective is presented in five themes. The first theme, BAs’ understanding of their role, highlights role related issues such as what the BAs value in their role, how they see their role to be contributing to the organisation, and what part of their role brings them satisfaction. The second theme, Practice work within the group of business analysts, is focused on the nature of engagement amongst the BAs and highlights the BAs’ perspective on the tools, methods, and documentation. The third theme, Boundary role perspective, is concerned with highlighting BAs’ perceptions about their boundary spanning role. The fourth and fifth themes, Interactions with users and Interactions with IT staff, raise issues that BAs face in spanning boundaries with the users and IT staff respectively. As discussed in chapter 4, in order to make explicit the contribution of particular categories and codes towards the discussion of the five themes in each of the three cases, summary tables were developed. These tables are in Appendix 2.5.
- The users and IT staff perspective: This section is based on the interviews with users and IT staff.
In discussing the perspectives of BAs, users, and IT staff, there is no attempt to discuss all data associated with each theme. For the discussion, I have tried to select from each case some of the more salient features of the data from the perspectives of the participants. Therefore, the salient features discussed under the themes vary between the three cases. In each case, I have tried to highlight some of the issues on which most of the BAs were in agreement, bring out areas where there was much greater diversity of opinion, and to discuss some of the issues that really came as a surprise to me or seemed to be inconsistent in their narrative.

5.2 Case Study 1: Uni 1

Uni 1 is a multi-campus institution with a number of campuses in Australia and one campus overseas. It has close to 30,000 students and over 2,000 staff. It offers educational programs in a variety of disciplines. A major focus of Uni 1 is to deliver industry-ready graduates.

Figure 5.1 is a simplified presentation of the organisation structure of Uni 1. The division that offers higher education programs consists of various faculties that offer courses in various disciplines. The university services division consists of sub-divisions that offer various services. These include sub-divisions such as human resource, IT, facilities and infrastructure, legal services, student support, and risk management. The research was conducted in the student support sub-division.

Figure 5.1 The Organisation structure in Uni 1
As shown in Figure 5.2, the student support sub-division consists of three departments. First, the customer services department deals with students in matters such as providing information, collecting fees, issuing identity cards, and organising graduation ceremonies. Second, the student management department deals with student administration tasks such as managing admissions, conducting examinations, releasing results, and deciding fee related issues. The student management department performs these tasks in collaboration with various departments and faculties in which students are enrolled for education programs. The BAs were employed in the ‘business systems and data management department (BSDMD)’, which is the third department in the student support sub-division.

The BSDMD has the responsibility for co-ordination of information systems to meet business requirements, compliance with legislation and reporting requirements, and process improvements. The BSDMD consisted of two teams. The data management team is concerned with the data setup in systems and reporting to clients. The systems team consists of the BAs and performs the following tasks:

- Manage system security issues and ensure the right level of systems access is provided to the users.
- Provide support and training to users in the use of the student management system.
- Conduct requirements elicitation and analysis activities for system enhancements and system development.

Figure 5.2 Locating ‘the case’ in Uni 1
Liaise with the various faculties and administrative departments to conduct process analysis and suggest improvements.

Liaise with IT department and users of information systems for system enhancements. This requires BAs to get the system changes accepted by the users so that IT department can then make the improved systems operational.

Analyse issues that affect multiple information systems or several operational areas in the university.

Build and implement information systems test plans in collaboration with users and IT staff.

Engage with various faculties and departments to provide ongoing support by assigning BAs to play the role of account managers.

From the list of tasks and through my interactions with the BAs, it was evident that the BAs undertake most of their work outside their own business unit. Their work involves interacting with faculties and other administrative units across the university to ensure there is adequate communication between the business units and the IT department.

The user requirements were largely related to Xsys, the student management system used in Uni 1. Xsys is a legacy system that has been used in Uni 1 for close to 20 years and, as indicated in Figure 5.3, has several interfaces built into it for interacting with newer systems that have been acquired and/or developed in the university. This legacy system and the multiple interfacing systems to Xsys add complexity to the BAs’ work. The business environment for the education sector is dynamic and Uni 1 is continually faced with new challenges that are largely a result of a variety of funding arrangements that have emerged in the recent past, increasing compliance and reporting requirements for Commonwealth and State Government authorities, and increasing competitive pressures. There have also been internal challenges arising from the restructuring of the divisions. The university has responded to these challenges in several ways. A number of IS projects are underway to improve Xsys’s capability to capture data from other systems. Uni 1’s administrative processes are being changed to reflect new requirements. These conditions and the requirements of multiple internal and external stakeholders provide a complex context for the BAs’ work.
Figure 5.3 Xsys’s multiple interfaces to other systems in Uni 1
5.2.1 Information about the research participants

I interviewed staff undertaking business analysis activities in the BSDMD, and also interviewed some of their clients and IT staff to understand their perspectives on the boundary spanning work of BAs. The interviews were conducted between November 2009 and April 2010. Table 5.1 provides a summary of interview participants.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Job Title</th>
<th>Role description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA1</td>
<td>Senior BA</td>
<td>The analysts were involved in understanding problems of users in the faculties and other administrative units and writing the work requests that were to be taken up by the IT department. This involved liaison with users and IT staff. BA4 was responsible for liaison with IT and engineering faculties.</td>
</tr>
<tr>
<td>BA2</td>
<td>BA</td>
<td></td>
</tr>
<tr>
<td>BA3</td>
<td>User acceptance test (UAT) administrator</td>
<td></td>
</tr>
<tr>
<td>BA4</td>
<td>Senior BA</td>
<td></td>
</tr>
<tr>
<td>BA5</td>
<td>Manager, Systems team</td>
<td>BA5 allocated projects to the BAs, and was also involved in certain projects as a BA.</td>
</tr>
<tr>
<td>BA6</td>
<td>Manager, Data team</td>
<td>BA6, as the manager of the data team, worked closely with the entire systems team. Having knowledge of systems and business rules, BA6 was often assigned to important university-wide projects as a BA.</td>
</tr>
<tr>
<td>U1</td>
<td>Manager, Students and programs (IT Faculty)</td>
<td>U1 was involved in managing the administrative tasks for all the IT degree courses, liaison with students, teaching staff and other stakeholders in the university.</td>
</tr>
<tr>
<td>U2</td>
<td>Coordinator, (Engineering Faculty)</td>
<td>The coordinator reports directly to the Manager of the Engineering faculty and runs the unit’s administration.</td>
</tr>
<tr>
<td>IT1</td>
<td>Team leader, Application development team</td>
<td>Lead of a team of 10 staff that were involved in maintaining university information systems. This largely involved enhancing systems to meet changing business requirements.</td>
</tr>
<tr>
<td>IT2</td>
<td>Technical support officer</td>
<td>IT2 was a member of the Application development team and played a key role in database design and implementation.</td>
</tr>
</tbody>
</table>

Table 5.1 Summary of interview participants in Uni 1
In BSDMD, I interviewed 6 people who were all performing business analysis work, but had different job titles: BA, senior BA, user acceptance test administrator, and manager. The BAs’ work was of two types. They worked on various IS projects in Uni 1 to maintain Xsys and related systems, and also as account managers for various faculties and administrative units. As account managers, the BAs were expected to build relationships with clients to assist the clients with process improvements and Xsys related problems. BA1, BA2, BA3, and BA4 were responsible for undertaking the business analysis tasks listed earlier. The major focus of their work was to analyse the problems of users and liaise with IT staff to deliver the enhancements to Xsys or other systems (see Figure 5.4). BA5, the manager of the systems team, was not only supervising the BAs in the team but was also working as a BA on some projects. The supervisory role, among other things, involved assigning BAs to projects and to work with various departments as account managers. BA6, the manager of the data team, had extensive knowledge of Xsys and other interfacing systems and, therefore, was often assigned to important university wide projects as a BA.

The interviewees in the user role were working in two departments that offered education programs. U1 was the administrative manager in the department offering IT courses. U2 was a coordinator in the department offering engineering courses. Both U1 and U2 were part of their respective teams that were responsible for administration activities such as student enrolments, time-tableing, assessments, and data reporting. BA4 was the account manager for the IT and engineering faculties.

The interviewees in IT roles were involved in interacting with BAs for delivering on systems enhancements. IT1 was the Team Leader of Uni 1’s application development team. The team consisted of 10 programmers who were dedicated to maintaining Xsys and other systems that Xsys was connected to. IT2 was also a member of the application development team and played a key role in database design and implementation.
Figure 5.4 BAs’ Liaison work in Uni 1
5.2.2 The BAs’ perspective

In this section, I discuss insights into roles and practices of BAs under five themes.

5.2.2.1 The BAs’ understanding of their role

In this theme, it was interesting to note how BAs viewed their work and how their view may influence their practices within the group and their boundary spanning work with users and IT staff. In discussing their role, there was no one view amongst the BAs about their role being either a technical or a business role. The BAs expected more clarity around the BA role and highlighted some issues that contributed to job satisfaction.

BA role - Is it a technical or a business role?

In Uni 1, it appeared that majority of BAs understood their role as a business role. Most of them had come from business backgrounds and that may have shaped their perception. This is exemplified in the following comment:

*I consider it more as business role...probably because I came from business. If the person had an IT background they might consider themselves closer to IT* (BA1).

The background of the BAs is not the only factor that may shape their understanding of the BA role being a technical or a business role. The nature of their current work and their work related interactions may also influence their understanding. For example, BA2 first commented that the BA role was both a business and a technical role and, when asked to choose between being a business role and a technical role, BA2 viewed the BA role to be more of a technical role. Although BA2 had come to the BA role after spending a considerable amount of time in the student administration areas of Uni1, BA2, having a greater involvement with the IT department, considered the BA role as a technical role:

*I just feel maybe because of my business background as I have worked in a lot of [student administration] areas and I’m still connected with them in the work that I do...But, our work probably on a day to day basis deals more with [IT department]...Probably an IT role* (BA2).
The BAs’ perception of the role being a technical or business oriented role may influence the BAs’ work. For Example, BA1 and BA2 had a different perspective on their ‘closeness’ with the users and IT staff. BA1 who thought the role was more of a business role viewed the BAs to be representing the users. BA2, who considered the role to be more of a technical role, felt more like ‘insiders’ with the IT staff:

We are essentially representatives of the user group to IT and it’s my experience generally that there is that trust, that we will go to IT asking for exactly what they want (BA1).

I think the business probably see us as [IT staff], but not fully...But [IT staff] treat us like insiders because we’re working on the products that they’re working on, we’re the ones liaising with them about the issues on the majority of the occasions and we also speak their language (BA2).

The feeling of being ‘insiders’ and ‘representatives’ is likely to influence their practices and result in varying degree of comfort in working with the users and IT staff. For example, if they considered their role as a technical role, they may focus more on technical concerns in their work and feel like ‘insiders’ while working with the IT staff.

A lack of clarity in the BA role

Another relevant issue that is evident from the BAs’ comments was a lack of clarity associated with the BA role. The BAs were aware that the BA role was relatively new and people in general were not familiar with it:

It’s my experience in a social situation that very few people know what a business analyst does and if they do, they generally interpret it as an alternative, something different to what I do (BA1).
What was more surprising was the lack of clarity the BAs themselves had about their role. The BAs felt a need to better understand their own role and to explain their role to others by adopting appropriate communication strategies:

*I wouldn’t say we’re 100 percent clear in what our roles are. I would say that we need to clear that up...We have a lot of work I think as far as telling the organisation what we do and what our specific expertise are...because I don’t think that’s very clear* (BA2).

For a group of individuals designated to span boundaries with various organisational stakeholders, this role ambiguity may create new boundaries. For example, any differences between the expectations of the users and IT staff and the understanding the BAs have of their own role may result in difficulties during BAs’ interactions with the users and IT staff.

One contributing factor for the lack of clarity about the BA role is arguably grounded in the various ways in which individuals may be involved in boundary spanning work in organisations. For example, there may be individuals with the job title of BA undertaking business analysis work, individuals in some other job title undertaking business analysis work, and individuals in job title of BA but undertaking very different type of analysis work (e.g., change analyst, process analyst, and financial analyst). For example, although not a designated BA, BA6 had been involved in many projects to undertake business analysis work, and commented:

*I think you have got a person who is a business analyst and then you have got a person who does business analysis as a part of your role. Like what I do and what our team does* (BA6).

Levina and Vaast (2005a) assert that while individuals nominated to boundary spanning roles may not be effective in spanning boundaries, individuals without being nominated to boundary spanning roles may be effectively spanning boundaries. In Uni 1, BA6 may be viewed as a non-designated boundary spanner. BA6 did not have a job title of BA, but was often involved in business analysis work involving users and IT staff.

In Uni 1, the BAs were also trying to promote a new role for themselves, called ‘account managers’. While the BAs had the responsibility for working on various Xsys enhancement projects, they were also appointed as account managers to manage relationships with various departments:
Part of their role includes being Account Managers, going and getting to know the business, building up those relationships (BA5 referring to BAs 1-4).

The role of BA as an ongoing manager of relationships with clients is quite distinct from the project based view of BA work. Having BAs in the ‘account manager’ role may allow organisations to adopt a service mindset for systems and projects (Alter 2010). However, adopting a service mindset may have implications for recruiting, training, and placement of BAs. For example, BAs interested in working on project-based assignments would be interested in assignments of a shorter duration and may not be appropriate for being placed in ‘account manager’ roles. Further, a project focus that is usually associated with business analysis work may not be appropriate for BAs in ‘account manager’ roles. An approach focused on projects may be driven by project metrics that may not be good indicators for the quality of relationship with clients.

**Value a variety in work experiences**

The BAs seem to value a variety of work experiences and this was a potential source of satisfaction in their work. This inclination towards variety of work experience suggests that BAs may seek different work experiences, and thus may actively seek opportunities on new projects:

> Different organisations define business analysis with different terms and they also have different requirements by way of experience using methodologies, language, systems in order to be able to have their staff meet the requirements of the actual business analysis role. So, the aim for me at least in the short to mid-term is about accumulating a variety of experience in the work...I suppose having done the job only once before, I was only a Business Analyst in the eyes of my former employer. Now I’m a business analyst in the eyes of two and I have literally doubled my usefulness as a BA (BA1).

The BAs’ inclination towards a variety of work experiences could be an important consideration in deciding on strategies for motivating and professional development of BAs. By motivating and retaining BAs, organisations would be able to retain the boundary spanning competence that ‘resides’ in the BAs.

**A Sense of contributing to the organisation**

Another source of satisfaction for the BAs was the sense of making a contribution to the organisation. One BA reasoned that as organisations are relying increasingly on IT-based
systems, the BA role is increasingly required as a ‘third-party’ (intermediary role) by the IT department to maintain large systems:

*I can see why business analysts emerged when most organisations started relying heavily on a principle system or a series of them, where the maintenance of those requires that the third party is the business analysts* (BA1).

BA2 was of the view that the IT departments needs to involve the BAs in various meetings because of the BAs’ ‘connection and importance in the whole process’. The feeling of making a significant contribution can also be attributed to the BAs taking responsibility and ownership of Xsys and associated systems:

*I don’t know much about [the new tool to communicate with clients],* but that will be a tool used to liaise with the user group in particular when they have issues with the systems that we own (BA1).

Although Xsys and the associated systems were owned by the student support sub-division as a whole, it was the BAs who assumed the responsibility for these systems. The pride in their contribution came from assuming the ownership of Xsys and associated systems which arguably underpin all operations of the university.

The sense of contribution can also be attributed to the BAs’ perception that their role was one of change agent and advising users according to university objectives:

*I’ve got a fairly varied role. Basically I guess the main part is to do with change management* (BA3).

[The users] might contact us and say “*Can you analyse this and have a look at whether there could be potential work to be developed for this?*” and we will just look at whether it’s going to be a big enough project or whether it’s rated high enough as far as impact to the university to do it, and just advise and guide the business on their options on where they’re going with it (BA2).

Another source of job satisfaction in the BA role was proving good service to users. They were particularly interested in ensuring that the users were able to use the enhanced functionalities of
Xsys. The BAs in the group had formal training responsibility and for BA1 it was the most rewarding of all the responsibilities:

*The thing that I like most about BA work is handing over a finished product to the user and saying “Here’s what we’ve got for you, it’s great and here’s how you use it.” I think that’s the most rewarding part of the process...I like the work because I think it’s useful, it’s interesting and it’s dynamic (BA1).*

The training role would be especially important in cases where BAs are playing a role of ‘account managers’ and have an ongoing role to support users.

To conclude, the majority of BAs in Uni 1 perceived themselves in a business role because of their background and seemed more at ease with the users, as ‘representatives’ of the users. Further, the BAs being in the ‘account manager’ role, may have also contributed to the BAs’ perceptions of being representatives of the users. This raises the following questions: What are the implications if individuals in a boundary practice perceive themselves to be belonging to one of the two groups they are designated to connect? For example, for the BAs that feel more in a business role may find more difficulties in dealings with IT staff. Some indications of these difficulties are evident in this case (discussed under the theme *Interactions with IT staff*). This may result in business oriented boundary practices. The other issue was the lack of clarity about the BA role. The BAs themselves were not clear what their role was and also perceived a lack of general awareness about their role in the organisation. The label of ‘account managers’ and the practice of getting business analysis work from individuals that did not have the job title of BA may also contribute to the lack of clarity about the BA role. The sources of job satisfaction for BAs are having a variety in work experience, a sense of providing good service to users, and bringing change in the organisation.

5.2.2.2 Practice work within the group of business analysts

The perspectives of the BAs on the internal group practices highlight their need to comply with the group, the potential influence of organisation structure on their practices, the nature of shared understanding within the group, the practices that contribute to their learning, and the ad-hoc nature of work allocation (a combination of individual work and team work). It was also interesting to note the perspectives of BAs on the use of tools, documentation, and processes.
Complying with practices within the group

BAs in Uni 1 were generally aware of the need to comply with the team’s practices. It was important for the BAs to work in similar ways:

*So we do work in teams as far as making sure we all try to do the work in the same sort of manner* (BA2).

The need to follow practices within the group was grounded in the BAs’ understanding that they could not simply ‘import’ practices from organisations where they worked previously into a new organisation:

*When you come into an organisation there is a process of trying to achieve compliance. Obviously it’s not particularly productive to walk in and say “Well this is the way I used to do my job, so that’s how I intend to do it now”* (BA1).

This supports the discussion in chapter 3 that the notion of ‘importing’ best practices may be problematic (Marabelli and Newell 2012; Orlikowski 2002).

The BAs’ need to comply with the team and maintain a status quo is in contrast with their efforts to be change agents for their clients. When it came to the issue of changing practices within their own team, the BAs seem to give priority to ‘harmony’ and status quo rather than to change:

*I try not to make too many changes, especially this area I’m in, in my employment. I think sometimes I can be offensive to long-standing staff member...My job is to at least maintain the status quo and to make sure that I am performing the job in a predictable way when I am working on my own* (BA1).

However, there was no reason to believe that the need to comply also meant that there was an agreement about the ways of working.

Influence of organisational structure on BAs’ practices

One factor that may have contributed to the BAs’ need to comply with group practices was their view that the business analysis practices vary considerably between organisations. BA1 explains as to why practices of BAs may differ between organisations:
A lot of the definitions of BA work are dependent on the structure of the organisation. So, in my last job for example we worked much more closely with the IT group and so our practices were very, very different from the way they're done here (BA1).

The ‘distance’ amongst the BAs, users, and the IT staff, may be influenced by their location in the organisation structure. BA1 is of the view that the business analysis practices in Uni1 were different from those in another organisation where BA1 had worked more closely with IT department. Thus, one can infer that location of the BAs in the organisation structure may influence their perceptions of ‘closeness’ and the focus expected from them in their work.

Shared understanding in the team

The need for compliance with the team’s practices was supplemented by the need to have a shared understanding with other BAs in the team, especially when members of the team were all working on aspects of the same system:

I can understand why BAs would work independently all the time if they were working on a small component over and over again, but otherwise when you’re dealing with a large database which is the case here and in the case of my last job, it’s a team environment where we have a shared understanding in terms of the system behaviour, of methods for analysis, of understandings of use of language or use of templates (BA1).

BA4 revealed other areas where an improved shared understanding would be useful:

I think we need to have probably a better understanding of not just how we interact within our team but with others. So if we’re working for example on implementation of a new enhancement to a system...we have many stages in that process and it’s just making sure that we’re consistent in that process. Also consistent in our data gatherings, we’re working with the same methodology to make sure we’re all approaching the tasks in a similar fashion (BA4).

Differences amongst the BAs were perceived as healthy, and as leading to better solutions:

People have different ideas about how to solve the problem, but that is always good because even if you have got two or three business analysts saying something different
and then you start bouncing ideas off system designers, then you are going to start to come to a workable solution because you are using more people's brains and ideas (BA5).

The process that BA5 describes of arriving at a shared understanding gives an important insight into the boundary spanning work of BAs. The suggestion that a shared understanding among the BAs requires ‘bouncing ideas’ off the systems designers implies that for a boundary practice, unlike for a CoP, the elements of joint enterprise and mutual engagement may not be shaped at the core of their practice but formed at the boundaries in their interactions with the users and IT staff.

The Practices that contribute to learning

The BAs had largely relied on informal learning opportunities to acquire skills needed in the BA role:

Well I came to BA work because a staff member that I was working with in my last employment said “We’d like you to come and work with us.” So I learnt about BA work on the job. I started in a position which was a Business System Officer...and it was sitting in with people, sitting in on meetings and watching how people did things, basically being a fly on the wall (BA1).

BA1’s comment suggests that the process of becoming a BA involves on-the-job learning without any formal training. BA4 said that he had not done a structured BA training program and in that sense did not view himself ‘officially as a BA’. The following statement from the manager of the BA team explained why informal learning on the job was important:

I think they're always continuing to learn because they have to be involved in different processes or different areas that they may have no expertise in, so they learn more about the business every day. They have to be flexible to continually adapt to changing things so they’re always ready (BA5).

The manager emphasised that the learning was focused on the practices being followed by different business areas. The nature of their work, however, requires them to provide analytical inputs to the user of the various systems in the business areas. The challenge for BAs was to shift their focus from seeking information from these areas to making analytical contributions.
There is no clear indication that BAs were aware of learning needs associated with analytical component of their work.

The BAs considered office space design to be important for facilitating informal learning interactions:

_We’re probably learning off each other, just trying to pick up skills just using templates to sort of feel our way into what we know and what we don’t know_ (BA2).

_Because we’re in an open plan area there’s a lot of informal knowledge, people overhearing things about discussion, then it goes back and forth between BAs_ (BA5).

This statement highlights the importance of acquiring knowledge informally by merely being part of an open office space where conversations and discussions involving others in the team are taking place. This access to interactions results in discussions amongst the BAs and contributes to their learning.

The BAs were in favour of getting formal training for the skills required in their work. A formal training program was seen as a source for understanding the broad spectrum of skills and traits required in the role and for networking and learning the practices of BAs in the wider community:

_I’m an advocate for formal learning...I think it would just pinpoint a lot of specific Business Analyst skills and traits that are important to the role...If you’re not doing a course you can’t see how other business analysts are working either. So I think if you did a course you can actually get good ideas that you can maybe go back to your manager and go ‘Hey can we try and have a go at doing it this way or improving our current processes?’_ (BA2).

**Nature of work – Combination of individual work and team work**

BA1 explained that their work was a combination of both team work and individual work. The group level work is for arriving at a common understanding of the way the systems work and the approach the BAs will use. The individual work comes in when the BAs liaise with business and IT department for understanding and delivering on user requirements:
It’s a combination. I think that’s common of BA work everywhere that what generally happens is an understanding has to be reached in a group environment, especially if you’re working with a large system...The work needs to be sort of cut into slices and that’s where the independent work takes place in liaising independently with user groups or with members of IT (BA1).

In Uni 1, there seems to be no organised way of allocating work in the team. I was interested in knowing how well the BAs in the team understood each other strengths and weaknesses and if that was related to the work allocation within the team. It was clear from BA2’s responses that they were not able to assess each other’s strengths and weaknesses yet:

I don’t think at the moment because our team’s getting bigger, but down the track I think the BAs in our group will probably show strengths and weaknesses in different areas. So we may use that as to who will do more of what work...a lot of the work sometimes it’s just sort of verbally given as far ‘You’re working on this,’ ‘You’re working on that’ (BA2).

Perspectives of BAs on the use of documentation, tools, and processes

The BAs emphasised the use of documentation and computer-based tools. There was, however, little reflection undertaken by BAs on how the documentation and tools were used to accommodate the perspectives of different stakeholders. Their focus on documentation tended to revolve around their own interests of traceability during troubleshooting:

I understand the importance of having [documentation] formalised, the processes of transparency and being able to go back and see what went wrong if something did go wrong (BA1).

Another interesting issue was whether the documentation used by the BAs was suitable for the users:

If you are including process flow diagrams or use cases or things like that, business people aren’t used to that kind of thing. But if you can show them the same thing all the time, they will get used to it (BA6).

If we consider BA6’s statement, the users have a low familiarity with the models the BAs used. However, the assumption is that users’ increased exposure will improve users’ familiarity with
models and will somehow help improve the user-BA interactions. Although this might be a pragmatic way to improve familiarity, it seems to be somewhat in contradiction with the ‘service mindset’ that the BAs were trying to promote. While users’ exposure to models may make the users more familiar with the models, the larger question is: Are these models really effective in supporting user-BA interaction or, as highlighted in chapter 2, are they indispensable because they are serving the programming driven paradigm followed in IS projects?

In relations to using processes for their work, BA4 commented upon the challenges involved in bringing about a change within the BA team. The comment also partially explains as to why compliance with group practices may have been on their minds:

*I think that sometimes the negativity [towards change] can become a bit draining...it concerns me that several people that I’ve met so far in my travels here at Uni 1 are so focused on having very strict guidelines and boundaries by which they work. I find that very hard to deal with...people who have been established for a long time and they can become somewhat institutionalised, they’ve been here too long, they believe whole heartedly that their life must only exist in this box, you can’t work outside the box and no-one must ever come into my box (BA4).*

The rejection of rigidity in the established procedural guidelines is accompanied by a degree of frustration. A need for change in the attitude of BAs who have been longer in Uni 1 is suggested by BA4’s statement. One could also speculate that the newer members of the team could be facing difficulties in following procedures and practices that the established members have learnt over many years.

In relation to the internal team processes for dealing with issues raised by the users and IT staff, there seems to be no formal improvement process:

*At the moment I think someone just raises it as an issue at a meeting or to the manager directly and then I guess we just have a look at discussing the issue and possibilities of how we will go about improving it if we are going to improve it. There is no formal process of going about the change in the team (BA2).*

The reliance on ‘common knowledge’ or ‘common practice’ emphasises the practice perspective where the practitioner is relying on ‘practices’ held in common in the group. These
‘practices’ need not be documented or discussed explicitly within the team. Thus, if we need to understand, improve, and support the work practices of BAs, we need to focus on these ‘practices’ that drive business analysis work:

There’s nothing that we’re required to follow. It’s just sort of common knowledge or common practice. So if an incident comes in, we will just read it. So we’ll read what the incident is, try and do just a bit of an analysis on what they’re requesting and it’s generally forwarded to the appropriate people or raised with the right people. Or you resolve it and then you write back. So there is no formal “You have to do this.” It’s just common sense really (BA2).

One area that BAs felt they needed to be involved more was the process for undertaking change management in Uni 1. BA6 highlighted that the BAs should be responsible for change management in Uni 1 and that the change management plan should include user training and be developed in parallel with understanding user requirements:

I think business analysts are the ones who have gathered all the information, so they are also the ones who are going to understand how the process needs to change and what type of training is required. So when you are doing your requirements document, you need to be able to pull out your training requirements out of that documentation as well (BA6).

To conclude, the BAs were aware that business analysis practices varied significantly between organisations and therefore compliance with practices was important. In some comments, however, there also seemed to be an element of protest against the rigidity of the experienced members of the team. The BAs were aware that the process of learning was largely informal and on the job. The formal learning opportunities were also seen as opportunities for networking and keeping abreast with practices in the professional BA community. As most of the BAs’ liaison work was done alone and not in teams, it seems the opportunities for developing a shared understanding become limited and there may be a need to organise structured learning activities within a group of BAs.
5.2.2.3 Boundary role perspective

The BAs’ comments on their role as a ‘bridge’ between the users and technical IT staff highlight their understanding that the bridging role involves two distinct interactions, each with its own difficulties. The BAs commented on how the ‘worlds’ of users and technical staff were different and how the BAs needed to practice ‘diplomacy’ and ‘speak two languages’. The data also provides insights into the BAs’ attitude toward alignment with organisational objectives.

The Bridging role

The BAs were well aware of being a connection between the users and the IT staff. The BAs perceived their role was to link the two parties by participating in two separate interactions. This makes the BAs’ role very challenging as they are engaging two different practices, the user practice and the developer practice. One BA commented:

Well it’s kind of unidirectional really because what happens is when you’re dealing at the beginning of the process, it’s generally the user has a requirement. So what you work towards in the direction of the IT is documentation, diagrams, workflow, generally sort of prose based description of “as is” to “to be” and going through that process is very much “I’ll write this down and hand it to [ IT] and then they go ahead with it” (BA1).

BA1 also suggests that the medium for interaction could also vary in the two interactions. For example, there was a need for less formality with the user in comparison to the formality expected with the IT department. The level of formality could also be a measure of the ‘distance’ the BAs experience with the two sides:

Obviously there’s an approvals process involved, but generally what happens is that the dialogue with the user is verbal, with IT it’s written (BA1).

The differences in the vocabulary and interests of the users and IT staff seemed to make it challenging for the BAs to reconcile differences in the two different interactions. This required the BAs to emphasise clarity in their interactions:

I guess the clearest possible terms without being abstract and without being over technical or under technical, always just try to achieve clarity. Generally when I’m
asking a question and someone gives me an answer, I repeat it back to them and get them to confirm that I’ve understood. That is the same for either group really (BA1).

This statement demonstrates the BA’s might be aware of how interpretations may vary between them and the stakeholders that they interact with, and that such semantic boundaries (Carlile 2002) may need to be considered in their communications.

**Frustrations and difficulties in the boundary role**

Although the BAs were trying to promote a service culture and expressed satisfaction for being able to contribute to the organisation, the BAs experienced several frustrations in acting as a ‘bridge’. BA6 explained that in the conduit role ‘you don’t hear about the good stuff, you only hear about the bad stuff’ and that the BAs might be seen as an outsider by both the users and the IT staff:

> When you are talking to business people they see you as an IT person and when you are talking to IT people they see you as a business person (BA6).

There were frustrations in managing priorities of users and IT. BAs perceived that there are two ‘sides’ in the project (the user side and the IT side) that have different priorities and key performance indicators (KPIs). BA1 explained:

> When I first started we had two major products that were required for implementation into the system before re-enrolments could commence and what we were feeling at that time was a combination of pressure from IT who were saying “We want you to get this product out in a timely manner,” because obviously they have KPIs to consider as well as we had faculty staff saying “We’d like to start re-enrolments as soon as possible [so we want this other product].” In those situations what gets compromised is the potential quality of the finished product because if we’re being asked to do something by both users and IT on either side of us and of the project, what we end up with is less time to do a good job (BA1).

BA1 also expressed frustration about the situation in which they have to face users’ questions about timelines for delivering system changes:

> I think the thing that frustrates me most is the conduit. The middle man situation can be very frustrating because it’s this never-ending process of going between one or the other and especially going from IT back to users, IT are so rarely willing to give you an
estimated time of delivery...I think one of the most frustrating things is having to tell the users ‘We don’t know, but as soon as possible’ (BA1).

BA1’s frustration suggests that the more satisfying part of their work does not revolve around meeting the conflicting expectations of the users and IT staff. Given that the main expectation from the BAs would be to ‘manage’ the users and IT staff, such frustrations seem to be inherent in the BAs role.

Another consequence of the BAs acting as a bridge was that the BAs spent a lot of their time ‘living in two worlds’ of the users and the IT staff. The BAs found it difficult to divide their attention between the needs of their own team and the needs of their clients:

Because our clients are external to our team, we’ve got to really meet their needs first. So I guess we do not have enough time to sort of work on our own team and processes...I would say most of the time [the focus is] always on the outside, the business want training, the business want a production incident fixed, the business want a new major product deployed, but also our team needs work. We need to get processes in place, communication out there about our team, but that sort of has to get left behind (BA2).

BA6 commented that in order to effectively serve the clients, the BA team needed to be better organised and therefore spend more time on improving their internal working:

At the moment it is probably more outside and they need to start turning inwards a little bit because we have some internal goals and projects that we want to do and we need to have our area working well before we can provide good service to others (BA6).

Another area of concern was the delay in dealing with the expert end users (referred to as Subject Matter Experts (SME)) in the process of understanding requirements, resulting in the system requirements focusing on the outputs rather than the functionality. The functional inadequacies surface later when user acceptance test is done with SMEs. Despite this realisation, there was no indication that the practices were being changed to correct this situation:

The representative of business who is involved in the signing off of the documents is rarely a person who actually uses the function...They are most often the manager of the
person who is going to use the function which is frustrating because these are not the people who have to use what we give them...knowledge that [the managers] bring to the process is the output [expected from the systems]. It’s not the function itself (BA1).

Adequate knowledge for dealing with users and IT staff is considered important by the BAs. The BAs valued knowledge required to deal with problems presented for analysis. There were clear indications of frustration when a BA perceived lack of information:

I think the difficult part is having knowledge of everything and how everything works. Unfortunately there’s no one person that you can go and ask, there’s no oracle of information and that makes it quite challenging (BA4).

I don’t like some of the lack of knowledge that I might have...You’ve got to give someone an answer but sometimes the people that you need to get information off aren’t available. So I don’t like that aspect where you’re constantly sitting around, sometimes just waiting on people to be around for you to answer your question (BA2).

This highlights the challenge BAs faced in dividing their attention between the needs of the team and the needs of their clients. The lack of engagement between the BAs due to their focus on clients could be potentially resulting in poor knowledge management initiatives within the team. This is evident in the BAs’ acknowledgement of lack of knowledge within the team. One may also speculate that the knowledge within the team was still being developed.

**Being ‘diplomatic’, ‘speaking two languages’, and ‘living in two worlds’**

Irrespective of whether they saw themselves as representatives of business or IT, the BAs practice diplomacy with both parties. One BA referred to the liaison role as that of a diplomat working with business and IT. When asked to elaborate, the BA explained:

I guess because I work as a bridge, a liaison between the business and the IT department, there’s a lot of diplomacy involved in communicating the business requirements from the business to the IT department and communicating solutions or problems from the IT department to the business (BA3).

The BAs were hesitant in questioning the IT staff and almost in awe of IT skills. They were also well aware of the IT staff’s inflexible attitude. The BAs, therefore, were careful about how they were going to present user requirements to the IT department and the IT department’s response
to the users. The BAs explained that the people in the IT department were straightforward and
the choice of words they might use could upset the business:

*I guess in a way [the IT department] is a bit more straight talking which can be - if I
was to just tell the business exactly word for word what [the IT department] has said, in
some cases I think that could ruffle a few feathers because [the IT staff] will just say
“Oh no, it won’t work,”* (BA3).

Another element of their boundary role orientation was the need to “speak two languages”. The
BAs used a different vocabulary in their interactions both with users and with IT:

*The businesses have no idea what [the IT department] is going on about and they
generally talk in a language that is not system orientated or technical orientated. I think
the issues are when you’re dealing with two different groups you start picking up two
different languages and you can sometimes forget who you’re talking to* (BA2).

The BAs knew it was important to make sense of both the ‘worlds’ and bring out the translation
required. The BAs thought that without them the users and IT people would be unable to
communicate effectively with each other:

*I think just in terms of the use of language you’ve got to really live in two worlds in this
role. You’ve got to understand from a user’s point of view how they’re seeing the end
product as well and understand from an IT point of view how these products are
developed* (BA4).

**Attitude towards bringing about alignment**

In some of the templates that the BAs used for documenting the outcomes of their interactions
with users and IT staff, there is an expectation that the BAs be mindful of organisational goals
and ensure that alignment with the goals is maintained in projects. However, this expectation
did not appear to be part of the practice of BAs in Uni 1:

*There’s parts [related to vision and mission] – that’s in the template [used by BAs], but
not always filled in. But it is part of the template* (BA5).
When asked whether aligning with organisation strategy was involved in their work, the response was clearly a negative and we can infer that the imperatives of organisational alignment do not seem to be central to the way the BAs in Uni 1 approached their routine work:

I don’t think it has a real connection...I mean I know it’s there in the background, but I think unless you’re up on the management level that you’re really being pushed to make sure that you meet those guidelines. So in my day-to-day work I guess it’s not really on my radar (BA2).

Wenger (1998) asserts that organisational practices may not follow organisational policies and that the policies are often at odds with the practitioners’ work practices. This is quite evident from the absence of an explicit focus on organisational goals in the routine work of BAs.

The BAs were also expected to bring about alignment amongst the processes being adopted by the users of information systems. For example, the focus of alignment was on different processes that were being used in various departments:

[Shared understanding] is not only to do with system enhancements, but more to do with processes. Is there a process that all the faculties are doing, but in a slightly different way? Can they all use the same one? Is that valid or are there reasons why one does it in a slightly different way, like due to a legislation or something? So we’re going to be looking at working together, finding out what they do, all their little intricacies in their little processes that they do, why they do it and is there a possibility that we can amalgamate that all into the one process (BA2).

It is evident from this statement that the BAs face a challenge in aligning the different processes used by the users. The BAs, though aware of the slight differences amongst the users, were interested in getting the users to follow one uniform process.

5.2.2.4 Interactions with users

The BAs’ perspectives on their interactions with users highlight the challenges they faced in understanding the issues reported to them by users, understanding the differences between user requirements, dealing with lack of user involvement, and managing user expectations.
Understanding issues reported by users

The users’ initial report that raised the issue seemed to be of little help to the BAs in immediately classifying the issue:

The issue that I experience frequently is that people don’t know the difference between certain types of problems with the system. If the system isn’t doing something that they want the system to do, or what they usually expect it to do under a certain set of circumstances, the language they use is ‘The system’s broken.’ I guess that’s very rarely true (BA1).

The task before them is to understand the nature of problem for which the system is being perceived by the user as a “broken” system. The classification of the issue by BAs is an important step towards issue resolution. The process of classification is informal and involves interacting with the concerned people. There is little evidence to suggest which issues were given more importance by the BAs. BA1, however, revealed a hierarchy of requirements in terms of importance:

Xsys needs to maintain information that can be retrieved, generating reports, notifications, error messages, links, that sort of thing. These are I suppose second level requirements that are good to have, but the most important thing that the system needs to have is the ability to record and retain information (BA1).

In the hierarchy, the “ability to record and retain information” was first level requirements and the ability to “maintain information that can be retrieved, generating reports, notifications, error messages, links” was a second level of requirements. While the BA might argue that the first level requirements are a more fundamental requirement, it is the second level requirements that appear to be more important to users. The BAs were perhaps giving priority to considerations other than users’ interests.

The BAs were encouraged by their manager to be problem oriented in dealing with the issues that came before them from the users. This suggests that the manager viewed the BA role as a problem/issue analyst for gaining shared understanding of the problem, prior to coming up with the solution:

Well if someone comes to me with an issue or a problem and I can look at it and I can say, ‘Oh yeah I think you can do this and this and this’, my manager will say, ‘No, no,
no, you shouldn’t be thinking about a solution you should just be thinking about the problem, let someone else sort out the solution’ (BA4).

Understanding differences in user requirements

Some of the BAs’ comments suggest that they were coming to terms with the fact that users of Xsys could have different requirements even though they may appear to be involved in similar kind of work. This realisation was described by BAs as ‘interesting’ and ‘astonishing’:

_It’s astonishing that the university’s finance department that deals with student finances and the student services finance department are two different groups and they don’t talk to each other and they both work totally different ways. I sit there and I think to myself “What have I missed? Is there something wrong with the way I think because to me they should be the same people and they should be working the same way with the same goals_ (BA4).

_It was interesting to see that some of the faculties cared about a particular component and others weren’t really concerned at all. That was an interesting experience when I would consider that on a hierarchical level, faculties are kind of even, they’re equal. But they all do business in different ways and most interestingly, they all want to use their system in different ways_ (BA1).

Although the BAs were aware that different users of the system would have different requirements, it was still a challenge to reconcile the differences. The tendency to assume that faculties in Uni 1 have similar requirements had caused problems in the past:

_We implemented an exemptions process for screen viewing and one faculty highlighted they didn’t like the fact that there was a field missing for information because that got taken off. They weren’t consulted in the writing of the business rules. One faculty said ‘yeah, we are happy’, so we just went with that_ (BA2).

BAs also were required to deal with situations where users groups could not agree on the system functionality. For example, a department responsible for the graduation of students wanted an enhancement by which students could apply to graduate online and also to pay online to attend the graduation. The finance department was not interested in automating this financial transaction since it would mean changing their ways of doing things.
The BAs made efforts to support users in several ways. BA5 explained how the BAs that were assigned to more than one faculty as account managers were expected to relate the practices of one faculty to another. This suggests that the BAs were spanning boundaries not only between IT and users but also between the various user groups in Uni 1. One of the BAs explained how this was done:

> I was posed a problem by one of my faculties. Now luckily for me both of these faculties are in the same building so it’s very easy for me to share information and one of the Managers very kindly gave me some wonderful information that was really, really, really useful. I then took that information and immediately went and saw the manager from the other faculty with that information and she was absolutely thrilled. She said ‘This is exactly what I needed to know’ (BA4).

**Dealing with lack of user involvement and managing user expectations**

BAs experienced a lack of user engagement. The BAs were disappointed by the level of willingness the users showed in understanding issues as was explained by one BA in the team:

> I think that I am given the time to be autonomous but that has to coincide with the willingness on the part of the user or the business owner to be willing to spend the time with me so that they can reach the highest level of understanding. So it’s definitely a two-way street (BA1).

BAs expect that their willingness to explain issues to users must be reciprocated by users’ willingness to learn. This was especially true when it came to explaining technical issues to users:

> So I think the issue is that they don’t want to know what [IT’s] issues are, they just want their system to work and do what they want it to do in a basic sense. If you say to them ‘Because of technical reasons we can’t do this,’ you’ve got to win them over a little bit more because they don’t understand by just saying ‘Because of technical reasons,’ because they’re just ‘Well make the system work’ (BA2).

Managing user expectations was another challenge for the BAs. Having understood the user requirements, the BAs evaluate them for feasibility by matching the user expectations with system constraints:
When we’re looking at requirements for enhancements, the requirements process can be quite difficult because it’s that realistic expectations issue that you come up against where people ask for something that simply isn’t possible because of the way the system is structured (BA1).

A BA explained how the interaction with the users starts with discussing requirements but then system constraints become the focus:

So although in the beginning the focus starts as the business requirements, they get gathered. But then the constraints come in and then things just start dropping off (BA2).

Managing expectations required explaining how the requirements could adversely affect other users. At times this was not enough and BAs expected someone in a position of authority to intervene:

The explanation process is more about furnishing the end user or the person who’s making the request with a sense of ‘It impacts you, but it also impacts other people in other ways’...Now, they don’t generally like it when you tell them you can’t do one part, but in some scenarios you’ve got someone higher or something that’s saying ‘No.’ So it’s not just you as a team saying ‘No, we’re not doing it’ (BA2).

It appears that BAs’ routine work requires them to deal with issues of power and authority in the workplace. The strategies for decision making related to user requirements would therefore be important for managing user expectations.

To conclude, for the BAs, performing in the role of ‘account manager’ was made difficult by the constraints imposed by Xsys. Despite their perceived closeness with users, the BAs still found it difficult to involve users and manage their expectations. Another issue relates to bringing about alignment amongst user groups. In the previous theme, I discussed BAs’ perspectives on bringing about alignment in processes used in various organisational units. The need to bring about alignment between the user groups may be driven by the need to achieve efficiencies in the process of system maintenance. However, it was not clear if the BAs considered that achieving such efficiencies could prevent critical requirements of some stakeholders from being met.
5.2.2.5 Interactions with IT staff

The BAs commented more about their interactions with users than with IT staff. This could be because the BAs were located in the student services sub-division, a sub-division supporting the various faculties that used Xsys and its interfacing information systems. Little emphasis on BAs’ interactions with IT staff, however, could also be perceived as a symptom of a relationship that needed more attention. From the BAs’ perspective, the relationship suffered due to the attitude and practices of IT staff.

Difficulties with the attitude of IT staff

The BAs were critical of the IT staff’s attitude towards sharing information. This seemed to have added to the BAs’ frustration of not having enough knowledge about the problem domain:

Some people [in IT] are difficult to get information out of, so you need to be able to hound them and keep asking questions in different ways (BA6).

The BAs and the IT staff were located in the same building, but on different floors. BA4 perceived IT staff had an attitude of superiority:

I think it’s the tyranny of distance even though it’s only one floor...IT believe they’re IT and that’s it. No-one else is part of their group...we don’t actually get access to their space. They have full access to ours but we have no access to theirs (BA4).

The BAs disliked the fact their system knowledge wasn’t appreciated by the IT staff:

Sometimes talking to IT can be a frustrating experience because I feel like I’m treated as though I were just a user from time to time. When I report something I am returned with a response of “No, no, that’s not what the system is doing,” and I’ve done a lot of testing in my time...Well IT’s attitude that “I know more about the system than the user does,” or “I have a better understanding of the link between programming and function,” ends up manifesting in the documents (BA1).

The BAs perceived that it was problematic for the IT staff to have an attitude that technical knowledge gives them complete understanding of the functionality that users expect. This attitude, according to the BAs, was reflected in the documentation of the IT department. Another concern was that IT staff’s primary aim was the ease of maintaining systems rather than meeting user expectations:
IT, they can be very technically minded, so they don’t care that the business want it to be a little bit more like this. They’ll generally build it in a way that might be easier for them to manage, but may not necessarily be what the business really asked for (BA2).

There was a concern that the IT staff preferred technology based interaction over face-to-face interaction. The lack of a customer orientation in the IT staff was attributed to over-dependence on technology for communication:

I think that it’s a cultural issue. I think that for too long IT considered themselves exempt from the customer service standards that most organisations try to adhere to. As business analysts, there is no avoiding the human contact component. For too long IT have been sitting in a room looking at a computer, doing something with a computer and sending an email (BA1).

Perception of status difference

Another influence on the BA-IT interactions is related to the BAs’ perceived difference in status with the IT staff. The notion that BAs carry out important boundary spanning work for the organisation and the IT people are implementing solutions recommended by BAs, is not evident in Uni1:

You know they say that people who can’t become doctors become dentists. It’s kind of like that with the hierarchy of IT and business analysts...In a sense what they do is magic and it’s something that I’ve never had any skills for. Yeah, we are the dentists and [IT people] are doctors I guess in a way (BA1).

It is evident that BA1 looks up to the IT staff for their technical skills and the lack of those skills is seen as not being able to speak the technical ‘language’ of the IT staff. This also raises a question relating to the self-image of the BAs: As to whether the BAs see themselves as being ‘inferior’ to IT people? There could be implications for this perceived status difference in the boundary spanning work of BAs:

So although in the beginning the focus starts as the business requirements, they get gathered. But then the constraints come in and then things just start dropping off. That’s all driven I guess by [IT department] because I guess they hold more of the power (BA2).
This perceived status difference may affect the ability of BAs to be unbiased in understanding requirements from the users and deliver those requirements. For example, if BAs are dominated by the IT staff then the latter’s agenda that may include ensuring system maintainability and minimising scope creep are likely to be pursued by the BAs as opposed to trying to understand and deliver on users’ requirements.

5.2.3 The User and IT staff perspective

We have so far focused on the BAs’ perspective on the boundary work. I now discuss the perspective of the users and IT staff.

The users saw the BAs as a bridge not only to the IT department but also to different faculties for relating practices of one faculty to another:

> Recently when we had enrolment sessions, business analysts came and helped us. In the same way they went to different faculties as well and I think it was a good observation by them to see how faculties are approaching a particular system. I just spoke with one of them and he mentioned that different faculty have different practices and their different priority as well (U2).

To the users, the bridging role of BAs seems more a matter of gaining access to a ‘remote’ IT department and not only an issue of translation of their requirements related to Xsys. There is also an expectation that the BAs will play a supporting role to the users by helping them use the various information systems at Uni 1:

> So what I’ve seen so far is that [BA4’s] position, and positions like his, are trying to form a bridge between the user of the systems and those who actually maintain and fix the systems if you like, so a bit of an interface…because it’s an interface, it has more appreciation of how the tools are used and not just telling us what the system won’t do (U1).

By contrast the IT staff expected the BAs to act as a ‘cover’ and shield the IT staff from direct contact with users. The IT staff did not wish to engage with users to explain the existing functionality of the student management system and how the system was already equipped to
meet user requirements. The BAs were expected to help users explore whether the existing system functionality could meet their new requirements:

* A major part of BAs’ responsibility is to work with business owners and/or business users and ensure they understand the system they’re using. So for instance if the users have got a request [the BAs] might go and do some research to identify whether it can actually already be done in the system (IT1).

It seems that the IT staff expects BAs to manage users so that their interaction with users is minimised. Another member of the IT development team explained how the BAs could ‘manage’ users:

* One thing about BAs is that they go through and get clarification of all the requirements in writing. They have these processes and if ever the user turns around and says “The report that you wrote for me is incorrect. It’s not what I asked for,” you can always go back to what’s in the document and say “Look, this is what you’ve asked for. You didn’t specify this other thing that you’ve been talking about.” (IT2).

In case system enhancements were necessary, the IT staff, with the exception of a few initial meetings with the users, looked to interact more with the BAs and not with the users. When I asked if the IT staff ever went back to the users, they replied:

* Initially there may be some meetings where we’d be involved in the meetings with some business analysts and maybe one or two users to clarify some information. Once the development or the project has been defined and the requirements have been gathered, a functional spec has been defined, then our major role is more in relationship with the business analyst (IT1).

It is clear that IT staff prefer to be judged by how well they meet documented specifications and not so much by how the users might feel about the implementation of the system developed by IT. The documentation provides the IT staff with a structure that they need to guide their work thus keeping them isolated from the user’s world.

One member of the IT development team had analysed the difference between IT developers and users. Having BAs between them and users was not only a matter of convenience, but more. The participant said:
I think many of the users...don’t necessarily expect logical system flows. I don’t think that humans work like that, but obviously when you’re working with computers you get into that mindset that you need a very logical systematic flow of events to occur before you can get an outcome...it can be very difficult to talk to the developers. They can be a bit grumpy and difficult to talk to. You have to talk to them, in a very logical, structured kind of method. You can’t just ramble on to them...They’ll just throw it back and say “No. This isn’t going to work. Start again” (IT2).

This explains what ‘living in two worlds’ could mean for the BAs. In the world of the users they are dealing with unstructured business settings. In the world of the IT developers, BAs are dealing with issues related to logic, algorithms, and data. Spanning these two worlds would mean first to be able to understand the two orientations and then to find a meeting ground for the two views.

IT staff were aware that requirements articulation and interpretation can be problematic with the involvement of many people between them and the users. However, they seem to regard this as a risk they are willing to accept and manage by ensuring careful documentation and signing off requirements and specifications. The IT team leader explained:

Articulating expectations into requirements sometimes don’t happen well or the understanding of the requirement doesn’t capture the full expectation. Those are possibilities that do happen from time to time (IT1).

If we consider the user perspective, the users were not satisfied with the support they got for using the systems and were expecting more training and interactions with other users in different parts of the university. The faculty manager said:

I think our department has been hampered largely by lack of resource information to support our systems, i.e., how to run reports through [student management system] - it’s pretty difficult to find that information and so if one had more of that sort of information and perhaps a few promotional activities, inter-faculty visits and that sort of thing, say “Hey do you know how to do this or do that?” it would help us (U1).

The IT department’s interface of emails and online logging of requests was not liked by the users. The users needed to interface with BAs that presented a human face:

There tends to be this faceless wall where there’s no doors and no windows and the IT Department live there but nobody ever sees a real person. They tend to be a bit
removed and remote from what seems to be the business of some parts of the Uni. I know that’s not entirely true, don’t get me wrong but because I don’t know where the Help Desk is for instance, you can’t go and knock on a counter and say, “Hello, I’d like to log this request” it’s all just on a number. They could live in Sydney for all I knew, they could (U1).

The users expected BAs to have knowledge about the system and also know how users use the system in their work. Further, the BAs’ understanding of organisational aims was also considered important by the users:

First of all they should know the system. Second they should know how staff works with the system and what the limitation of the system are. Third maybe they should be good communicators with the non-IT users, and also they may require a vision or the long term goal towards which the university is heading (U2).

The IT staff acknowledged the importance of considering system constraints in framing user requirements:

The future proofing of design considerations may not have happened in the past. That certainly adds some constraints to how flexible the system is to changing now…Well what we do obviously is just talk with the BAs about, “These are the limitations. This is what we can deliver within the limitations of what we’ve got. This is what we can’t deliver. Is that satisfactory?” and then it’s really up to the BAs (IT1).

The BAs were then expected to work within the system constraints while discussing requirements with the users. Both users and IT staff were concerned that the meaning of the requirements can be lost during the translation.

In conclusion, the interactions with the users and the IT staff suggest that the users and IT staff seem to regard the BA role differently. For the IT staff, the BAs served as a ‘cover’ that shielded the IT staff from the users. For example, the IT staff preferred to deal with the BAs rather than directly with the users. Further, the IT staff expected BAs to be helping users with Xsys related queries preventing the users from coming directly to the IT staff. For the users, the BAs served as a ‘drawbridge’ that gave them access to the IT department. For example, the users expected the BAs to be the interface to the IT department and support them in the use of the information systems and provide easy access to the required information.
Case Study 2: Expressmail

Expressmail is a large company with the dual responsibility of sound commercial practices and social responsibility. Although its primary focus is on providing high-quality mail and parcel services, it has a range of products and services. For example, its product portfolio includes products and services such as trusted financial and identity services, document management, and payment gateway services. In order to provide national and international services, Expressmail has joint ventures with international airlines and overseas logistics companies. The strength of the company is its brand image and a widespread distribution network.

The company had recently undergone a restructure (see Figure 5.5 and 5.6). There are four main divisions. The Mail division is responsible for collection, processing, and distribution of the mail. From being a cost centre, the Mail division had begun to take charge of its revenue stream and was to work as a profit centre. The second division is the Retail division. This division is responsible for all the retail outlets that were either owned by Expressmail or were franchisees of Expressmail. The Logistics division is managing the courier business of Expressmail. The joint ventures with international airlines and overseas logistics companies are managed by the Logistics division. The fourth division is the online business division. This division is responsible for new online services like payment gateways service. The division is also being promoted as an incubator for new business ideas. The functional structure is part of the Centralised services unit. This unit had the responsibility to manage the functional areas such as human resources, finance, marketing, and IT.

The IT functional area was headed by the CIO (Chief Information Officer) and operated like a matrix structure. Each division had a general manager (IT) that reported to the CIO as well as to the division head. The IT functional area has three operational units. The Infrastructure unit is responsible for the technology infrastructure and manages all platforms. The support for the technical issues and operating systems is in the Infrastructure unit. The Application maintenance unit managed the applications that were operational at Expressmail. This included handling minor change requests. The New projects unit was where all project delivery resources were consolidated. It was in the New projects unit that the BAs were located.
Figure 5.5 The Organisation structure in Expressmail

Figure 5.6 Locating ‘the case’ in Expressmail
The New projects unit was responsible for all new projects and therefore the human resources for projects were consolidated into this unit. Along with the BAs there were project managers and financial analysts that were also located in this unit. The BAs had been working largely on ProjectX. ProjectX was the most active and the biggest project being undertaken at Expressmail. The aim of the project was to consolidate many legacy applications and databases that overlapped in functionality into one application and one database. Each BA in the team was allocated a separate functionality of the new application that was being developed. The legacy applications were related to maintaining address records or components of address records. The new application was being developed for a new platform. The project was also to provide support for the restructured business approach at Expressmail.

The request for ProjectX occurred several years ago. The management had put forward a model that modernises the databases and systems used for maintaining addresses. The project was launched when the hardware supporting the legacy applications was no longer supported, parts were difficult to find, and there was no choice other than to replace the existing hardware and that allowed the management to look at consolidating many systems, modernising those systems into a database environment, and providing more user-friendly interface into the business. The project had started in 2007 and it was approximately one year away from completion at the time of the data collection in 2010. The project was past the stage of understanding requirements. At the time of data collection, the BAs’ interactions were more about ensuring that development is satisfying the business requirements and managing scope in response to change requests.

5.3.1 Information about the research participants

As in the case of Uni1, I not only interviewed staff undertaking business analysis activities, but also interviewed their clients and IT staff. I also interviewed two managers who were considered as subject matter experts (SMEs) and who interacted with the BAs to provide a business perspective. The interviews were conducted between September 2010 and October 2010. Table 5.2 provides a summary of interview participants.
<table>
<thead>
<tr>
<th>Participant</th>
<th>Job title</th>
<th>Role description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA7</td>
<td>Lead BA</td>
<td>As the Lead BA responsible for the business analysis, works on Project X. This involved managing the other BAs in the team.</td>
</tr>
<tr>
<td>BA8</td>
<td>BA</td>
<td>As the BA in Project X was responsible for the business processes related to the customer address management at Expressmail.</td>
</tr>
<tr>
<td>BA9</td>
<td>BA</td>
<td>As the BA in Project X was responsible for the application interfaces and business impact assessment.</td>
</tr>
<tr>
<td>BA10</td>
<td>Lead BSA</td>
<td>As a business and systems analysts at Expressmail had been managing the team of business and systems analysts that worked in the project delivery operational unit.</td>
</tr>
<tr>
<td>U3</td>
<td>Manager, Mail process optimisation</td>
<td>Responsible for process improvements in the mail business process.</td>
</tr>
<tr>
<td>U4</td>
<td>Manager, Customer address database</td>
<td>Responsible for leading the department that maintained customer address database for Expressmail.</td>
</tr>
<tr>
<td>SME1(Subject matter expert)</td>
<td>Manager, Project execution</td>
<td>Responsible for acting as an interface between users and the project delivery teams.</td>
</tr>
<tr>
<td>SME2(Subject matter expert)</td>
<td>Manager, Customer projects</td>
<td>Responsible for managing implementations of projects at customer sites.</td>
</tr>
<tr>
<td>IT3</td>
<td>Consulting manager IT</td>
<td>Worked in the Mail services division under the IT GM of the Mail division.</td>
</tr>
<tr>
<td>IT4</td>
<td>Manager, Application development and delivery</td>
<td>Worked in the Application maintenance unit as manager of a team responsible for application development and support.</td>
</tr>
</tbody>
</table>

Table 5.2 Summary of interview participants in Expressmail
The participants in the BA roles included two lead analysts (BA7 and BA10). BA7 was leading the team of BAs that were working on ProjectX and had been involved with the project since 2007. BA7 had also been involved in recruiting the BAs in the team. The role also included allocating work to the individual BAs. BA10 had earlier been a team leader for a team of business and systems analysts at Expressmail and was also located in the New projects unit. BA8 was responsible for the business processes related to customer address management at Expressmail. The work allocated to BA8, therefore, focused on ensuring that the application being developed was meeting business requirements relating to addressing requirements. BA9 was originally brought into the project for handling the user interfaces and later had also become involved in assessing the business impact of the new application.

The participants in the user roles (U3 and U4) were located in the Mail division and had interacted with the BAs in Expressmail on different projects. U3 was responsible for process improvements in the mail business processes and had interacted with the BAs for developing a spreadsheet based tool for forecasting mails. U4 was the manager of the department that maintained customer address database for Expressmail and was involved in ProjectX. U4’s department maintained address and delivery profile in a central core data base for use by Expressmail in mail processing and distribution operations, as well as for other products and services that Expressmail offered.

The participants in the IT role (IT3 and IT4) engaged with the BAs in different capacities. IT3 worked as the consulting IT manager in the mail division. As a representative of the IT functional unit, IT3 provided the interface that the Mail division needed to access the IT department’s services. The role included acting as a consultant to the Mail division around the initiatives that would have an IT component. Such initiatives were many and still growing. IT4 worked in the Application maintenance unit as manager of a team that was responsible for application development and support.

SME1 was the manager for project execution and often acted as an interface between the business and the project delivery teams. This involved understanding the requirements of the business divisions and working with project teams to deliver on those requirements. SME2 was the manager for customer projects. The role involved working with project delivery teams to ensure an effective integration of Expressmail products and systems with the systems and products of new customers.
5.3.2 The BAs’ perspective

5.3.2.1 The BAs’ understanding of their role

In Expressmail, the BAs’ comments suggest that the BAs had a relatively higher degree of comfort in the uncertainties that are inherent in their boundary spanning work. Their comments also highlight their perceptions about the lack of clarity in the BA role and the BAs making important contributions through their business analysis work. The interactions with BAs provided interesting insights into the BAs’ perspective on how their role compares with the role of subject matter experts.

**BA role - Is it a technical or a business role?**

In Expressmail, the answers to the question, as to whether the BA role was a business role or a technical role, varied. For example, BA7 and BA9 considered their role as being both business and technical. BA9 considered himself to be more in the IT role and was happy to be considered by the business as one of the business people:

*The whole time I’ve been at Expressmail, I’ve always been in the IT area, however for at least two to three years or more we were co-located and sat with the business and many times I’ve had people from business areas say, ‘oh I thought you were business’. So I kind of take that as a compliment because that means we’re speaking their language hopefully (BA9).*

**Uncertainties inherent in the nature of the BAs’ work**

In Uni 1, while the BAs saw their role to be a ‘bridging role’ with immense scope for making contribution to the organisation, they also had expressed several frustrations in being in the role of an intermediary. One of the frustrations the BAs had commented about was dealing with the uncertainty. In contrast, the BAs in Expressmail suggest that uncertainty is inherent in the nature of their work. It seems that the role is understood to be one that requires the ability to handle problems and issues that may not be easily resolved:

*I think it depends on the personality of the business analyst. If you’re a person who likes everything clear and clean and easily solved and not too many problems, then you’re probably going to find it difficult. I think personality is a big part of it (BA7).*
For BA8, the challenges in the intermediary role worked as a motivator:

*I quite enjoy doing that bridging [between business and IT]. Your finger in both pies...I enjoy getting involved in issues as well that you need to go through and got to work back with the business and IT and kind of flush out the problem* (BA8).

Although the context of the business analysis practices in Uni 1 and Expressmail was different, one can see that being in the role of an intermediary, BAs would be generally expected to deal with the uncertainties involved in connecting the users and the technical IT staff.

**A lack of clarity in the BA role**

Like the BAs in Uni 1, the BAs in Expressmail commented on the lack of clarity about the BA role. They were of the view that the BA role was ambiguous and needed to be clearly defined by both practitioners and academia and clearly differentiated from the other roles:

*I think the whole role of business analyst is very poorly defined. It’s not well understood. You get many, many definitions and I think it would be really helpful within the industry to be clear about what the role of business analyst is...In terms of university courses, I think they touch on business analyst but they don’t really teach it as a discipline. I think there is confusion about what a BA does and what they don’t do and how it relates to other roles* (BA7).

The BAs sometimes found project managers were not able to understand the need for their specialist role. While this may seem like an outlier observation when compared with the perception that BAs play an important role in bridging the gap between the users and the IT staff, it highlights the point that in many projects there could still be ambiguity about the contributions that BAs make:

*[The project manager] didn’t understand what a business analyst did and basically didn’t think he needed my team at all. So I had to work fairly hard to prove that ‘you do need my team and this is what they do and if you don’t have us this is what will happen’* (BA7).
Comparing BA role and other roles

I tried to understand the BAs’ views on whether subject matter experts (SMEs) would be effective in the BA role. The BAs expected the SMEs to use work experience and domain knowledge to support the BAs:

*I see subject matter experts as a distinct role from a BA. I see a subject matter expert as somebody who has substantial experience and knowledge in a particular business domain and they can therefore work alongside the business analyst (BA7).*

There were different views on how different the role of BA and business systems analyst (BSA) was. There was a view that considered the skill sets of BAs and BSAs to be different and that the BAs were expected to focus less on the technical solutions in comparison with the BSAs:

*On a continuum if you imagine on the left hand side you’ve got a skill set of BA, then you’ve got a skill set of BSA, architects and then across the top of that is project management. So whereas a BSA might be able to become more technical and work as an architect or work as a BA, I wouldn’t expect a BA or my experience to date has been that good solid BA’s are not necessarily thinking about solutions or technical things and certainly have no aspirations to be architects (BA10).*

This clear distinction between the BA and BSA role was not equally shared in the team. In practice, it seems, the distinction between the two roles may not be very clear:

*I don’t understand the difference. Because even the BSA, because my role on this project is BA but I’m actually with Expressmail as a BSA. I’ve never been able to work out the difference between what I’m doing here and what I was doing as a BSA (BA8).*

An understanding within the organisation about how the BA role compares to that of the SMEs on one side and to the technical systems analysts on the other side would be useful in clarifying the BA role to the organisational stakeholders.
A Sense of contributing to the organisation

The BAs’ perceived themselves to be ‘problem solvers’. The role of solving problems seems to give the BAs a greater sense of contribution than being involved in operational routines:

*I say first and foremost I’m a problem solver...the business people said we’re really happy with what you’ve done there we’d like you to become the business system manager for this system, and from that I got another business role. Ultimately I saw myself back in IT, solving the problems rather than operating the business* (BA10).

Although the BAs considered themselves as making contributions during organisational change by being agents of change, they were clear that the ‘principals’ or drivers of change could be located outside of their group and often these drivers could be ‘thrust’ upon them. An accurate description of the situation would be one in which the BAs are seen not as initiators of change but as implementers of change:

*What we’re really saying is we’re all agents of change...maybe it’s a change that’s been thrust upon us because it’s legislative or compliance. Maybe it’s a change because a requirement has changed...It might be because we would like to seek new opportunities...So in the context of everything we do, it is driven by some sort of change that has come about, then our role across all of those skills is implementing the organisational changes* (BA10).

To conclude, the BAs in Expressmail seemed to be relatively comfortable with the uncertainties of their boundary spanning role. They were also able to reflect on the question of how their role was different from the role of subject matters experts and the technical systems analysts. Although their sense of contribution to the organisation was visible in their perception of being ‘problem solvers’ and ‘agents of change’, they did not consider themselves as leading change in organisations. Further, there was little reflection on the extent to which the BAs were required to take an abstract or concrete view on problematic situation.
5.3.2.2 Practice work within the group of business analysts

The perspectives of BAs on the internal work practices highlight how the extent of BAs’ compliance with group practices may vary with the nature of BAs’ employment. The BAs discussed the practices that contribute to their learning and their work allocation being a combination of individual work and team work.

Compliance and accountability

Unlike Uni 1, the BAs’ in Expressmail made very few comments on the issue of complying with the group’s practices. However, the lead BA’s comments suggest that the extent of compliance and accountability to the group may vary with the nature of employment. The pool of BAs in Expressmail consisted of both permanent and contracted staff. The independent contractors were seen to better motivated and more accountable to the team lead:

*My experience has been that permanent employees are probably not quite as highly motivated as independent contractors...People that I engaged through third parties like another consulting company were compliant but generally didn’t produce the same quality of work as what I got from the external contractors. They would appear to take direction but didn’t do it to the same degree (BA7).*

There are some significant issues that are raised in BA7’s comments. First is the suggestion that the level of motivation of independent contractors on project teams is higher than those that are employed on an ongoing basis. It seems that BA7 prefers to have independent contractors on her team. Second, BA7 does not equate compliance with producing quality work. This seems to support the assertions made earlier that compliance may restrict creativity in BAs’ analytical work and compromise quality of their analysis.

The Practices that contribute to learning

The process of learning about issues and gathering relevant information was perceived as an ongoing process. The characterisation of the learning process by some BAs as ‘osmosis’ suggests that their learning was informal, gradual, and did not always involve acquiring formal education:
Sometimes [learning is] almost osmosis, it’s just something that builds over time. Obviously there are certain things that you need to know initially but there are other things that you sort of learn as you go…I haven’t done anything academically, I haven’t got any certification qualifications in business analysis (BA8).

The lead BA, however, had a different view on the need for academic qualifications and considered academic qualification as an important criterion for selecting people in the BA role. The qualifications were seen to provide the BAs with the much needed IS concepts:

*I think qualifications, as in formal training makes quite a difference. Because if you can understand some of the basic principles about information systems, I think you have a far better chance of solving problems in a holistic way, that actually means they don’t come back later* (BA7).

BA7’s emphasis on qualifications is in contrast with BAs’ largely learning informally while working in the BA role. The challenges of learning from each other seem to arise when the BAs are either physically distant or there is little overlap in the nature of projects they are working on:

*I’ve been with Expressmail for close to 11 years, so historically [learning from each other] has worked well where we have had a team of people who were working on different but related projects…If we’re sitting together and the domain overlaps, then there’s an opportunity for us just to share and ask each other questions. These days though the resources tend to be physically separated working over a much wider base of projects. So some of them might be working alongside each other, but the ability to share domain knowledge I think is quite a challenge to us* (BA10).

Given the informal nature of BA learning, organisational strategies for training and development of BAs and for designing BAs’ office space, need to enable regular interactions amongst the BAs are well supported. This becomes important because having to spend most of their time spanning boundaries with users and IT staff, the BAs would have constraints on the amount of time they would have for intra-team interactions. The use of Expressmail intranet for learning was not effective in BA9’s experience as most of the information on the intranet was of little value in business analysis work.
Nature of work – Combination of Individual work and team work

As reported by the BAs in Uni 1, the BAs in Expressmail essentially worked individually on project related tasks and it was only on very large projects that they worked jointly on tasks:

In another project where we had 25 BAs, I had a situation where there were two BAs working on the business requirements for a particular area of the new application. But that must have been a bigger project, Oh far bigger. About four times the size of the one that I’m on now (BA7).

This suggests that the BAs are mostly working alone on tasks and teaming up with other BAs only for large projects. However, in comparison to Uni 1, there was less emphasis on shared understanding amongst BAs.

Unlike the ad-hoc work allocation experienced by the Uni 1 BAs, the allocation of work at Expressmail was undertaken on the basis of individual BA’s skills and experience:

So I have six business analysts and each of them have responsibilities that relate to particular functional areas of the application that we’re building...It is based on people’s particular skill areas or experience and to a certain degree their areas of interest. So for example the business analyst who’s responsible for interfaces has a more technical background, has actually developed interfaces previously and so she was ideal for that kind of work (BA7).

Although the reasons for considering past experience and skills are obvious, an over-emphasis on this approach may ignore BAs’ need to learn on the job and acquire a variety of work experience. The comments from BA10, however, revealed a gap between ‘theory’ and ‘practice’ of work allocation:

We have a pipeline of work, so the theory is this - you see work coming through and as that work approaches you, you know what people are finishing and you can allocate them to those pieces of work...The practice is probably slightly different from that...sometimes a good idea from the business for a big dollar save will come and escalate all the way down the pipeline and you’ll go from not knowing anything about it to ‘I need a resource tomorrow’. Although we call ourselves a pool, we don’t have bench strength therefore anything that needs to be done now we either double load
somebody or we have to go to the market to get a resource. So that complicates things as well (BA10).

The statement suggests that in practice the work allocation may not be as planned as one would expect. It is also evident that recruiting independent contractors for managing the workload at Expressmail was widely practiced to deal with any sudden increase in demand for BAs in Expressmail.

**Perspectives of BAs on the use of documentation, tools, and processes**

Although the detailed documentation of requirements on the ProjectX was appreciated by the BAs, the BAs were aware that too much detail could be problematic, resulting in a complex view of requirements. It is also clear that the focus on documenting features of the application rather than business needs could also be problematic:

> I’ve already said that we’ve got really detailed business requirements. On a negative side of that, the documentation that we do have is very complicated. You can sometimes be over fancy with your documentation as well. I don’t think you can do much documentation up front with a lot of the interface requirements, because then we’d all be just focusing on the application itself rather than the business. We are starting to run into issues now because of that (BA8).

I tried to understand what processes were followed by BAs and what activities became a part of their routine:

> You tend to do things in automatic pilot most of the time. So when you get asked about it, you have to think about what you do (BA8).

One way of looking at this comment is to see a scope for BAs to increase reflection on their routine work. However, the ‘automatic pilot’ mode may also be seen as the ‘true’ representation of organisational life in which majority of the work gets done by following routines that may rarely require practitioners to reflect on the processes that they are following.

The BAs, however, were aware of the importance of oversight. Using the analogy of a ‘house under construction’ for system development, BA10 explained how oversight is instrumental in
delivering the ‘promised’ user requirements, irrespective of whether waterfall or agile approach is used:

The governance is that you’ve got the builder and the electrician sitting there with you. So you sit there and they ask, ‘how many power points in this room?’ and you say, ‘six’, and he puts six power points in and says, ‘is that okay?’ and you go, ‘yep now let’s move to the next room’. So there’s still a feedback loop and I know I get my house by those governance processes whether they are the waterfall governance process or whether they’re the type of an agile process (BA10).

But oversight was not without its problems. The BAs were of the view that the cost of oversight could eat into the project budget and suggested that innovation in oversight is needed to reduce costs:

The amount of governance that we have now is impacting cost because there’s always got to be a regulation or a check point and the more regulation and check point the more overheads that you have. So maybe some research into how you can have that level of governance without having an additional cost…governance, it certainly chews into the project’s budget (BA8).

The BAs emphasised the use of computer-based tools in their work. However, the limitations of using computer-based tools in BA work were highlighted by the BAs. A BA noted that the tools that automate business analysis tasks could also have a constraining effect and that instincts could play an important role in the BA role:

I have found where we’ve used things that are automated but anything that is automated constrains you, it becomes quite a barrier. So quite often in the business systems analysis or the analysis phases you want to start with a blank whiteboard and a blank piece of paper…The one that comes above the shoulder gets used a lot. The difference between a good BA and an average BA is how they think and what their instincts are (BA10).

Although there was an understanding amongst the BAs that a different approach may be required for dealings with the users and the IT staff, there is little evidence that such a distinction was made in their practices. From the following statement, it is evident that the priority for the BAs is to provide a structured communication to the IT staff and a ‘reasonable’ picture to the business:
I have found personally that we communicate a lot in pictures. So I have found since I have been using UML conventions that helps a lot because not only is it a more structured way to communicate with the technical people but it actually still paints a reasonable business picture without people coming to use all the conventions (BA10).

In conclusion, the perceptions of BAs about their practices relate to issues that were discussed for the group of BAs in Uni 1. Some practices are similar to those discussed in Uni 1. For example, the practices related to allocating work to BAs and those related to learning within the group. However, the perceptions also reveal some different insights into those issues. For example, the BAs commented on the influence of the nature of BAs’ employment and their willingness to comply. There was little emphasis on the notion of shared understanding amongst the team. While there is no evidence to suggest there was little shared understanding, one can speculate that a time-bound association on the project and having been allocated distinct tasks may have contributed to the little discussion on the subject.

5.3.2.3 Boundary role perspective

The BAs’ comments on their role highlight a change in the nature of mediation that BAs may be expected to provide. The BAs discussed some difficulties and frustrations in the role of an intermediary. There was also discussion on the need to align business analysis outcomes with organisational objectives.

The Bridging role

The BAs were of the view that the nature of mediation was changing as a result of the users’ increasing technical knowledge. For the BAs, the users’ increased technical awareness was a welcome change:

Traditionally it was very much like you were in the middle where you could talk the technology [with the IT staff] and then converted that into business language [for the users]. I don’t see that so much now because the business talk in technology terms...so you’re not needed for that translation anymore (BA8).

I definitely think [users] are becoming more knowledgeable...Has it changed my role? It has probably helped a bit as people become a bit more technologically savvy because if anything they’re more aware of what is out there in terms of options and how you could do a solution (BA9).
BA8 explained that the role was now more of a support role that ensured the users could remain focused on their routine work while the BAs documented their requirements and did all the communication work with the IT staff.

That traditional aspect of the role is becoming very blurred. I see that what we’re doing is that we’re supporting the business. It is almost like providing an additional resource in some ways for the business...So you try and cushion a lot of the interaction so that the business need to put in minimal amount of effort to provide the answers for what’s needed for the project (BA8).

In Uni 1 the BAs were expected by the IT staff to serve as ‘cover’ that minimised the IT staff’s interactions with the users. At Expressmail, the BAs perceive their role to ‘protect’ the users from excessive interactions with the IT.

Unlike the BAs in Uni 1, the BAs in Expressmail gave little indication of the need to practice ‘diplomacy’ in their interactions with the users and IT staff. However, the BAs were ‘careful’ in their interactions in advanced stages of project lifecycle. The impact of changing user requirements in the advanced stages of the project required the BAs to be more careful:

We’ve just had one major issue with one of our databases and the BAs have had to negotiate with the business on what their requirements are but also on the other hand we have had to be careful, particularly because of where we are in our life cycle like we’re almost nearing the end of development, so [for] any changes that we need to make to the code at this point (1) there would be a cost involved and (2) it puts the schedule at risk. So that’s been a really fine balance trying to get something that’s acceptable for the business without incurring too much cost and without putting the schedule at risk (BA7).

Frustrations and difficulties in the boundary role

The BAs felt constrained in undertaking analysis if they didn’t have access to the required information:

I guess there’s always room for more analysis but I guess depending on what the task is you have to have the right resources to be able to find out that information. So one of the challenges sometimes I think we have is not having access to business data...But
sometimes I guess if you don’t have the right resource set and tools to do it how do you do it without harassing the business (BA9).

The perception that seeking information from users could be ‘harassing the business’ perhaps represents the challenge of spanning boundaries in the BA role. It seems BAs would be better supported with direct access to the information related to business and IT domains. This may be ensured by measures such as increasing BAs’ participation in relevant meetings held in user and IT departments, online access to user and IT documentation, and increasing familiarity of the BAs with regards to the routine work of BAs and IT staff. In effect, the BAs would need to be peripheral participants (Wenger 1998) in the user and IT communities.

The organisational environment created some difficulties for the BAs. The BAs were unsettled because of the restructuring that was taking place at Expressmail. The access to people with the necessary systems knowledge seemed to be very important and the hierarchical culture made it difficult to directly access such people:

It is very hierarchical and if you don’t go through the right Managers, say if you want to talk to someone who has a system knowledge base, it’s not the politically correct thing to do (BA9).

The budget and cost implications seemed to be the main drivers of IS project governance. Therefore, the BAs were always under pressure to work within budget constraints. Any change in scope and its implications for the budget caused BAs problems that at times needed to be escalated:

Well just from experience we only do tend to escalate when we actually can’t resolve something...The escalation is more in terms of we see a reason why the business may need to do something but it has a budget implication. So we then have to escalate that up to senior project members and help them understand the issue (BA8).

I was interested in understanding whether the BAs had an interest in moving away from the BA role towards roles in business or IT. The lead BA who had considerable experience in working with BAs in the industry had an interesting observation:

Funny you should ask, I think most business analysts want to get out completely! A lot of them would actually rather be doing something else but that’s my experience. I don’t think they particularly want to go in either direction (BA7).

Although BA7 acknowledges that she is generalising from her experience, the comment highlights the need to understand the potential sources of frustration in the BA role. For
example, is this comment reflective of the difficulties of simultaneously ‘living in the two worlds’ of the business and IT? This may also suggest that the seriousness of burnout in IT professionals (Pawlowski et al. 2004b, 2007) may also be prevalent in the business analysis profession.

Attitude towards bringing about alignment

The BAs in Expressmail seemed to be very aware of the strategic objectives and how their work related to both business and technical issues and impacted on working towards the strategic and financial objectives:

*We need to also have a feel for what are the strategic objectives, what are our inter-dependencies. Whatever we do has an impact somewhere along the line to somebody else. Really understanding the full scope of the work that you do and how it relates to both the environment that you work in and another intersecting environment (BA8).*

*The work that we do now is very clearly aligned. In fact the governance processes we’ve got in place for the organisation and the profit and loss accountability in the business ensures that there is a much tighter alignment between strategic intent and the projects we do (BA10).*

In conclusion, the BAs’ suggestion regarding the changing nature of mediation calls for further reflection on the role of BAs and implication for organisations. The lack of information seems to be emerging as a significant concern for the BAs. Another interesting observation is that the BAs did not emphasise practicing ‘diplomacy’. Perhaps, because the BAs were not expected to have a long term association with the users and the IT staff, they relied less on ‘diplomacy’. The BAs seemed to rely more on formal governance processes and on escalating problems where required.

5.3.2.4 Interactions with users

The BAs’ perspectives on their interactions with users highlight different types of issues that are presented before them for analysis and how they have a formal way of dealing with differences in user requirements. The BAs commented on how the meaning of requirements may be lost if the context of requirement is not retained. Their empathy with users is also evident in some of their comments about the changing nature of user requirements. The BAs also commented on
how their attitude towards change in project scope varied at different stages of the project lifecycle.

**Types of issues presented for analysis**

I tried to understand the nature of problems that were presented to the BAs for analysis. The response to my direct question was usually an attempt by the BAs to discuss the types of issues that were raised:

*Well in terms of problems, you could get things like where data is corrupt and you might need to investigate whether there’s a problem with the business process and who’s responsible for inputting the data. Or it might be investigating the rules...and maybe those rules are not accurate or they’re not as rigid as they should be. You look at problems with communication between different business groups in the user community (BA7).*

In BA7’s response, the problems of process, business rules, and communication are all centred on the business and do not directly relate to the IT department. For example, there is little indication of the problem of communication between themselves and IT staff. This may be due to the worldview that everybody other than the users is in a problem solving role.

Understanding requirements for the new application at Expressmail presented a different type of business analysis work that BAs would sometimes be expected to undertake. The difference was that understanding requirements for large systems would sometime involve understanding the requirements and business rules that were programmed into the software rather than interacting with users. The BAs may be expected to understand requirements from the code when there is little documentation:

*So I’m trying to keep away from the whole generic kind of requirements gathering...I mean a lot of the issues we’ve had on this project with requirements was... [that] the existing applications were either very poorly documented or not documented at all. So it was very difficult to find out what they actually did. So we actually had to hire people who could go into the code and reverse engineer the business rules from the actual code (BA7).*
Understanding differences in requirements and focusing on the context of requirements

The BAs were also aware of how requirements differed amongst the various users groups. They managed such differences by having a project group with representation from each user group. This awareness was required in interacting with users as BA9 pointed out that ‘you have to be able to sometimes ask the question in a variety of different ways because people operate and their brains work differently’.

I initiated a discussion to understand how users’ requirements get ‘lost in the translation’ between the users and the IT staff. It seems that what gets lost or is not articulated, understood, or documented is the context of the users’ stated requirements. The documentation of requirements without the context seems ‘meaningless’. The requirements lose their intended meaning without the context. The BAs found it challenging to understand the context of requirements:

The requirements have been defined and there’s not that explanation of exactly what, how, and why. Sometimes I think maybe [the requirements] are not lost, but the original reason why something is requested might be lost a little bit or misunderstood (BA9).

If [the users] talk about how they do something there may be a lot of other things that hang around the edges that they don’t explain because they are understanding it, they don’t need to tell everybody else. So I find it rather challenging sometimes (BA8).

The focus of understanding requirements, therefore, needs to also be on the ‘other things that hang around the edges’. It was, however, not very clear how the BAs formalised efforts required to understand and document the context of requirements.

Users learn about their requirements

The BAs understood the changing nature of requirements and were aware that the users learn about their requirements over a period of time:

It’s that change process...as you take them through that journey you’re learning new things, they’re starting to appreciate what functionality exists and what they can and can’t do. And that’s when you sometimes get the gaps that you did not have at the
beginning unless you were asking all those questions. But the problem is you don’t know those questions until you work through that process (BA8).

The BAs were aware that the requirements are not ‘out there’ and both the users and the BAs learn about the requirements over a period of time:

A bigger challenge is when the requirements are not there and it doesn’t matter how much I interview the person...you know, workshopping them, locking them in a room, you don’t get the answer (BA10).

This would imply that not only do BAs need to talk to the people that may have the information requirements but also the requirements are not something that people have in their possession that they could simply deliver to the BAs.

Managing user expectations

As the users became more aware of their needs and the possibility of their needs being met by a new application, the BAs had the task of managing their expectations. The expectations were considered in light of the technical, budget, and time constraints. Users’ perception that BAs are trying to help deliver on their requirement needed to be managed:

So as long as [the users] can understand that you are trying to help them but it’s not technically possible, they’re fine (BA9).

Managing users’ expectations became increasingly difficult for the BAs at the later stages of the project:

A year ago we were able to raise a change request and we would get it costed and everything and provided it was needed, it got put in. Now where we’re at is that we won’t even raise a change request unless it can be proven that without that change request being implemented the business will fail...so as we go along further it’s getting much more difficult for change of requests to be input (BA7).

This would suggest that approach to managing perception of users varied during the project lifecycle. For example, the BAs were more flexible in accommodating changes to requirements in the early stages of the project in comparison to the later stages of the project.
To conclude, the theme suggests that the users are not the only sources of requirements in business analysis work. For example, reverse engineering requirements from legacy programs may be an important skill for BAs to have. The theme also highlights that the requirements are learnt and therefore there may be some implications for the models that are used in user–BA interactions. For example, the models that BAs use for documenting their interactions with users could be based on the understanding that requirements are learnt rather than on the assumption that requirements are ‘out there’ waiting to be captured.

5.3.2.5 Interactions with IT staff

In Uni 1 we saw that the BAs had many problems in dealing with the IT staff. In Expressmail, the BAs seem to have comparatively less trouble with IT staff. In some cases the BAs even explained the difficulties of IT staff in meeting certain expectations. Some of the issues are discussed next.

Over-complicated communications

The BAs felt that the IT staff did not expect BAs to be technically knowledgeable:

> [In] dealing with designers and developers there’s quite often an assumption on their part that the BA doesn’t have a technical background and therefore won’t understand certain things (BA7).

The BAs felt that at times the IT staff over-complicated the communication with the BAs.

> Sometimes when the designers get a bit complex you have to pull them back and really understand what they’re actually talking about (BA8).

This complexity was experienced despite the fact that BA8 had a systems background. The systems background gave the BAs confidence to interact with the IT staff.

Acknowledging constraints under which IT staff work

The BAs were, however, aware that process constraints within which the IT staff worked may be real. The BAs perceived the inflexibility of the IT staff to be related not to the approach of the IT staff but to the governance processes by which the IT staff were bound:
Well if you look at the number of processes and the number of rules and the number of committees and whatever you’ve got to go through before you can get anything done, then [IT] will appear inflexible because they can’t go from step A to step B until they’ve done multiple activities, they can’t do that until they’ve got multiple approvals. So what seems a very simple task to the business and is in general terms a simple task, is bound by multiple processes and approvals which makes it a very inflexible role (BA8).

Understanding the relative influence of BAs

It was interesting to note how the relative influence of BAs could influence their work. BAs explained that being respected by the stakeholders gave the BAs more power to negotiate. Their comments suggest that the BAs were in no denial of the limited influence they had on the IT staff. They were aware that organisational politics influenced the process of acknowledging and responding to user requirements:

Oh yes [power] can be an issue. My experience has been that business analysts don’t have the power to necessarily dominate…[a] situation might arise between BAs and the designers and developers and it would really have to be escalated for it to be resolved (BA7).

Well politics always has a place in every organisation. I guess what it can end up meaning is that the business doesn’t necessarily get the best outcome. So you might have a number of requirements which feed into a high level strategy of the organisation but if politics, depending on what it is, certain things might get cut out or they might try and increase the scope (BA9).

In comparison to the issues raised by the BAs in Uni 1, there seems to be fewer concerns expressed by the BAs about their interactions with IT staff. However, there is no reason to assume that the BA-IT interactions were without any problems. In the next section, where I discuss the perspective of the IT staff, some of the difficulties become evident.
5.3.3 The User and IT staff perspective

For Uni 1, I discussed potential issues related to the location of BAs in the organisation structure. The IT manager at Expressmail confirmed my concerns that the location of BAs in the organisation structure is an issue that needs attention:

*I was at a seminar last year looking at this area and I spoke to a few peers of mine in other industries, and almost universally we have the same issue that no one’s quite sure where the business analyst should live...If I had to choose, I’d probably lean toward IT, only because IT are more project orientated than perhaps someone from the business (IT3).*

From the IT manager’s perspective, the BAs’ focus should be on the project metrics. There is an expectation that the BAs need to work within project parameters and being in the IT department would get the BAs to do exactly that. Another related expectation that IT staff seem to have is the BAs should focus more on solution. IT3 explained that BAs should be “thinking not just about the ‘as is’ situation, but asking the questions about the ‘to be’”.

The IT manager was of the view that the SMEs cannot replace BAs or become effective BAs by virtue of having the domain knowledge alone. The SMEs’ familiarity with the business domain is perceived as a potential source of problems in documenting the business requirements without the contextual details. The BAs that may not have the familiarity with the business domain are seen to effective as they may try and make explicit the context of the requirements:

*One of the criticisms that business always brings to bear is that ‘[BAs] ask some questions about things that we already know. So why wouldn’t we take an SME and put the SME into the business analyst’s role? Because they know all this stuff already’. Now of course it’s missing the whole point...Of course the SME is very skilled in what they do. They are a subject matter expert. They’re not necessarily business analysts. I think the trap is that the SME knows very well what is being done today...they have difficulty in describing it in a document because of their familiarity with the subject area, that means that some things that are completely obvious to them are not obvious to others, and that lack of transparency that is passed into the business requirements specifications and that is passed into the functional specs, which is then passed into the outcomes (IT3).*
The users, however, seem to find it difficult to see the contribution of the BAs. This became apparent in a user’s response to my question as to how they were supported by the BAs:

*So how do they support us? They charge me money to rephrase and rewrite my requirements. So they charge me to basically say ‘I think this is what you meant. Is that correct?’ And then if I’m happy, they say ‘I’ll charge you again to tell you how much it might cost you to do this if you wish to go ahead’. And then at the end of it all they will say ‘okay this is what it’s going to cost you to actually get something done’ which is usually 60% more than it would have cost me if I had done it myself* (U3).

The subject matter experts, however, were of the view that users have a poor understanding of the requirements and highlighted why the users need to be supported in articulating requirements:

*One of my goals is to be able to force the business or, not force the business but basically work within the business area, to articulate requirements to get better outcomes. Because IT in a lot of cases cop a lot of rubbish around not delivering and all that sort of stuff. The problem always starts at [the business] end because the business doesn’t know what they don’t want.* (SME1).

The IT staff were also not satisfied with the contributions that BAs were making. There was an expectation that the BA role was failing to add value to the process by not undertaking any analysis:

*I sound a bit like a broken record but one’s that aren’t real analysts, they’re not adding any value* (IT4).

*If it really is just about having an interview or a workshop with the customers and them telling you, informing you of what’s required and you simply write all that down and put it into a document template, then say “There, my job’s done,” then all you’ve really done is something that you can get a secretary to do. You’ve not done any analysis at all, you’ve just written things down* (IT3).

The IT managers’ criticism of lack of analysis in BAs’ work is quite strong. This suggests that, although the BAs did not comment much on their problems with the IT staff, from the perspective of the IT staff, the BAs are not able to meet expectations.
I tried to understand whether the IT department could give more authority to the BAs to deal effectively with the business and IT staff. The response reveals that in practice that was difficult to achieve:

*I don’t think it necessarily can come from IT. I think the key there from my point of view would be to have the business sponsors or the project sponsors, but the business sponsors in particular, actually instill that empowerment in the business analyst. I don’t think it’s done generally anyway* (IT3).

The statement is an acknowledgement that the BAs did not have enough influence to effectively deal with situations where some authority over the stakeholders may be required. Unlike Uni1 where the power seemed to be concentrated with the IT staff, at Expressmail the power seems to be with the business sponsors of the project. A statement from the user gives some indication of the attitude of the business towards the IT staff:

*If it simply comes down to the developer preferring to do something in a different way because they lack the ability or skills to do as has been described in the requirements, then they should seek another job and we find someone who can do it. So it comes down to they either can, can’t or won’t* (U4).

The IT staff had a problem with users being too demanding and attributed that to the use of the waterfall model of systems development that encouraged the users to request for too much functionality:

*The system has trained [the users] to be inflexible. I’m not saying it’s their fault. If I’m only going to get the opportunity to get something into production once every 18 months, guess what, I want everything. This is my only opportunity for two years to get an update to this system. The system becomes what’s called a feature magnet. It just attracts every stupid idea that the business can possibly think...It’s the lack of constant releases...And so there’s flexibility that comes about in a system once you start delivering regularly. Whereas this whole project model, waterfall, PMO, massive, massive project thing has got to go* (IT4).

As discussed earlier, the BAs emphasised a variety of software tools to be part of their ‘tool-kit’. The limitations of using computer-based tools in BA work were also highlighted by the BAs. For the BAs automation by such tools constrained their work. For the IT staff, the costs of acquiring and using the tools outweighed the benefits:
We had a conversation, I sketch some things out on butcher paper, I came up with software. Then the other way I went to elaborate lengths. I did UML diagrams galore and I came out with a piece of software. The difference in investment between the low fidelity requirement and the high fidelity requirement is much higher than the difference in the piece of software that comes at the end. So was it really worth it, is my question. I think people have gotten tools blinded (IT4).

In conclusion, the perspectives of the users and IT staff not only highlight the differences in the perceptions and expectations in the tripartite arrangement involving the BAs, users, and IT staff, but also raise important issues such as the location of the BAs in the organisation structure and the issue of making subject matter expertise as the basis for appointing individuals in the BA role.
5.4 Case Study 3: CompX

CompX is a public sector organisation that works with energy companies, primary producers, mineral explorers and rural communities to address the major and emerging challenges in sustainability and productivity. The services it offers are delivered through a few important areas such as policy making, science and technology, and sustainability. CompX also plays an important role in emergency and disaster management. The policy making contributes towards improved wealth and well-being in the energy and primary industry sectors and the community. The science and technology work area aims to increase the productivity, profitability, sustainability, international competitiveness, and export value of the primary and energy industries. In the area of sustainability, CompX facilitates the adoption of new ideas and practices and assists industries and communities to understand, manage and adapt to change driven by economic, social and environmental pressures.

The organisational structure of CompX aligns with its core functions (see Figure 5.7). The earth resources and technology division is responsible for the development of industries that rely on natural resources. This division consists of sub-divisions that are responsible for energy, industry development, and technology innovation. The research division has sub-divisions that are responsible for research into biosciences and farming practices. It is involved in commercialisation of research outputs. The agriculture division is responsible for the farms, fisheries and bio-security, and emergency management. The strategy unit manages the delivery of policy and strategy and oversees the department's legislative responsibilities. CompX has a centralised service unit that provides services such as human resources, marketing, legal services, finance, and knowledge services.

The BAs are located in the knowledge services unit. The knowledge services unit is responsible for providing IT and related services to the four divisions. These services included IT strategy and investment advice and business analysis services. Knowledge services unit was recently restructured and a separate service delivery unit was set up with functions such as record management, training, and IT support.

The business analysis services were provided by a team of 10 BAs led by a manager. The services provided to all divisions included project management, IT architectural support, systems security, and business analysis. The role of BAs included developing business cases, supporting the development of IT systems, and developing and implementing business processes to transform practices. The business analysis services were focusing on three distinct areas of support - energy, agriculture, other centralised services (e.g., finance, HR).
Figure 5.7- The Organisation structure and locating ‘the case’ in CompX
The BAs were involved in not only IT related projects but also in developing business cases, making process improvements, and providing advice on policies for state legislations. Some BAs were involved in flagship projects, really big projects that were of millions of dollars of investment and running over a number of years. CompX had a focus on emergency management and the BAs were also assigned to the work of managing emergencies. At the time of the data collection the BAs were involved in development of an online system for farmers to process rebates. The rebate was part of a response that CompX was undertaking to compensate the farmers for locust related losses. The government had offered to provide a rebate to farmers for the cost of the insecticide they used to spray their lands. The same offer was available to municipalities for the cost incurred on spraying of public land. The online system allowed CompX to process applications and provide rebate related information to the applicants. The system was also integrated with CompX’s financial system in order to make online rebate payments.

5.4.1 Information about the research participants

The interviews were conducted between November 2010 and February 2011. Table 5.3 provides a summary of interview participants.

I interviewed three BAs who were working in the knowledge services division. BA12 was a senior BA leading the delivery of business analysis services to the agriculture division. BA11 had been involved in quite a few short term process improvement projects. These projects were of two to three months duration. One such project was replacement of existing PCs and peripherals with new ones. BA11 also had played an active role in the restructuring of the knowledge service division in which the new service delivery unit was created. BA13 was brought into CompX for a portfolio management project but had been working on the rebate processing system, the latter having the highest priority at CompX.

The rebate processing system was developed by IT5 and IT6, web developers in the web services team. The development was over and the system was operational. IT6 was responsible for the maintenance of the system. The web developers used scripting languages like java script and PHP in their development work. Other than the rebate processing system, the web developers were also responsible for maintaining the CompX website and the CompX intranet. They had also been building web applications and online training tools for the staff at CompX.
U5 and U6 worked as emergency response coordinators in the agriculture division. The BAs interacted with them to understand the requirements of the rebate processing system. U5 and U6 were part of a new team that was created in the agriculture division for dealing with emergencies. The team predominantly focused on the strategic end of emergency management. The role of the team is to ensure that the planning support systems for emergency management were ready.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Job title</th>
<th>Role description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA11</td>
<td>BA</td>
<td>Process improvement BA in short term projects. Involved in restructuring of the knowledge services division.</td>
</tr>
<tr>
<td>BA12</td>
<td>Senior BA</td>
<td>Responsible for leading the business analysis support provided to the agricultural division.</td>
</tr>
<tr>
<td>BA13</td>
<td>BA</td>
<td>Recruited for working on a portfolio management project but involved in the high priority rebate processing system being developed in CompX.</td>
</tr>
<tr>
<td>IT5</td>
<td>Web developer</td>
<td>Responsible for developing and maintaining the web-based rebate processing system. Maintained the CompX website and intranet used by CompX employees. Built web applications and online training tools for staff.</td>
</tr>
<tr>
<td>IT6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U5</td>
<td>Coordinator, Emergency management</td>
<td>Coordinate response to emergencies and provide requirements for the rebate processing system. Ensure preparedness of planning systems for managing emergencies.</td>
</tr>
<tr>
<td>U6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.3 Summary of interview participants in CompX
5.4.2 The BAs’ perspective

5.4.2.1 The BAs’ understanding of their role

The BAs in CompX, like the BAs in the two other cases, perceived themselves to be making important contributions to the organisation and commented on how expectations of BAs can vary in different organisations. The BAs also seemed to understand that retaining a problem focus in their work was important. In contrast to the other two cases, the BAs seemed to be more driven towards achieving strategic goals through their business analysis work.

Variations in the BA role

The BAs’ understanding of whether their role was a business role or an IT role seems to be related not only to their background but also to nature of their work. BAs’ comments highlight that they experienced differences in what they were expected to do in different organisations:

*I mean I’ve worked in a number of different organisations...the business analyst role does vary quite differently between the private and the public sector and also within different organisations...The service provided by the business analysis team [in CompX] is quite different to many other organisations...It’s not just traditional, I have done very little business requirements gathering in this role (BA11).*

*I’d have to say that in my last business analyst role I was very much IT. I think here although it is still IT it’s probably less IT...It doesn’t necessarily need to be IT at all...I mean writing an energy business case to shut down a power station or something like that, it’s got absolutely nothing to do with an IT system, but they still come to us for assistance. (BA13).*

In CompX, they were not only involved in the work of understanding requirements for IT based solutions but were required to use their analytical skills for analysing business problems in general.

Over the years, the BAs had seen changes in the nature of business analysis work. The BA role had moved away from being concerned only with user requirements to a broader analysis role and BA13 remarked that ‘You’d be struggling to find a BA that does the same thing’. There was the perception that the extent of data modeling done by BAs had reduced significantly:
Ten years ago a lot of the project work I was involved in was more just requirements focused...And there was also probably a much greater emphasis on data modeling ten years ago to what I’m seeing now. I don’t see a lot of data modeling at all being applied in the last four or five years (BA11).

The smaller projects or ad-hoc assignments required the BAs to undertake not only business analysis work but also carry out tasks for managing projects:

*Often there is no project manager depending on the size and complexity of the project. Being able to estimate the size of a project and identification of resources and producing of a rough schedule, word breakdown structures, is all the stuff that business analysts have to do* (BA11).

*Once again that cloudy area of what does a BA do. A lot of the stuff we do is project management work* (BA13).

While this may appear as a developmental opportunity for BAs and an efficient practice for organisations, the BAs’ focus on project management tasks should not adversely impact their ability to undertake the work of business analysis. For example, BAs’ focus on the project management objectives of managing scope, time, and budget, may take focus away from the investment of time and effort required in understanding user requirements. In CompX, for example, the concerns for social and environmental impacts may be easily overlooked as they may not be accounted for in the efficiency-based project metrics.

**A Strategic role for BAs**

The BAs in CompX suggested the usefulness of locating the BAs directly under the top management, where they could play a more strategic role:

*One of the good things for the whole sort of BA industry [is that] it’s getting a lot more focus from executives. I know a lot of organisations are even putting BAs directly under the executive...and the BAs work hand in hand with the CIO* (BA13).

The BAs’ close proximity to the top management could develop the BAs as a strategic resource with more authority and a broader skill set that is not IT-centric.
Retaining a problem focus in business analysis

The time invested in problem analysis had two potential advantages for the BAs. First, having a clear understanding of the problem allowed for the solution to be more apparent. Second, the time invested in understanding the problem could be used to bring about a clearer understanding amongst stakeholders about the change process that would accompany any potential solution:

*We’re really bad in my profession to go directly to the solution, we see a problem we try to solve it...Because the solution is usually pretty self-evident once you’ve that mapped out and understand what the problem is...And part of that figuring out the problem is to bring your stakeholders your client on the journey so that they can understand what it is we’re trying to solve, what does this mean to them, what are the transitions and changes they need to come through* (BA12).

We can see reasons for why the business analysis work could become solution focused. First, the understanding that the end-result or outcome of business analysis work is an IT-based solution, may result in the analysis work to become solution-centered:

*It’s easier to focus especially on the technical side because I know I need to provide some sort of solution at the end. If it’s a payroll solution or it’s some sort of mobility solution, it’s easier to say okay I need to produce this report, how am I going to produce this report* (BA12).

The second reason relates to the involvement of SMEs who, knowing enough about the problem domain, may tend to expedite the business analysis work towards seeking solutions:

*It’s an essential component of a project to model the ‘to be’ process although having said that I have been involved in some of the short term projects where you’ve got subject matter experts that know the ‘as is’ process in depth. So the stakeholders are not interested in the ‘as is’ and a lot more focused on where we’re going* (BA11).

For Uni 1 I discussed how the SME’s familiarity with the business domain may result in their ignoring the detailed context of user requirements and therefore result in a limited analysis. Similarly, SMEs familiarity with the problem domain could result in spending too little time on analysing the problem.
A Sense of contributing to the organisation

The BAs were aware of the some users’ attitude that the BAs role was not important. However, the BAs felt that this attitude was now changing and that their role in CompX was growing in importance:

*I think in the past probably people think ‘business analyst, oh no, we can just do that ourselves, we know the business that’s fine we can do the work ourselves’. But I guess now people are starting to understand that we can be very useful to have...I mean you can just tell when a department comes and says can you help us do a business case* (BA13).

They considered their role to be important for driving change management processes and commented that the formal change management processes were not effective for responding to the subtle requirements arising from change. This is not surprising in the light of suggestions that there is a lack of awareness in organisations about all aspects that need to be changed during transformation initiatives (Unhelkar and Ginige 2010, p.1) and that organisations face major risks when new challenges arise due to changes in tools and methods (von Hellens 1995, p. 17). For example, the BAs viewed that change management processes to be ineffective in dealing with the influence of organisational change on the role of individuals:

*Change management is massive and I worked with a senior project manager [who said] that the actual change management is often overlooked. There’s the very formal change management which everyone’s got...We need to change a field in the system, there’s a change management process. But there’s all the other things, the most important things about change management that are probably overlooked and that’s someone’s role is changing* (BA13).

In conclusion, BAs’ analytical and boundary spanning skills could stay under-utilised and under-developed if the BAs’ involvement is limited only to IT based systems. In strategic roles, the boundaries between users and IT staff may just be one example of the boundaries that the BAs would be expected to span. There is scope of spanning boundaries between departments and with clients and suppliers. The other issue is project management orientation of BAs. While project management approach and project metrics cannot be ignored by BAs, a separation of analytical work and project management work may be desirable. For example, BAs’ project metric orientation may reduce their empathy towards users’ changing requirements.
5.4.2.2 Practice work within the group of BAs

Like in the other two cases, the BAs commented on the need for compliance. In this case, however, the emphasis seemed to be more on learning about the existing practices within the group. The practices that contribute to learning and why informal learning may not always be effective were evident from some comments. The BAs’ perspectives provide further insight on the challenges of using excessive documentation and automated tools in business analysis.

Complying with practices within the group

The BAs were conscious of the need to conform to the practices of the team. This attitude was perhaps more entrenched in BAs who are independent contractors and have a greater awareness about how expectations from the BAs differ across organisations:

I’m one of the standardised business analysts. In the past I’ve performed more of the senior business analyst’s role. I’m a contractor here so I try to conform to what’s required of me in this particular role...I’ve been with CompX for just over 12 months. I’m still in the early days trying to find the guidance on the right tools and techniques and policies that are adopted [in the team]...So that involved quite a lot of collaboration between the BAs and those [BAs] that had done it before obviously share their experience (BA11).

The process of complying with the team is linked to learning from the more experienced BAs. The independent contractors’ emphasis on compliance, however, may restrict creativity expected in the BA role. Therefore, both, bringing about change and ensuring structure in the team’s work, need to be balanced.

In response to my question as to whether the BAs’ understanding of each other’s strengths and weaknesses influenced their practices and engagement with each other, BA11 commented that discussing weaknesses was difficult and required a degree of diplomacy and negotiation:

Because it’s difficult to not be offensive to other people, especially if you’re talking about weaknesses, it’s probably more difficult to manage. I mean you do obviously seem to be working with people that have particular strengths and weaknesses and I guess it’s a matter of trying to adopt a workable approach. So sometimes there’s a bit of negotiation. You have to just reshape your typical approach to the project depending on who’s on board (BA11).
The BA’s compliance required them to adjust to the work styles of others in the team. The extent of ‘reshaping of the typical approach’ could have significant impact on expected outcomes. These shifts in practices are likely to be spontaneous. The challenge would be to provide ways by which the ‘negotiation’ among BAs could be made more explicit and the resulting changes in business analysis approach are understood by all concerned.

The Practices that contribute to learning

The interactions amongst BAs again highlight that BAs usually learn business analysis skills by working in various BA roles. There is little evidence to suggest that formal training courses have a played an active role in shaping their careers as BAs:

*When I started out many years ago there was no business analysis...So I just sort of fell into business analysis. I haven’t really had formal training [to say] ‘this is what I’ve done’* (BA12).

*I got an opportunity to work as an associate sort of junior BA role a couple of days a week and then that turned into a full time junior role...I did that for about three years and then got a job here. So my sort of experience as a BA is very on the job experience* (BA13).

The BAs’ on-the-job learning was supported by a community-of-practice (CoP) that gave them an opportunity to share their knowledge and experience. The membership of the CoP did not involve a formal membership process. An online collaboration space was used to complement the learning opportunity presented by the CoP meetings:

*We have like a regular community of practice meeting which is fortnightly where we generally discuss a topic of interest...So that’s quite a positive and more open forum where people can throw in their learning and questions and it’s quite a good environment...We do also have a collaboration space for the BA community of practice. So, all of the upcoming topics are published there. As far as I’m aware, others can attend if they wish it’s not a closed loop* (BA11).

The CoP was not a ‘closed loop’ but open to outsiders. In the previous cases, I had noted how interactions with the business and IT staff may shape the practices of BAs. The decision to keep the membership open to non-BA roles confirms the need for BAs to engage with individuals
from other departments to learn and become more effective. Given the large extent of informal, on-the-job learning of BAs, future research needs to consider ways by which learning needs of boundary practices may be met.

Similar to the observations made in the previous two cases, the BAs seem to be motivated by the challenges of working in a new domain and learning from the experience:

*I like to be learning, always learning. I get frustrated if I’m doing repetitive work. I guess [I like] a changing environment...it’s all new, it’s different, you’re learning, every day is different. The best way to learn is on the job experience. So that’s why I left my last role because I just felt I wasn’t learning anything anymore (BA13).*

While learning on the job seems to be the way the BAs learn, BA13’s frustrations suggests that it may not always be an effective way to improve the familiarity of BAs who are entering new business domains:

*You’ll find you’re sitting in the back of a meeting [and]...you’re missing everything that’s going on...One thing that I struggled with, and like I said I’m only three months here, is like the acronyms and things like that. The things that you can only really pick up with time but people who have worked here for five years just talk about it like its standard language here. It’s very challenging to come in and not even have an understanding...And you don’t want to be the one sitting in a meeting going ‘what’s that, what’s that, what’s that’ and just basically just stalling the meeting really (BA13).*

**Nature of work – Combination of individual work and team work**

As in the case of Expressmail and Uni 1, for smaller projects BAs were appointed to undertake tasks with individual responsibility. For the larger projects a number of BAs were appointed as a team with collective responsibility for outcomes. The allocation of work to the BAs was based not only on their availability and experience but also on the need to provide a learning opportunity to BAs:

*I guess we’ve been split into four areas so if there’s something within that area of expertise, so if it’s agriculture that will fall to me...I’m now working on [ProjectX]. It was case of I happened to be free at the time [and was told] ‘okay, we’ll pull you into this because there isn’t anybody else available at the time to be able to provide the*
support’. So as need arises and who’s got the capabilities to be able to take on the job (BA12).

*I mean it’s all just developing their skills. I don’t have a very strong financial background...but then they would put me in to assist someone who would have a financial background* (BA13).

The BAs by virtue of being in boundary spanning roles are likely to experience less engagement within the team. Further, given that a large proportion of business analysis work in organisations is undertaken by individual BAs, organisations need to be concerned with the extent to which the individual BAs are supported by their team, department, and organisation as a whole.

**Perspectives of BAs on the use of documentation, tools, and processes**

The use and the development of very detailed documentation in business analysis work can be a source of frustration for BAs. BAs expressed certain concerns:

*Sometimes you feel like you’re just documenting things for no purpose other than to suit auditors at times I would say. So some documents you’ll spend weeks doing and you think what is this even for...And a lot of the documenting is more for our own benefit ...I could understand where technical people say, ‘what’s the use of all this crap?’ and then the business people go ‘what’s the use of all this crap?’ And a lot of the time it’s not really useful for either of them it’s more for us* (BA13).

From BA13’s statement, it is evident that excessive use of documentation may not be serving the interests of either the business or IT staff. It could be serving the BAs themselves in meeting their role expectations or ensuring organisation’s audit and compliance requirements. While these may be valid reasons for pursuing development of documentation, the use of BA role for developing such documentation may result in BAs’ lack of focus on expectations of users’ and IT staff.

The process that BAs followed in the team was not based on any one particular methodology but was influenced by several approaches:
It’s pretty much a mish-mash right now. I’ve been in IT for a long time so I’ve pulled a lot from my own experience. Methodologies I use are agile methodologies, probably waterfall. There’s the IIBA...There isn’t a whole lot of standardisation...we’re just developing a methodology so we’re pulling in pieces and as we learn we’re putting that into a repository (BA12).

Although, going by BA12’ description of the process as ‘a mish-mash’, one may conclude that there is a lack of process at CompX, one could also consider it as a requirement of practice to use only those components from various methodologies that are useful in a particular context or a particular type of business analysis task. The synthesis of the required components from various methodologies into a useful ‘mish-mash’ may be seen as an effective business analysis skill. This skill may be used by business analysts in being creative when no standard modelling notations serves their purpose (Unhelkar 2005, p. 60).

The BAs used a variety of computer-based tools and templates in their work. There was an understanding that the computer-based tools need to be used together with other simple but effective practices such as using whiteboards for interactive sessions:

It’s horses for courses. I think if you’re trying to facilitate a session and trying to introduce concepts the whiteboard is quite useful, if you try to get input from a number of different players within the group it is quite useful to have a centralised focus and using something like a whiteboard which can be rapidly changed...There’s benefits of using electronic documents as well and having an online display. Certainly being able to capture the outcomes at the point of discussion which saves a lot of reworking (BA11).

BA12 explained that some BAs could impose rigidity on their business analysis work by being inflexible in the use of the templates and guidelines. The expectation is that the BAs should be able to adopt the templates and guidelines to their specific needs and be open to rejecting those suggestions and details that are not required:

If you’re strictly a by-the-book kind of person, you’re sticking to the script, you can definitely limit and miss things because you’re just going here’s my questions or here’s how I’m going to fill in this document and I absolutely have to have everything filled in. Instead of looking at it as a guide and say ‘okay does this have everything that I need or
is it too much’ and sometimes it’s way too much information…I’ve come through a number of companies that have had tools, they’re all pretty much the same (BA12).

In conclusion, the BAs appear to be relatively more reflexive upon the use of documentation, methods, and tool in their work. The CoP promoted for BAs may also be seen as a way of recognising and compensating for the lack of mutual engagement between the BAs who spend majority of their time spanning boundaries with users and IT staff, by adding some formality to the ways in which BAs could learn from each other. Similar to my observations in Uni 1 and Expressmail, there was little emphasis on a full scale implementation of a business analysis methodology.

5.4.2.3 Boundary role perspective

Although the BAs in CompX were aware of their bridging role, their comments suggest that their role was also about ‘negotiating’ for the business case and organisational objectives. The difficulties in the boundary role were seen to be arising from issues such as politics and organisational restructuring.

The Bridging role

There was a sense amongst the BAs that their role of bridging the users and IT involved carrying out translation between the technical ‘language’ of the IT staff and the language understood by the users:

*We are the voice between technical and the general clientele in the department. I guess you can be the negotiator at times...Because of my past history I can speak “techies” so I understand the architecture...so I can then relate it back to the business to say okay we do have a solution and here’s what it is in English (BA13).*

BAs compared the interactions with the users and IT staff and suggested a different approach was required for the two interactions:

*I think the business group’s presentations often work better by providing more pictures and diagrams, probably less words, less procedures, less rules. Probably more conceptual and...more of a business focus, business context...And with the technical groups obviously the “i’s” dotted and the “t’s” crossed. As much information as*
possible to make sure that they’re delivering what’s expected of them and they’ve got sufficient detail with the documentation (BA13).

The BAs seem to be making the assumption that detailed information is what enables the BAs to deliver on requirements. From the IT staff’s perspective, however, details do not help them much.

**Attitude towards bringing about alignment**

The BAs considered their role to be that of a negotiator and not merely as a representative of either the users or the IT staff responsible for facilitating interactions between the two. The BAs aimed at ensuring that project related decisions were made in accordance with the business case and towards achieving strategic objectives:

[Technology] architects like to go over here and business is going over there and I’m going ‘no we’ve got to come back to the middle. This is where the business case is’, if there’s a business case I’m the champion of that business case to keep everybody focused on that...Sort of a traffic cop in some cases as well (BA12).

So we’ll look at what they’re doing and how they’re doing it, and we’ll provide guidance or input...So we try and stay in touch with what’s going on across the Department so that we can provide input into what people are doing strategically over the next three years with their business plans (BA12).

BA12 was of the view that the business was usually interested in dealing with the budgetary issues and short term pressures rather than taking a long term view of the situation.

**Frustrations and difficulties in the boundary role**

A potential source of frustration for the BAs was dealing with personality conflicts. Some situations required mediation by another facilitator as ‘regular’ BAs were not seen to be good at managing people:

If there’s personality conflicts well then I would often try to get to the individual beforehand and try to prime them for the discussion and try to diffuse any potential blow ups before they happen. I guess another method is to actually get another party
involved perhaps like a professional facilitator who is better at managing people than a regular business analyst (BA11).

Organisational politics, restructuring, and changing priorities were a potential source of de-motivation for the BAs. The turnover of business staff that were viewed as project champions required the BAs to rebuild support for the project with new users:

*With the users, politics always plays into this...Politics around just re-organisation in the organisation, people moving, people leaving, so you lose that continuity. For instance I’ve lost an individual in the business that was really close connected with my project, he’s now gone off to another position, so he was really a good champion of the project. So now I’m going to have to rebuild that to make sure that this project is successful*(BA12).

The BAs were unhappy that the requirements are ‘lost’ because all the users at the right level of the system usage are not involved. Thus the process of understanding requirements needs to ensure that the interactions, documentation, and sign offs involve stakeholders are all levels. The unresolved differences in requirements between the users at different levels could result in requirements being ‘lost’:

[Requirements] get lost when you don’t involve the users at the right levels. You don’t either involve them, you’ve only got them at the executive level or you’ve only got them at the line manager level...So that’s how requirements will get lost because executive management is expecting one thing, line management is expecting something different (BA12).

In Uni1 the BAs were unhappy for being viewed as having the same, and not a superior, understanding of the systems as the users did. The BAs in CompX did not experience that frustration. To the contrary, BAs acknowledged that the users had a better understanding of the system than the BAs:

*The business quite often understands the system a lot more than the BAs do because we are really one level removed from the actual technology* (BA11).
To conclude, the BAs in CompX seemed to focus more on the strategic objectives rather than merely facilitating the interactions between the users and the IT staff. In order to strive for such an objective, the BAs would arguably need to hold more influence and status in the tripartite arrangement. The comments from the BAs and the comments from the users and IT staff that follow in the next section, suggest that the BAs enjoyed considerable influence over the users and IT staff. Another issue that needs to be noted is the recurring concern about involving ‘the users at the right levels’. The same issue was raised by BAs in Uni 1. While the solution to this may appear to be simple, the observations in the three cases suggest that it may not be easy to implement.

5.4.2.4 Interactions with users

BAs’ acceptance of the users’ changing requirements is more evident in this case. The BAs were able to understand that the requirements are learnt over a period of time. The influence that BAs had in the tripartite arrangement was reflected in their assuming the role of an expert in advising the users. The exercise of influence arguably resulted in some difficulties in the BA-user interactions, such as users’ resistance to change.

Users learn about their requirements

The challenge for the BAs in dealing with the users was to constantly monitor what the business was doing and how their requirements were changing:

\[\text{Need to understand the business, need to stay up with what the business is doing, so I’m checking back and forth. As far as the users go that’s a challenge for me (BA12).}\]

There were some changes in the users’ requirements that were not related to the changing business needs but were seen by the BAs as the users’ inability to clearly understand and articulate their requirements at the outset:

\[\text{It’s often very hard for people to describe their requirement at first. You go bang, sit them in a room and go ‘right, what’s your requirements?’ So we’ll go da, da, da and document them all quickly and then we go away, spend a lot of time, go back and they say ‘no, that’s not it at all, that’s not what I meant’. I can say you can work with them and try to get them documented better in the first place but in reality that’s just what happens (BA13).}\]
Considering BA13’s statement, the reality of BAs’ practice suggests that changing of user requirements is inevitable. The challenge, therefore, is to support the users and BAs to improve the understanding and articulation of user requirements in ways that minimise changes.

**Focusing on the context of requirements**

BAs viewed adding value to the requirements stated by the users as an opportunity for being creative and, more importantly, for capturing the context of the stated requirements:

> If I’ve got something that’s a little soft around the edges and not quite set in stone it allows me that flexibility and creativity. What I enjoy is the creativity of how do I change this and move this around and how to capture this information. Some people really think that the requirements are done so just take what is before them and go. However that’s potentially what gets back to your question of ‘how do requirements get missed?’ If I’m just picking this up and going, I could have missed again that context of why we’re doing this particular requirement (BA12).

To be effective, BAs would need to formalise ways of documenting the transition from a stated requirement to one that is seen in a given context.

**Dealing with lack of user involvement and user resistance to change**

Unlike Uni1 and Expressmail where the BAs found it difficult to get information from users to conduct their work, the BAs in CompX perceived their role to involve sharing their knowledge and expertise with the business:

> Well it’s basically empowering the business to meet its goals. So assisting writing business cases is one that’s come up. So it’s sharing our knowledge through the department...empowering the department is one of the strategic goals I believe most sort of fitted to our business analysis. And sort of mentoring because it’s a very big department. There will be other areas that do process mapping so we will assist them with that as well (BA13).
However, for the BAs, sharing knowledge and expertise with the business was challenging in the face of users’ resistance to change:

*People don’t always see you as a positive being there. People don’t like change at the end of the day and business analyst is all about change. So you get in there and people already hit the defensive. So it’s about working through that with them trying to assist them. We got sent up to the emergency as ‘just get up there and assist’, so when we got there people were saying ‘hang on what’s this something’s changing, you know the ivory tower in [head office] has sent business analysts up to review everything’. The big challenge is working on the relationship and working with them (BA13).*

The BAs were aware that the users will not be willing participants in a change process unless the BAs worked on their relationship with the users. The users’ perception that the BAs are being imposed on the users by a centralised authority to review the way the users worked does not help the cause. Thus, the users’ perceived closeness of the BAs becomes important in the role of being a change agent.

BAs also perceived that users were unable to understand the effort that was required in the business analysis work. As a result of this lack of understanding, BAs found that the users’ expectations on delivery were not very realistic:

*One of the big issues is always just managing the business expectations. It’s difficult for them to understand if it’s a process modeling sort of exercise why it takes six months. I mean they think ‘I already know what I do why can’t we just go and buy a package or develop a solution and get it done and dusted in three months so I can meet my KPI’s’. So I guess a lot of it is just trying to educate the business in terms of the benefits of taking a methodological approach to conducting a business analysis activity and showing them the benefits of doing that (BA13).*

The role of BAs, therefore, involves not only discussion around the information systems and user requirements, but also ‘educating’ the users about the usefulness of formal business analysis activities.

In conclusion, the relative influence between the users, BAs, and the IT staff seemed to be quite different from what was evident in the two other cases. The BAs may also need to practice ‘diplomacy’ in their role as a ‘negotiator’.
5.4.2.5 Interactions with IT staff

In comparison to the other two cases, the BAs in CompX seemed to be able to exercise more influence over the IT staff. The BAs were able to challenge the approach of the IT staff when they perceived the IT staff to be not following the correct approach:

*With technical guys I need to be able to say I don’t think so, I don’t think you’re quite right on where you’re going and being able to challenge them intelligently... Sometimes they get caught up and down this path and it is like saying ‘oh come back here. I don’t think that’s the path we need to go’* (BA12).

BA12 qualifies that challenging IT staff needs to be done ‘intelligently’. This perhaps implies that suggestions to the IT staff need to be supported with structured and logical arguments.

The other challenge in working with IT staff for the BAs was arising from the technical staff’s focus on achieving their own technical objectives to perfection, without realising that the business requirements did not need the very best technical solutions:

*You can be working with a security expert who’s just so security driven that it just drives you nuts and it’s about working with them to figure out what is an acceptable level of security in their mind. An acceptable level of security is locking it down like the FBI but then it’s about saying to them ‘well you know we’ve got to relax a bit’...I guess technical people, they’ve got a niche area of expertise. So you’d have a data base specialist and they would get very protective of the data bases and then you’d be working with the web team and they’re very protective of the web stuff. It can be quite challenging working with the technical people* (BA13).

The potential source of technical staff’s single-minded focus on their technical objectives is seen to emanate from their understanding being limited to a niche technical area.

The BAs felt, that the technical staff were not interested in understanding the motivation for and impact of their work:

*They don’t care, that’s the technical people. They just say ‘I don’t care just tell me what I’ve got to do. Don’t care about all this stuff’. You say, ‘well no you need to get an idea for what’s going on’. But it’s ‘no, just tell me what button goes where, this, that etc.’* (BA13).
5.4.3 The User and IT staff perspective

The users were aware of the difficulties of clearly articulating their requirements at the start of the requirements analysis phase. But they were not willing to take the entire blame for it. From the users’ perspective, the upfront analysis by the BAs can also be too detailed and delay clear articulation of user requirements. U5 felt that while the users were providing information to the BAs, the BAs response was not easily understood by the users:

*We can’t always describe what we want and so the business analyst assists us in being clearer about what we want. It may be too detailed, it may be way over the top...In the early phases you feel like you are giving all of the time, you are giving and not getting much back. Apart from something that you really don’t quite understand (U5).*

The way in which BAs handled changing user requirements was problematic for the developers. For the developers, it appears that the piece of code is much more than a means of satisfying user requirements. In fact, the developers seem to have a completely different sentiments and purpose attached to it. The developers expressed an emotional attachment to the code and were more concerned about how other programmers will judge the programming parameters like code efficiency and maintainability:

*We tend to be a bit more emotionally driven into a project. Because it’s our baby...I find I have an attachment to it, like I’m very proud of what I write. You’re always refining you’re always trying to make it run that little bit quicker and tighter and integrate it just in a way that you can kind of go well if I leave this place and someone else comes in I want them to kind of look and go ‘wow that’s really well done, he’s done that part really good, and it’s functional, quick, clean’. Yeah and then a BA can come in and say oh we want this function changed, and all of a sudden you’ve got a dog’s breakfast and you’re sitting there going I hope no one ever sees this code...You want to make sure it’s maintainable because if it’s not you get depressed (IT5).*

For the IT staff the change requests were all not of the same type and the BAs were seen to not understand the difference between the simple and ‘massive’ change requests.

*A gap in their knowledge is that they don’t understand what a simple change is, what’s a simple update, what’s a simple modification and what is just a massive, massive change that is going to take days and days for us to do...And I don’t think in their minds they know what the difference is. So maybe that’s where you could bridge a gap of*
understanding. And that’s maybe why they’ve accused us or whatever of being inflexible (IT6).

The users’ experience with the BAs was both positive and negative. This is evident in the following two comments from U5:

*What I enjoyed in that process was the rigor and the approach of looking at where we are now, where we want to be and how we’re going to get there...It actually helps to clarify your thinking. We know what we want to do but we have to be able to articulate the logic behind how we got to the point (U5).*

*I’m sorry there is an experience that I had with this group in...I bid for some money to develop an IT system to be able to capture all of the knowledge that we have about our clients in a coordinated way. The methodology became really torturous. It was really hard to keep focused and concentrate because it just took you into so much depth and to analyse things to a point, it did become very difficult to keep going, to maintain your enthusiasm into something (U5).*

Although U5 is appreciative of the BAs’ ability to support logical articulation of user goals and analysis of resources needed for achieving those goals, U5 felt that rigor can at times make the analysis irrelevant and uninteresting for the users. U6 explained that it was not just the methodology but also the associated documentation that could be too much for users:

*So certainly the information we’ve had, well it’s almost been overkill in some sense. So, you almost need to have six month’s training in Visio I think to work some of these documents that come out. Somebody must spend a hell of a lot of time drawing bloody diagrams (U6).*

The IT staff seemed to share the users’ perception about the limited usefulness of the very detailed documentation that the BAs handed over to them. But they were aware that the BAs were expected to document in detail because of audit related requirements:

*And so they’ll say we’ve got all of these flow charts and everything else and I’ll kind of say okay can you make it into an easier flow chart for me...It’s nice to have but from my side of it I don’t need it. And I work more verbally as well. If I see six documents I might need to reference them but they’re not what I’m running off the whole time, I’m...*
running off notes and things that I’ve picked up...and they’ve got like heaps and heaps of documents. I would only ready maybe 2% to 5% of documents because I don’t need to read them...most of the time it’s got to be read by auditors or upper management to sign off so they’ve got to put that stuff in (IT5).

The users had certain concerns which, rather than being related to any system requirements, seemed more political. They were not pleased with the BAs’ role extending from being problem analysts to that of becoming problem solvers. This is reflective of perhaps the influence that BAs in CompX had over the business areas. The BAs’ work was seen by the users as an ‘encroachment’ into their area and the BAs were considered unqualified to provide solutions to problems:

*To me the value of a business analyst is to work alongside someone who is clear about what’s required. There’s an agenda going on here about making better use of these guys [the BAs]. ‘They are terrific, they are wonderful, they can solve all our problems’. They can analyse our problems, yep but can they fix them? There’s an assumption they can fix them too. They need to be part of a team that’s trying to solve a problem rather than being the leader of the show (U5).*

The users felt that it was difficult to get approval for the systems that they wanted to be developed and the effort invested after every few years in building business cases for the system was a waste as such proposals were rejected and the users had to be satisfied with using workarounds:

*One of the other learning we’ve had over many years is you try and build this wonderful IT system, you find out what it’s going to cost and it never happens. And so you do it again four or five years later. What do we need, oh we need one of these we build it all over again. Put it up, no money. Nothing happens...So in itself the analysis is a useful technique but it can be overdone. If there’s no result at the end it’s a bit like hitting yourself on the head up against a brick wall you eventually stop and think I need another way around this...So the history of the organisation is that we build little workarounds (U5).*

The users discussed the pros and cons of using independent contractors in the BA role. The disadvantage was that the knowledge acquired by temporary contractors was lost to the
organisation when their contract was over and the organisation again needed to invest in taking new contractors along the learning curve:

If [the BAs] are contractors they’re brought in for this and brought in for that and then we actually lose our corporate knowledge very quickly. It’s one of the models that’s definitely being used here that half the people here are contractors who are in here to do a job and off you go, go and find something else...But it also refreshes the organisation, brings you new ideas and new things, but sometimes you then have to teach them the same lesson over again...It’s a bit like going to a different doctor every time, you have to tell them all the things that you told the last one. How old are you, do you ever smoke, have you had an illness, tell me about your family and all that sort of stuff. I actually just recently had my knee done and I was asked what my birth date is by at least 10 people within two hours (U5).

Another potential problem with contracted BAs was that the contracted BA’s reliance on the host department for continuation of employment is likely to result in the BA not being neutral in the bridging role:

I suppose [the BAs are] looking at,”Who’s going to extend my contract? So who do I have to actually support in this business, in this work?” If the IT crowd are the ones that are contracting the business analyst, that’s going to make sure the business analyst is fairly focused on doing the right thing by the IT crowd, as opposed to doing the right thing by the business analyst (U6).

U6 explained how it was more important that the BAs should be advocating user needs to the IT staff rather than the other way around:

I think we’re being IT driven at the moment or increasingly so. So the solutions that we get in are driven by what IT thinks is a good idea, not by what the business need specifically is. That seems to be a bit of a trend. So I think the business analyst has got to be more an advocate for the user to the IT crowd than an advocate for the IT crowd back to the user (U6).

One contribution of the BAs that is useful by the users is the simplification of the message in support of investment proposal and business cases:
[Business analysis] gives you also a chance to simplify the message. And simplifying the message is very important when you get to the top end of a major investment thing. It needs to be very obvious upfront why we’re doing this, what’s it going to cost and what will the benefits be (U5).

U6, a more technologically savvy user, experienced that the conduit role of BAs may sometimes act as barrier between the users and IT staff in situations that do not allow the users, IT staff, and BAs to hold joint discussions:

So if you have everybody in the same room, that’s much better than saying “Well okay, I’ll listen to this person about their business need, and then I’ll do my bit in the middle, the business analyst will do their bit in the middle and then they’ll take that through to the IT people at this end”. That’s reinforcing the barriers that exist (U6).

For U6, it seems direct access to the IT staff appears more useful in achieving users’ goals. The IT staff had a different view on having direct access to the users. For example, IT6 compared the experience of being on projects with BAs and without BAs. The mediation of BAs allowed the developers to get their questions about user requirements answered through the BAs without having the developers get away from their development work:

Every time there was an unknown like a web programming and we’re going ‘hang on how’s this supposed to work’, we could just go straight to the BA and say ‘we don’t know what rule we’re supposed to do here, can you please find out for us’…then I’d just go back and they’d then worry about figuring it out. I can focus more on programming and developing when I have BAs, when I don’t I have to do all that chasing myself (IT6).

Going by IT6’s experience it seems advisable that for critical decisions related to viability of projects, IT staff should have direct discussions with the business stakeholders if there is a difference of opinion with the BAs:

I was building the system and as I was building it I could tell pretty quickly that this was not going to be an improvement over what the stakeholder was already using. In fact it was probably going to be worse. But the person in the middle was of the very strong opinion that it was definitely going to be better...And so I said okay. And in this setup it wasn’t my role to go to the stakeholder and question them and say do you really
I think this is going to be a waste of time, that wasn’t my role. My role was to take the requirements from the analyst person in the middle...Theoretically I could have made a phone call back to the stakeholder but that might have been unprofessional, the analyst probably could say to me that’s not your responsibility (IT6).

This situation also suggests the importance of building confidence between the BAs and the IT staff to deliver the required business benefits. In order to prevent such situations, more flexibility in formalised ways of communications between the stakeholders in projects would be useful.

There was a perception that management by IT staff was not effective in leveraging the IT tools that organisations could use:

Well I think the IT systems are becoming more flexible, but I think the management of our IT systems is becoming less flexible...I think the tools are enablers, but the management are actually constraining us (U6).

The BAs’ boundary spanning work required the BAs to remain engaged with the various business stakeholders. The IT staff could see how the programmer’s role was different from that of the BAs’ role:

They’re always a lot busier than I am. A programmer will be sitting at his desk 99% of the time, whereas a BA could be speaking to a client then speaking to another client. And when they speak to clients they have to go out of the office a lot of the time. So if I need something, I’ve got to hope that there’s three business analysts across the project and hopefully one of them is in the office at the time I need to find the information. If not I send them an email and they get back to me (IT5).

The availability of the BAs is critical to the progress of the programming work of the technical staff. The IT staff may be better supported by effective knowledge sharing systems that include both IT staff and the BAs.

From my interactions with BAs in the previous cases, it seemed that the BAs looked up to the IT staff for the technical skill. IT6’s comments suggest that the technical developers may have admiration for the skills of the BAs as well. Having subject matter expertise or technical skills was not seen to be enough to perform in the BA role:
Obviously I’m better at building IT systems, programming them but I certainly don’t possess the skill to be able to break down requirements. Like if someone came to me and said okay we need a system that can process rebates, I wouldn’t know what to do…I don’t think you could be a subject matter expert and make a good analyst and you couldn’t be a developer and make a good analyst. There’s a distinct skill there in being able to take a task and figure out like okay what are the risks, who’s going to be impacted here, what do we need to factor in and let’s start breaking this down into its simpler component (IT6).

In conclusion, the user and IT staff perspectives highlight many areas for BAs to reflect upon. For example, the users’ perceptions suggest the BAs included excessive details in the initial BA-User interactions, which made it difficult for the users to understand outcomes of their interactions. Another issue relates to the IT staff’s perspective that the BAs were not able to distinguish between the minor and major changes and understand how the change impacts technical work.

Comparing and contrasting the perspectives of the BAs with those of the users and the IT staff lead to interesting insights into the differences in perspectives among the BAs and the users and the IT staff. Given that these insights seemed significant to not only business analysis but also to understanding boundary practices in general, they are discussed in chapter 7 titled Business Analysis as Boundary Practice. As indicated in the research design, the little overlap between chapter 5 and chapter 7 has been deliberately built into the structure of the thesis.
Chapter 6

A Cross-Case Analysis

6.1 Introduction

In chapter 5, I considered each case as a separate unit of analysis and presented results of the within-case analysis. In this chapter, the focus will move to a comparison of the three cases. The same themes that were used in discussing the results of the within-case analyses will be used.

6.2. Theme 1: The Business analysts’ (BA) understanding of their role

The cross-case analysis of Theme 1 is summarised in Table 6.1.

In the three cases, the BAs’ understanding of their role demonstrates a contrast in the BA role emphasis. The organisational need for providing analysis and support to the business users on an ongoing basis led to the expectation that BAs play the role of ‘account managers’ for managing relationships with clients and not be limited only to understanding and documenting project-specific requirements (Uni 1). Another emphasis relates to the increasing technical awareness of users in organisations. The increasing technical awareness of users meant that the BAs perceived themselves to be less in the role of ‘translators’ between users and IT staff (Expressmail). In such cases where the users were aware of the technical ‘language’ used by the IT staff, the BAs understood their role as being a support role to ‘protect’ the users from excessive interactions with the IT staff. This was perceived to be necessary to prevent the users from getting distracted in their routine work. The BA role emphasised a non-IT focus, especially where BAs were expected to use their expert knowledge of the business domain to advise and mentor the business users (CompX).
<table>
<thead>
<tr>
<th>Category</th>
<th>Issues</th>
<th>Uni 1</th>
<th>Expressmail</th>
<th>CompX</th>
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<tbody>
<tr>
<td><strong>Valuing variety in BA role</strong></td>
<td>BA role varies amongst organisations</td>
<td>• Variety in the BA role discussed to emphasise different role expectations and practices in organisations</td>
<td>• Variety in the BA role discussed to emphasise need for learning and keeping themselves motivated</td>
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<td></td>
<td>Seek variety in work experience</td>
<td>• Variety in work experience considered important for being seen as a BA</td>
<td></td>
<td>• Variety in work experience considered as a source of motivation and learning</td>
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<tr>
<td><strong>Attaching importance to BA role</strong></td>
<td>Change management role</td>
<td>• BAs as change agents</td>
<td>• BAs as change implementers rather than change initiators</td>
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<td></td>
<td>Reasons for perceived importance</td>
<td>• Organisation/ IT departments need BAs for maintenance of large systems</td>
<td>• Perceive problem solving role of BAs better than routine business operations</td>
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<tr>
<td><strong>Job Satisfaction in the BA role</strong></td>
<td>Source of job satisfaction</td>
<td>• Delivering systems enhancements to users and training them to use the improved systems</td>
<td>• The role of the bridge between IT and users</td>
<td>• Dependence of business on the BAs’ analytical skills</td>
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### Table 6.1 A Cross-Case comparison on the theme BAs’ understanding of their role

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<tr>
<th>Category</th>
<th>Issues</th>
<th>Uni 1</th>
<th>Expressmail</th>
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<tbody>
<tr>
<td>BAs’ understanding of their role</td>
<td>Changing nature of BA role</td>
<td>• Innovation: BA as a client relationship manager</td>
<td>• BA role changing as user is becoming technologically aware</td>
<td>• BA role changing and is much broader than the traditional requirements analysis role for IT systems</td>
</tr>
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<td></td>
<td>Clarity about the BA role</td>
<td>• BAs themselves unclear about their role and perceive more communication is needed to establish clarity amongst the stakeholders</td>
<td>• Feel there is little clarity about the role in industry and suggest the role needs a distinct focus in academic courses&lt;br&gt; • Need for the BA role in projects not always understood</td>
<td>• Clear about the BA role and do not perceive ambiguity from perspective of stakeholders&lt;br&gt; • See potential for a more strategic role for BAs</td>
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<td></td>
<td>Role of subject matter experts (SMEs)</td>
<td>• SMEs often assigned to BA role</td>
<td>• Awareness of differences between BAs and SMEs&lt;br&gt; • SME role important</td>
<td>• Awareness of differences between BAs and SMEs; SME role relatively less emphasised in projects</td>
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<td></td>
<td>Problem and solution focus</td>
<td>• BAs being coached to be problem focused</td>
<td>• Problem focused BAs perceived as effective</td>
<td>• Understand as to why some BAs tend quickly get into solution mode</td>
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<td></td>
<td>Project management skills</td>
<td></td>
<td></td>
<td>• Expectations that BAs will undertake project management tasks</td>
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Based on the context of the three cases, one can contrast BA role emphasis in the three cases (See table 6.2). In organisations, where the users in various departmental units have diverse needs, are heavy users of information systems, and need to be supported in their ongoing use of the system, the need for BAs playing the role of relationship manager seems useful (Uni 1). Ongoing relationship building may become even more useful when organisations are operating in dynamic business environments as a result of which the information systems supporting the users require constant upgrades. The need for constant upgrades may also arise from other reasons such as a poor fit between the information system and organisation’s requirements. In some organisations the BAs may be expected to ‘protect’ the users as the user involvement in IT projects may result in unnecessary disruption of operations (Expressmail). Organisations may also use BAs to provide value to stakeholders in ways that are not always related to IT-based systems (CompX). The BAs could be expected to undertake analysis work and deliver value to the stakeholder groups through initiatives that were not related to IT systems.

<table>
<thead>
<tr>
<th>Contrast in BA role emphasis</th>
<th>Potential contextual factors driving the emphasis</th>
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</table>
| From project-specific requirements analysis to managing relationships with clients | - Diversity in clients’ needs  
- Ongoing system maintenance / upgrades in a dynamic business environment  
- Need to support heavy use of IS by the employees at the operational level |
| From ‘translating’ between the users and IT staff to ‘protecting’ the users | - Technically knowledgeable user  
- Minimum disruption required for users  
- Little need for ongoing system upgrade/ maintenance |
| From IT system to non-IT system related work | - Organisation providing value to clients in ways that have little to do with IT systems |

Table 6.2 Analysing BA role emphasis in the three cases

Another issue that comes to the fore in the three cases is the relationship between the BA role and the subject matter expert (SME) role. At times, SMEs were considered to be suitable candidates for the BA role and were appointed to such positions, with some SMEs even assigned to work on strategic projects in BA-type roles (Uni 1). Such an approach assumes, and may signal to others in the organisations, that the BAs are essentially business experts. One concern with this is that business analysis requires strong analytical capabilities combined with business knowledge and it is questionable whether SMEs have thus developed the appropriate mix of knowledge and skills. However, there was a contrasting view that drew a distinction
between the SME and BA roles (Expressmail). The IT staff argued that SMEs familiarity with
the business domain could be a more of a liability in the BA role as the familiarity could result
in their being too familiar with the context and thus not able to objectively analyse problems,
and from that to adequately document solution requirements. In this context, the SMEs were
expected to work together with the BAs rather than replace the BAs. An alternative scenario
was where the BAs themselves assumed the role of SMEs (CompX). In such a case, it seems
that the SME role was less emphasised and the BAs considered themselves to have the required
business domain expertise to advise even the business users. These contrasting practices and
perspectives on the role of SMEs in business analysis suggest that practitioners have different
views on what skills and knowledge are important for a thorough analysis. The advances made
in academic literature are also limited to attributing various skills to analysts, without
investigating how and why the subject matter expertise in the domain being analysed influences
a thorough analysis.

The relative influence between the BAs and users seems to influence the importance associated
with the SME role. Where users seemed to have relatively higher influence, the business
sponsors were seen as a source of empowerment for the BAs, the role of SMEs was formalised,
and individuals were designated as SMEs (Expressmail). By contrast, where BAs appeared to
have considerable influence over users, the role of SMEs was not valued (CompX). Further, the
BAs’ influence over the domain experts was visible in the users’ perception that BAs were
trying to solve problems on their own without much consultation and unilaterally imposing
solutions on the users.

BAs in the three cases seem to be aware of the importance of not losing the focus on problem
analysis, but the extent of reflection on the issue varied. At a basic level of reflection, the BAs
understood that their role was primarily responsible to understand the problems, whereas the
technical solution was the job of the technical staff (Uni 1). Some BAs were more reflective and
understood as to why BAs could easily turn towards solutions rather than investing effort in
understanding the problem in depth (CompX). The BAs commented that If SMEs are appointed
as BAs or if the SMEs are influencing the requirements analysis process, their knowledge about
the business domain may take the focus away from further analysing the business domain in
which the problem lies, and also from ensuring that the essence of the problem is identified
before starting to discuss solutions. Perhaps, the SMEs in the BA role may too readily think that
they know what the problem is. This could also be because the outcomes of business analysis
are almost always seen as a new or improved technical solution so the stakeholders are quick to
start talking about the solution without spending time on analysing the problem situation.
The BAs commented on how the BA role and business analysis practices varied amongst organisations (Uni 1 and CompX). This variation was perceived by the BAs to be related to the tools, methods, and the ‘ways of doing things’, and resulting from organisational factors such as the location of the BAs in the organisation structure.

Perhaps this perception motivated the BAs to accumulate a variety of work experience. For the BAs who were close to the start of the careers, the experience in varied roles was seen to improve their image as BAs in the eyes of prospective employers. For BAs who were more experienced, working in new roles was considered important for continuing to learn and stay motivated.

Therefore, a variety in work experience may be very important for ongoing professional development in terms of both learning and career progression. The issue of professional development of BAs needs to be addressed by both practitioners and academia in order to respond to an increasing demand for BAs (ESI International 2011; Gautam 2007). The challenges in BAs’ professional development arise from the nature of their boundary practice work. Unlike practices where the required knowledge and skills may be acquired largely by working with peers, boundary practitioners such as the BAs spend majority of their time learning from and about individuals the BAs are trying to ‘bridge’. For BAs to remain attractive to prospective employers, the BAs, even those with considerable experience, need to continue to accumulate a variety of work experience and remain relevant in the dynamic business environment and increasingly agile organisations.

The BAs felt a sense of contribution towards the organisation, but emphasised different reasons. The BAs felt that they were needed by the IT department to maintain large systems (Uni 1) or that the users expected the BAs to analyse and solve business problems that may not always be IT related (CompX). One could, however, see that the extent of contribution the BAs perceived themselves to be making varied amongst the cases. This difference in perception is perhaps related to the power equations amongst the stakeholders. When the BAs seemed to be the most influential, they considered themselves as initiator of change (CompX). By contrast, when the BAs did not seem to be the most influential in the tripartite arrangement, they considered themselves to be implementers of change rather than initiators of change (Uni 1 and Expressmail).

To conclude, the comparison under this theme suggests the following. First, under the influence of changing organisational contexts, may emphasise different aspects in their work practices. Second, the extent of awareness about maintaining a distinction between the capabilities of SMEs and BA role could be further improved. For example, business analysis practices that are
heavily influenced by SMEs, or by SMEs appointed as BAs, may tend to focus less on the problem domain. Third, the relative power held by the users, BAs, and IT staff in the tripartite arrangement, seems to influence the BAs understanding of their role. Finally, the cross-case analysis highlights the challenge of providing professional development activities for BAs.

6.3 Theme 2: The Practice work within the group of BAs

The cross-case analysis of Theme 2 is summarised in Table 6.3.

In all the three cases, compliance with team practices was considered important by the BAs, but the motivations to comply varied. Compliance was often seen to stem from the value placed on learning. Complying with the practices of experienced BAs was regarded as a key tranche in the overall development of less experienced BAs (CompX). However, compliance also arose from issues of social identity and the need to belong. New members of the BA team, regardless of their experience and knowledge, felt social pressures to comply and thus avoid upsetting more established members of the team (Uni 1). Interestingly, and perhaps contra to expectations, contract BAs were regarded as more compliant with practices than were permanent staff (Expressmail). This may be attributable to greater insecurity in their employment, with compliance being potentially coupled with opportunity for future or ongoing employment. One concern with compliance is the potential for reduced inflows of new ideas, knowledge and practices if pressures apparently exist to comply with the status quo.

There were other reasons also that seemed to influence the BAs’ need for engaging with others in the team. The BAs emphasised the importance of a common understanding around the use of methods and functionality of the information system (Uni 1). This was perhaps necessary because, although they worked on independent projects, their work was related to one large information system for which they supported users on an ongoing basis. Thus, there would be benefits from adopting similar approaches to analysis and documenting requirements. However, when BAs’ association was limited to the duration and scope of a project in which each BA had a specific task with little task overlap, there was little emphasis on need for a shared understanding and on adapting to each other’s work style (Expressmail).
### Theme 2: Practice work within the group of BAs

<table>
<thead>
<tr>
<th>Category</th>
<th>Issues</th>
<th>Uni 1</th>
<th>Expressmail</th>
<th>CompX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complying with team</td>
<td>Need for compliance</td>
<td>• Awareness that practices differ between organisations</td>
<td>• Independent contractors more compliant than permanent staff</td>
<td>• Compliance described more as a process of learning from the more experienced members of the team</td>
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<td></td>
<td></td>
<td>• Avoid upsetting team members</td>
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<tr>
<td>Having Common understanding with other BAs in the team</td>
<td>Areas in which common understanding is required</td>
<td>• System behaviour and approach to analysis</td>
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<td></td>
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<td>• Reconcile differences between newer and older members of the team</td>
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<tr>
<td>Understanding work style of other BAs in the team</td>
<td>Adapting to other BAs’ work style</td>
<td>• Using a different ‘language’ with different members</td>
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<td>• A ‘diplomatic’ challenge to explicitly discuss strengths and weaknesses of other BAs</td>
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<td></td>
<td></td>
<td>• Strengths and weaknesses of each other understood at varying degrees by the BAs</td>
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<td>• Adapting approach to work in a team may require negotiations with other BAs</td>
</tr>
<tr>
<td>Category</td>
<td>Issues</td>
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<tr>
<td>Learning informally</td>
<td>Learning to work as a BA</td>
<td>• No formal training and learning on the job</td>
<td>• No formal training and learning on the job</td>
<td>• No formal training and learning on the job</td>
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<td></td>
<td>• Formal training aspirations for acquiring BA skills, skills for training users, and for networking with BAs to learn new practices</td>
<td>• Learning process as ‘osmosis’ and may not always involve a conscious effort by the BAs to learn</td>
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<td></td>
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<td></td>
<td>• Importance of academic qualifications</td>
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<td></td>
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<td>• Importance of ethical and professional conduct</td>
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<tr>
<td>Learning from each other</td>
<td></td>
<td>• Shared, open office space</td>
<td></td>
<td>• A CoP for BAs - online collaboration space</td>
</tr>
<tr>
<td>Aspiring for formal</td>
<td>Factors that supported learning</td>
<td></td>
<td>• Work allocation for learning</td>
<td>• Work allocation for learning</td>
</tr>
<tr>
<td>learning</td>
<td></td>
<td></td>
<td>• Opening CoP membership to staff other than BAs</td>
<td>• Opening CoP membership to staff other than BAs</td>
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<td></td>
<td>Factors that prevent learning</td>
<td>• Lack of tolerance for diverse perspectives due to differences in work experience</td>
<td>• Physical distance amongst the BAs</td>
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<td>• Little overlap in the type of projects that BAs are working on</td>
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<tr>
<td>Category</td>
<td>Issues</td>
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</tr>
<tr>
<td>Combining individual and team work</td>
<td>Individual work and team work</td>
<td>• Work done individually and team engagement required for achieving a common understanding amongst the BAs</td>
<td>• Work done individually except in large projects where more than one BA might be allocated to a task</td>
<td>• Work done individually except in large projects where more than one BA might be allocated to a task</td>
</tr>
<tr>
<td>Difficulty in allocating work in a team</td>
<td>Work allocation</td>
<td>• Ad-hoc</td>
<td>• BA’s skills, experience, and area of interest</td>
<td>• Availability and experience of BAs</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent contractors to manage workload</td>
<td>• To provide a learning opportunity to BAs</td>
</tr>
<tr>
<td>Using documentation</td>
<td>Concerns about usefulness of documents</td>
<td>• Need to improve users’ familiarity with documentation used by BAs</td>
<td>• Details may add to complexity</td>
<td>• Excessive use of documentation may not be serving the interests of either the business or IT staff</td>
</tr>
</tbody>
</table>
<pre><code>                                                            |                                                                        |                                                                     | • Documentation focus on application rather than business requirements can be problematic |                                                                       |
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<thead>
<tr>
<th>Category</th>
<th>Issues</th>
<th>Uni 1</th>
<th>Expressmail</th>
<th>CompX</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Concerns about processes used by the team</td>
<td>• Established procedural guidelines and attitude of established team members a source of frustration for newer members</td>
<td>• Project planning lacks emphasis on human resource requirements</td>
<td>• Satisfied with using a process that was developed by the BAs by taking parts of various methodologies</td>
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<td></td>
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<td>• No formal process for improving internal processes and interacting with users and IT staff</td>
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<td></td>
<td>Suggestions for improvement</td>
<td>• Change management plan needs to be drawn out by BAs in parallel to writing the requirements document</td>
<td>• Perception that cost of governance needs to be managed and requires research on governance practices</td>
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<td>• Agile approach may maximise the understanding of the changing requirements of the users</td>
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</table>

**Using processes for BA work**
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<th>Category</th>
<th>Issues</th>
<th>Uni 1</th>
<th>Expressmail</th>
<th>CompX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using tools for BA work</td>
<td>Use of electronic tools</td>
<td>• Used a variety of electronic tools</td>
<td>• Used a variety of electronic tools • Awareness that electronic tools can make work inflexible • BA’s instincts is an important tool</td>
<td>• Used a variety of electronic tools • Awareness that electronic tools can make work inflexible • Customisation of tools required for projects of different sizes</td>
</tr>
<tr>
<td></td>
<td>Use of tools in user and IT interactions</td>
<td>Little reflection on how the interactions with the users and IT staff would require distinct tools / models</td>
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</table>

Table 6.3 A Cross-Case comparison on the theme *Practice work within the group of BAs*
The BAs usually did not undertake any formal training before gaining employment as BAs and therefore, had to acquire the required skills while working. However, what was evident in the cases were differing perspectives amongst the BAs in terms of the ways in which learning from each other might be supported or restricted. Having the group of BAs share an open plan office space was seen as a way to help the BAs to remain engaged with each other and perhaps support learning by ‘osmosis’ (Uni1), even in situations where they were working somewhat independently on different projects. Without this informal interaction, the BAs had fewer opportunities to learn from each other (Expressmail). Another way of supporting the BAs’ learning from each other was by promoting a CoP, a forum for the BAs to exchange ideas, experiences, and knowledge with each other (CompX). The membership to the CoP was informal and open to staff members other than the BAs. There was also an online space for collaboration and sharing knowledge. Thus we see learning from one another was critical especially so given the lack of formal BA qualifications. Informal learning could be supported through physical office arrangements, and/or through creation of informal (sometimes virtual) communities.

In all the cases, the BAs were working on separate tasks with individual responsibilities for those tasks. However, in the case of large projects, more than one BA was assigned joint responsibility of a task, either related to IT projects or to some business needs analysis. The assignment of tasks to BAs was based upon BAs’ skill, experience, and areas of interest to allocate work (Expressmail and CompX). Although task assignment of this type appeared to be organised, that did not solve the problem of planning for human resource requirements for projects (Expressmail), where unexpected increases in workloads needed to be managed by hiring more contract staff.

The three cases highlight different concerns about the documentation used in the business analysis work. In one case, although the BAs realised that the users would not find the models and documentation that the BAs used to be easily comprehensible, the solution proposed by the BAs, to improving users’ familiarity with the documentation and models by simply exposing users to them more often, was really not helpful (Uni 1). Another issue is related to the level of details in the documentation and the resulting length of the documentation (Expressmail, CompX). The BAs were of the view that detailed documentation was important for them but they were concerned that excessive details could also make it complex. It was considered problematic when requirements documentation said more about the application being developed and less about the business requirements. The third potential issue with documentation may arise when BAs are working in an environment that had significant compliance and audit
pressures (CompX). In order to comply with these pressures, the BAs tend to develop excessive documentation that then proved challenging for both the users and the IT staff.

There were concerns expressed by the BAs with regards to the processes relating to organising and carrying out their team’s work. The BAs were concerned that their internal team processes did not get enough attention as the majority of their time was spent in spanning the boundaries of users and IT staff (Uni 1). In addition to this, the newer members were frustrated with the rigidity shown by the established members of the team for changing the group’s ways of working. However, rigorous planning for group’s processes was not useful when it was not coupled with planning for resourcing of BAs and other project staff (Expressmail). The BAs in CompX seemed most confident about the process they used. The process they used was far from standardised. It was drawn out of various methodologies the BAs had used over the years.

The BAs in the three cases used a variety of electronic tools, but expressed some concerns. The BAs understood that the support provided by these tools could be constraining for BAs’ work and that the cost of using these tools needs to be weighed against the expected benefits (CompX and Expressmail). For example, use of such tools for small projects may not be justified as they impose rigor that may be unnecessary. Some projects may need customised versions of the tools rather than full scale versions.

To conclude, the cases were similar in terms of the BAs’ need to comply with practices within the group, their emphasis on on-the-job training rather than formal training, their being assigned work individually on tasks, and use of electronic tools. The cases were different in terms of the apparent emphasis on shared understanding amongst the BAs and the types of concerns with processes and documentation.

6.4 Theme 3: Boundary role perspective

The cross-case analysis of Theme 3 is summarised in Table 6.4.

An interesting difference between the cases was in the BAs’ need for being ‘diplomatic’ in their interaction with users and IT staff. The need to be diplomatic with both IT and users was emphasised by BAs who felt that straightforward communication would upset users and IT staff (Uni 1). This could be interpreted in several ways. One could infer that the BAs were somewhat distant from both users and IT staff, and that the BAs were thus not perceived as ‘insiders’ by either the users or the IT staff. The location of the BAs in the organisations structure may have influenced this outcome. The BAs were not in the IT department and neither were they in business units of the end users. Further, the need to maintain relationships with the users, provide ongoing support to users within the constraints of a legacy system, and deal with the IT
## Theme 3: Boundary role perspective

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<th>Category</th>
<th>Issues</th>
<th>Uni 1</th>
<th>Expressmail</th>
<th>CompX</th>
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</thead>
</table>
| Acting as a conduit    | Representation of users or IT in the conduit role                      | • Aware of liaison / bridging role between IT and Users  
• Different views on whether they represented users or IT or whether there role was perceived as a business or IT role |                                                                             |                                                                                                                                       |
| Being a diplomat       | Emphasis on practicing diplomacy                                       | • Practice diplomacy with both IT and users in communicating outcomes of discussion at either boundaries  
• BAs assess that straightforward communication would upset users and IT staff |                                                                             |                                                                                                                                       |
| Speaking two languages  | Need for translating between users and IT                              | Acknowledge the user and IT live in different worlds and are unable to talk directly with each other  
• In many cases need to ‘translate’ between the users and the IT staff  
• Increasing technical knowledge requires less translation  
• Champions for the business case |                                                                             |                                                                                                                                       |
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<tr>
<th>Category</th>
<th>Issues</th>
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<th>Expressmail</th>
<th>CompX</th>
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</thead>
<tbody>
<tr>
<td>Seeking clarity in all interactions</td>
<td>Strategy for seeking clarity</td>
<td>• Assuming no knowledge</td>
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<td></td>
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<td>• Re-confirming one’s understanding</td>
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<td>• Rely on oral/written communication</td>
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<tr>
<td>Putting clients’ needs before team needs</td>
<td>Little time for organising team’s work</td>
<td>• A challenge to achieve a balance between time spent on organising</td>
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<td></td>
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<td>team processes and the time spent on dealing with IT and users</td>
<td></td>
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</tr>
<tr>
<td>Viewing IT and user interactions as separate</td>
<td>Understanding the two interaction were</td>
<td>• Interactions with users and IT described as ‘living in two worlds’</td>
<td>Aware that a different approach may be required</td>
<td>Aware that a different approach may be required</td>
</tr>
<tr>
<td>Disliking not having adequate knowledge</td>
<td>Concerns about lack of knowledge</td>
<td>• Lack of knowledge within the team and dependence on external sources</td>
<td>• Difficulty in getting information from external sources can limit the extent of analysis</td>
<td>• Difficult to acquire knowledge by simply being present at the meetings</td>
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<td>seen as problematic</td>
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<tr>
<td>Category</td>
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| **Frustrations in the conduit role** | Dissatisfiers in the boundary spanning role                                               | • Get to deal mostly with complaints and the positive feedback does not come to the BAs  
• Frustrated with users and IT groups’ different set of KPIs and priorities  
• IT non-committed about giving deadlines  
• Users at the right level of the system usage are not involved | • Political culture may prevent access to people that have the required systems knowledge  
• Issues of change in scope and its budgetary implications called for escalation | • Dealing with personality conflicts  
• Organisational politics, restructuring, and changing priorities  
• Users at the right level of the system usage are not involved |
| **Working on alignment**         | Focus on strategic issues                                                                 | • The imperatives of organisational alignment do not seem to be central to the way the BAs approached their routine work | • The BAs in Expressmail seemed very aware of the strategic objectives and how their role would impact on working towards these objectives | • Pressure of compliance and audit requirements  
• Emphasis on business case |

Table 6.4 A Cross-Case comparison on the theme *Boundary role perspective*
department may have required the BAs to be tactful. This may mean that the BAs perceive themselves to be of lower status than both the users and the IT staff. It may also result from the BAs genuinely perceiving themselves as carriers of ‘difficult’ messages, such as conveying to users the news that some of their requirements cannot be delivered due to various constraints, or informing the IT staff that certain changes are required within challenging time frames. Being diplomatic would be one way of trying to ensure that such messages were accepted without lasting acrimony. The practice of ‘diplomacy’ in the conduit role may be problematic if it turns into BAs’ ‘reluctance to transmit bad news’ amongst the various stakeholders in IS projects (Keil et al. 2004).

The BAs seemed to be aware that the interactions with users and IT staff were not of the same nature. For example, the BAs considered the two interactions meant that they enter and ‘live in two worlds’ (Uni 1) and deal with the users and IT staff who had different aims (CompX). But there is little evidence to suggest that the BAs reflected on how distinct approaches, tools, models, and documentation might be required in these two ‘worlds’. One interesting difference in approach was that the BAs in Uni 1 were happy to rely on verbal communication with the users, but with the IT staff they used written communication. This difference in the level of formality may be indicative of the difference in status between the BAs and IT staff or may even be viewed as the BAs’ level of trust being higher with the users.

The BA role involved working with users and IT staff and obtaining information to support the progress of the projects. The levels of concerns that BAs seemed to have in obtaining this information varied. Some BAs found it challenging to deal with this lack of information. Without having the information, the BAs could do little to facilitate progress of the projects or any business analysis work assigned to them (Uni 1). These BAs were unhappy with the team’s lack of knowledge on systems and users’ processes and resulting dependence on external sources for this information. Given that BAs’ role primarily involves seeking information from sources outside their team, this frustration seemed odd. Other BAs seemed less concerned but were aware that limited information could limit the extent of analysis (Expressmail). In one case, it was suggested that being present in meetings with users and IT staff may not be enough for BAs to acquire knowledge about a new domain and some formal methods for imparting domain knowledge would be necessary (CompX).

There were a number of other issues that caused frustrations for the BAs. Most notably accessing the ‘right’ users from which to elicit requirements caused frustrations and the BAs commented that the users at the right level of the system usage are often excluded in the BA-user interactions (Uni 1 and Expressmail). Despite the importance of speaking to the correct person, the political climate in organisations may prevent the BAs from getting access to the
right people, and also contribute to frustrations in terms of interpersonal conflicts, restructures, and changing priorities (CompX). Another issue that frustrated the BAs was managing the users’ and IT department’s different set of KPIs and priorities (Uni 1). The BAs were unhappy with the IT staff’s inability to give them timelines for delivering on system enhancements as this increased the difficulty of managing user expectations. The BAs were also unhappy that they rarely received positive feedback from users and were perpetually dealing with user complaints.

An unusual finding was the great variation in the extent to which the BAs in the three cases focused on aligning their business analysis work with the strategic objectives of the organisation. The imperatives of organisational alignment did not seem to be central to the way some BAs approached their routine work (Uni 1). In contrast, other BAs seemed very aware of the strategic objectives and how their role would impact on working towards these objectives. A considerable focus on strategic objectives seems to result from the compliance and audit pressures that BAs faced (CompX). The BAs commented that their role was not only being the conduit between the users and the IT staff but ensure that the users and IT staff followed a business case that met organisational objectives. It was outside the scope of this study to reveal causal connections here, but it would be interesting to speculate that in contexts where BAs are vigilant in ensuring projects stay aligned with organisational objectives, they are perceived as having greater effectiveness by senior management.

To conclude, the three cases varied in many ways with regards to their boundary practice orientations. The variations were in the BAs’ perceived need to practice ‘diplomacy’, the extent to which they felt challenged to balance the time and efforts spent in interacting with users and IT staff and with each other, and the importance the BAs gave to aligning with organisational objectives. These variations were perhaps related to the differences in the extent and nature of frustrations experienced by the BAs.

6.5 Theme 4: Interactions with users

The cross-case analysis of Theme 4 is summarised in Table 6.5.

The work of the BAs was different in terms of their interactions with users. In one case, the BAs had an ongoing interaction with the users in order to deliver system enhancements and to support users in the use of the information system (Uni 1). The BAs in other cases worked in a project based arrangement where the interaction was very specific and limited by the scope and timelines of the projects (Expressmail and CompX). It appears that the BAs in Uni 1 seemed to feel more challenged than the other BAs in managing user expectations and dealing with IT staff. This would suggest that BAs in ‘account manager’ roles might have more persistent issues to deal with, many of which are more relational in nature. However, given that there were
## Theme 4: Interactions with Users

<table>
<thead>
<tr>
<th>Category</th>
<th>Issues</th>
<th>Uni 1</th>
<th>Expressmail</th>
<th>CompX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Classifying user issues</strong></td>
<td>Concerns related to issues raised by users</td>
<td>• Incidents / issues raised by users reveal little about the nature of problem with Xsys&lt;br&gt;• Issue classification required discussions and system knowledge</td>
<td>Issues were not technical in nature</td>
<td></td>
</tr>
<tr>
<td><strong>Understanding differences in user requirements</strong></td>
<td></td>
<td></td>
<td>Managing different requirements formally through a project working group that had representatives from various project groups</td>
<td>Constantly monitor what the business was doing and how their requirements were changing</td>
</tr>
<tr>
<td><strong>Challenges in understanding requirements</strong></td>
<td></td>
<td></td>
<td>Problematic if requirements documented without the context&lt;br&gt;• Requirements are not ‘out there’ as possessions of the users that can simply be delivered to the BAs&lt;br&gt;• Empathy towards users’ learning requirements over a period of time&lt;br&gt;• Understanding old code</td>
<td>Users’ inability to clearly understand and articulate their requirements&lt;br&gt;Adding value to the requirements by adding the context of the stated requirements&lt;br&gt;Off-the-shelf packages made it difficult to deliver on the user requirements</td>
</tr>
<tr>
<td>Category</td>
<td>Issues</td>
<td>Uni 1</td>
<td>Expressmail</td>
<td>CompX</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Managing user expectations</td>
<td>Difficulties in managing expectations</td>
<td>• Information system constraints</td>
<td>• Technical, budget, and time constraints</td>
<td>• Need for ‘educating’ the users about the usefulness of formal business analysis activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Escalation seen necessary at certain times</td>
<td>• A changing approach to manage expectations</td>
<td></td>
</tr>
<tr>
<td>Dealing with a lack of user involvement</td>
<td>Difficulties in getting users involvement</td>
<td>Perception that users are unwilling to understand technical issues that affect their requirements</td>
<td></td>
<td>• Difficult to get people involved in the change process</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• The perception that the BAs are being imposed by a centralised authority not helpful</td>
</tr>
<tr>
<td>Supporting users</td>
<td>Considered ways of supporting users</td>
<td>• Relating practices of one group to other groups</td>
<td>Be an interface for accessing the services</td>
<td>• Mentoring the stakeholders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Address poor knowledge levels</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.5 A Cross-Case comparison on the theme *Interaction with Users*
other contextual influences (e.g., relative influence of BAs and differences in skills and knowledge of BAs) it is difficult to speculate whether the differences in BAs’ experiences and practices can be attributed only to the differences in the nature of interactions.

There were differences in the BAs’ awareness and acceptance of the fact that users requirements could vary in different departmental units that may otherwise appear to be doing similar work. Some BAs expressed surprise and were only beginning to realise that users could have different requirements even though they may appear to be involved in a similar kind of work (Uni 1). In contrast, some BAs worked with the understanding that there will be differences in users’ requirements that need to be formally recognised and managed through a project working group that had representatives from user groups (Expressmail). This is interesting as it may provide insights into the sorts of assumptions that BAs may hold, which then impact on the quality of the requirements documentation. Making assumptions about what users may require (on the basis that various user groups to an outsider are similar) can easily result in systems that do not meet the requirements of some groups. It may also suggest that developing more intimate knowledge of various stakeholder groups may help in this regard.

An interesting variation amongst the BAs came about in terms of the importance of context in understanding requirements. It was, however, not clear how the BAs went about recognizing contextual details and documenting them during the course of their business analysis work, thus overcoming the recognised problem of having requirements documented at a high level without the contextual information. The BAs in CompX commented that documenting the context of requirements was the part of value addition that BAs need to add once the users states their requirements. However, again it was unclear how this value addition was achieved.

The BAs were aware that understanding user requirements was not merely a matter of having a conversation with users (Expressmail and CompX). First, they commented that requirements are not ‘out there’ as a possession of the users to be simply delivered to the BAs in an interview. Second, the BAs were aware that the users would find it difficult to clearly understand and articulate requirements, and will learn about requirements over a period of time. The difficulties of understanding requirements sometimes related to the software as well. The BAs commented that some requirements had to be reverse-engineered from the systems that they were trying to integrate. These observations suggest that the challenges of articulating and understanding requirements may not be resolved by BAs unless the perspectives underlying the use of data collection methods recognise that requirements are learnt and constructed during the BAs’ interactions with the users.
Managing user expectations was a challenge to the BAs in all three cases, involving a number of different issues. One issue was related to what could be delivered within the constraints of the system (Uni 1). The influence of the IT department over the BAs and the BAs’ limited technical knowledge perhaps made it more difficult for the users to assess whether the constraints were really imposed by the system, or by an IT department reluctant to make certain changes. The BAs felt that when users were unwilling to understand that some requirements were not possible within the existing system, escalating the issue to a higher level of management was required. The second issue of managing user expectations was related to making changes to requirements, especially those made late in the project, which would then impact negatively on project metrics of time and budget (Expressmail). They explained that as the project moved closer to completion, they needed to be more ‘careful’ about users changing requirements. At the advanced stage of the project it was difficult for them to get change approval from the management. Thus there is a difficult balancing act between making changes that had clear, demonstrably business benefits, and making changes late such that project metrics would be negatively impacted. The third issue was that the BAs perceived that users were unable to understand the effort that was required in the business analysis work (CompX). As a result of this lack of understanding, the users were unable to understand why it should take so long for the BAs to undertake business analysis tasks or why so much time is required to be invested in what the BAs did. Therefore, in order to manage users’ expectations, it was important for the BAs to ‘educate’ the users on the nature and importance of formal business analysis activities.

The BAs considered various ways to support the users. The BAs were not only acting as a conduit between the various users and IT staff but between the various user groups as well (Uni 1). As client relationship managers of more than one user groups, the BAs were able to relate practices of one group to other groups. The team of BAs had the responsibilities to train the users on system use. The BAs were conscious of users’ need for a single interface to access the various support services and the BAs could be that interface (Expressmail). A distinct perception about supporting the users was the BAs’ view that their role was one of mentoring the business stakeholders (CompX). This suggests that the BAs were confident of their knowledge of the business domain and had the organisational mandate to influence business users. At the same time, the BAs were aware that such a mandate could alienate the users.
6.6 Theme 5: Interactions with IT staff

The cross-case analysis of Theme 5 is summarised in Table 6.6.

The BAs experienced problems in interacting with IT staff for a number of different reasons. BAs often felt that the IT staff did not acknowledge their system knowledge and considered their knowledge to be no better than the users’ knowledge of the system (Uni 1). The BAs also were unhappy that, by virtue of their technical knowledge, the IT staff assumed they understood user requirements better than the BAs. The BAs who viewed themselves as having a technical background also perceived that the IT staff did not think the BAs had much technical knowledge of the system (Expressmail). By contrast, some BAs were not worried about their technical knowledge (CompX). They were confident of their capabilities to mentor the business. They were even happy to acknowledge that users, being closer to the systems they work on, could have a better understanding of system than they did. The quest for technical knowledge was related with the BAs’ perception that this might be required to ensure that the IT staff did not justify avoiding work on the system by ‘blinding’ stakeholders with technical jargon (Expressmail). Quiet clearly, there could be some trust related issues embedded in these perceptions.

There were concerns expressed about the IT staff’s objectives and the lack of alignment with what the BAs were trying to achieve. The BAs noted that the technical staff gave priority to system maintainability over users’ requirements (Uni 1). The BAs were also concerned that the technical staff was not interested in understanding the motivations for and impact of projects and focused on achieving their own technical objectives to perfection (Comp X). However, the BAs did not blame the IT staff for their inflexibility, but attributed some of the inflexibility in the IT department to the governance processes that were in place (Expressmail).

There were questions raised about the work style of IT staff. In Uni 1, IT staff were seen by the BAs to be lacking a customer service culture. The BAs found the IT staff’s reliance on electronic communication a problem. It was difficult to get information from the IT department. In CompX, the BAs felt that at that the technical staff had the tendency to over complicate communications.
## Theme 5: Interactions with IT

<table>
<thead>
<tr>
<th>Category</th>
<th>Issues</th>
<th>Uni 1</th>
<th>Expressmail</th>
<th>CompX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealing with attitude of IT staff</td>
<td>Problems with IT staff</td>
<td>• Access to information is difficult</td>
<td>IT staff tend to</td>
<td>• Focus on achieving their own technical objectives to perfection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IT staff consider the BAs to have poor system knowledge</td>
<td>• Overcomplicate communication</td>
<td>• Technical staff not interested in understanding the motivation for and impact of their work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IT staff’s attitude that a superior technical knowledge gives the IT staff a better understanding of requirements</td>
<td>• Assume BAs are not technically knowledgeable</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lack a culture for customer service</td>
<td>• Avoid work</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Give system maintainability a priority over user requirements</td>
<td>• Be inflexible because of governance processes s</td>
<td></td>
</tr>
<tr>
<td>Seeing status difference with IT staff</td>
<td>Perceived status difference</td>
<td>• Due to differences in technical skills and power view IT having a high status</td>
<td>• Acknowledge that they would have little influence over the IT staff</td>
<td>BAs able to challenge the approach of the IT staff</td>
</tr>
</tbody>
</table>

Table 6.6 A Cross-Case comparison on the theme *Interaction with IT staff*
Concluding remarks on the cross-case analysis

To conclude, the findings across the three cases suggest that the problems between the BAs and IT staff appear to me more acute than those between the BAs and the users. This is irrespective of whether the BAs were located inside the IT department or elsewhere. One can also sense from the nature of concerns that these concerns could lead to, or even arise from, differences in the worldviews of the BAs and IT staff. Although the research was not specifically focused on understanding power issues in the tripartite arrangement, many comments of the participants left me with an impression that the BAs’ status in relation to the IT staff and the users may have a role to play in many issues. Figure 6.1 illustrates my speculation on what appears to be the status of BAs relative to the users and IT staff. In Uni 1, the IT staff seem to exercise considerable influence and were virtually directly inaccessible to the users. The BAs looked up to the IT staff for their superior technical skills. In Expressmail, the users seem to be having the most influence. This was evident from the IT manager’s comments that it was the users that could delegate authority to the BAs to exercise influence. Further, the BAs acknowledged that they had little influence over the IT staff. In CompX, there is little in the BAs’ comments to infer that BAs perceived IT staff to be of higher status. To the contrary, many comments from BAs, users and IT staff suggest that BAs were able to challenge both the users and the IT staff to follow the business case. BAs also considered themselves to have enough knowledge and expertise to mentor the business stakeholders. Thus the BAs wielded considerable degree of influence over users and IT staff.

![Figure 6.1 Relative influence and status of participant groups involved in business analysis](image-url)
The status of BAs relative to the users and IT staff (see Figure 6.1) helps in making sense of some of the differences observed across the three cases (see Table 6.7 and Figure 6.2). In Uni 1, the IT staff seemed to have considerable power that placed them in a position to influence the progress of business analysis and other project related activities. They were perhaps able to ‘use’ the BAs to ‘protect’ them from the users. The users having the least influence expected the BAs to work as the ‘drawbridge’ so that they could have access to IT services and support. The situation in Expressmail was different. The BAs appeared to have least influence, the users were seen to have most influence, and the IT staff viewed their role as one for providing support to the users. The BAs instead of ‘protecting’ the IT staff now did exactly the opposite and ‘protected’ the users from excessive interactions with the IT staff. CompX presented a case where BAs seemed to have influence over both users and IT. They perceived themselves to be in a position to challenge the users and IT staff to ensure project implementation is aligned with the organisational strategies and the business case. Interestingly, it was only in Uni 1 that BAs commented about the need to be diplomatic with both the users and the IT staff. In CompX, their perceived status perhaps did not require them to emphasise ‘diplomacy’. The perceived importance of SMEs in Expressmail appears to have been a result of the users having greater influence in the organisation. This was not the case in both Uni 1 and CompX.

<table>
<thead>
<tr>
<th>Case</th>
<th>Orientation of bridging role</th>
<th>Importance given to SMEs</th>
<th>Need for ‘diplomacy’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uni 1</td>
<td>Protecting the IT staff from users/ drawbridge to IT staff for users</td>
<td>Low</td>
<td>Yes</td>
</tr>
<tr>
<td>Expressmail</td>
<td>Protecting the users from IT staff</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>CompX</td>
<td>Negotiating with both users and IT to align work with organisational objectives</td>
<td>Low</td>
<td>No</td>
</tr>
</tbody>
</table>

Table 6.7 Using the relative influence of BAs to ‘make sense’ of differences across the three cases
<table>
<thead>
<tr>
<th>Perspectives on the BA role</th>
<th>Relative influence in the 3 cases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uni 1</strong></td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td>BA</td>
</tr>
<tr>
<td>BA</td>
<td>User</td>
</tr>
<tr>
<td><strong>Expressmail</strong></td>
<td></td>
</tr>
<tr>
<td>User</td>
<td>IT</td>
</tr>
<tr>
<td>BA</td>
<td></td>
</tr>
<tr>
<td><strong>CompX</strong></td>
<td></td>
</tr>
<tr>
<td>BA</td>
<td>IT</td>
</tr>
<tr>
<td>IT</td>
<td>User</td>
</tr>
</tbody>
</table>

Users view BAs as a ‘bridge’ to IT staff

IT staff expect BAs to ‘protect’ them from users

BAs view their role to ‘protect’ users from IT

BAs ensure that users and IT staff comply with the business case

**Figure 6.2** Differences in the BA role in the three cases
Chapter 7
Business Analysis as a Boundary Practice

7.1 Introduction

As discussed in chapter 2, many studies have highlighted differences in perspectives and expectations between users and IT staff. These differences are indicative of a boundary (Diamond et al. 2004) between users and the IT staff (see Figure 7.1). The business analyst (BA) role was introduced with the aim of spanning this boundary. In this research, therefore, business analysis is viewed as a boundary practice that is designated to connect the users and IT staff, and BAs are viewed as boundary practitioners. In this chapter, I will return to some of the relevant ideas from the boundary practice perspective and other literature to discuss the results of my research, specifically in terms of boundaries and boundary practice.

Figure 7.1 A Boundary between users and IT staff
The chapter is organised as follows. In section 7.2, I discuss differences in perspectives between the BAs and users, and BAs and the IT staff that were evident in the data and that may be indicative of a boundary between these respective groups. In section 7.3, I articulate a theory of business analysis as a boundary practice. In section 7.4, I relate my findings to the adopted theoretical perspectives of communities-of-practice and boundary practices.

7.2 Understanding differences in perspectives in business analysis

In discussing the motivations for this research, I highlighted the expectation that BAs act as a bridge between users and IT staff to overcome the differences in perspectives between the users and IT staff (Evans 2004a; Kaiser and King 1982). However, failure to identify users’ requirements and deliver artifacts that meet users’ requirements persists as a major factor leading to IS project difficulty (Geneca 2011; Goldsmith 2004). Given this, in chapter 1, I raised the question as to whether BAs are able to bridge the user-IT gap effectively.

The results suggest that the differences in perspectives between the users and IT staff as depicted in Figure 7.1, are not the only differences that BAs deal with. In this study of the tripartite arrangement, what has emerged also are clear differences in perspectives between BAs and users, and BAs and IT staff (see Figure 7.2). The introduction of BAs in the bridging role has the potential to introduce other boundaries: boundaries between the BAs and users and between BAs and IT staff. Such boundaries, in addition to the user-IT boundary, are likely to add to the challenges of the boundary spanning role of BAs. Therefore, in the sections that follow, I compare and contrast the perspectives of BAs with those of users and IT staff to identify the differences between them that arguably demonstrate a boundary between BAs and the other two groups.

![Figure 7.2 The Boundaries in the tripartite arrangement](image-url)
7.2.1 Differences in perspectives between BAs and users

The differences in perspectives between the BAs and the users are summarised in Figure 7.3 below.

An important difference in perceptions of the BAs and the users was regarding the extent to which the users were willing to make an effort to understand the broader issues related to user requirements. The BAs reported that users showed little interest in understanding how the technical constraints of the system or the needs of other stakeholders might be impacted by their own requirements. However, the users’ perspective presents a very different picture. For example, U1’s comment that ‘we often do not hear about all the issues’ suggests that the users were willing to understand the broader issues and committed to supporting the BAs in this regard. It was interesting to note that U1 was not pleased by the organisational practices that kept the users uninformed.

Another difference in perspectives relates to the use of online systems for communicating and tracking issues reported by the users. Some BAs were promoting a web-based tool for managing user requests with the aim of providing an improved service, believing that this would be an effective way of supporting the users. In contrast, the users’ perspective suggests that use of such systems might not be as well-regarded. Such online systems were seen by the users to be resulting in their requirements losing meaning by the time they were acted upon, and the users were very clear in expressing a preference for more face-to-face communication with the BAs. Going by the users’ perceptions, the BAs may find that more direct forms of communication may be more effective in providing quality service to the users, and might help ensure that the user’s interpretation of the problem is preserved. It is interesting to note that the BAs were critical of the lack of a customer service culture in the IT department but they themselves adopted practices that resulted in dissatisfied users, such as implementing this online system. Further, the users were not only unhappy with service but also had a considerable degree of cynicism about the BAs’ promotion of the online system, suspecting that the real purpose of the web-based tools was to help the BAs themselves track users’ requests, and that its prime purpose was not to improve communication with the users.
There were also differences in the extent to which the BAs and users expected business analysis work to be problem-oriented or solution-oriented. The BAs were often encouraged by their managers to have more of a problem focus, rather than a solution focus. The user expectations were not necessarily the same. It seems the users expected the BAs to not only understand their problems but also play an active role in developing and delivering solutions and advising IT staff to meet organisational objectives. For example, users explicitly stated that they would
‘expect [BAs] to have some value adding and some expertise that might help with a solution’ (U1) and that ‘[the BAs] can advise or support the information technology solution department to make sure that they deliver’ (U2).

There were different perceptions regarding the knowledge that BAs would need in meeting the expectations of their role. The BAs’ understanding of being an intermediary seems to result in their emphasising the importance of both business and technical knowledge in their work. The BAs perceived a trust deficit when they lacked business knowledge. For the BAs, having business knowledge seems to be matter of being confident that the users will trust the BAs to undertake analytical work in the users’ domain. For example, a BA commented that without domain knowledge the users ‘might not have faith in the work that I am doing because they’re probably getting the gist that I don’t understand them’ (BA9). Though it would be difficult to ignore the role of business knowledge in business analysis, the response of users suggests a different emphasis and thus a different expectation of the BAs. For users, the role of BAs was not about bringing business knowledge into the discussion. The users seem to expect a specialised analytical skill set from the BAs, and were willing to share their business knowledge with the BAs. For example, users were happy with the work of BAs with ‘a [business analysis] skill set but no background knowledge as such and who didn’t understand [the organisation] and [still] did a great job’ (U4). The users expected the BAs to support them to gain insight into their requirements, when the users themselves were finding it difficult to understand their own requirements despite their domain expertise.

Interesting differences in the perceptions about the BA’s role and practices were evident when the BAs were able to exercise significant influence on users. In such situations, the BAs considered their role to be that of a negotiator and not that of a representative of either the users or the IT staff. The BAs ensured that the decision making in projects was in accordance with the business case and challenged both the users and IT staff if their inputs to the project were not in line with the business case. For example BA12 commented that ‘If there’s a business case, I’m the champion of that business case to keep everybody focused on that...Sort of a traffic cop in some cases as well’. The BAs perceived this approach to be one that was achieving strategic objectives of the organisation. However, this is not how the users perceived the BAs’ focus on the business case. For the users, being driven by strategic direction and instructions without being creative was more like being ignorant of more effective options and solutions. It is interesting to note in U5’s comment that users at the operational level did not agree with the importance the top management may attach to a particular objective:

[The BAs] are very focused and they tend to follow the instructions they’re given, rather than thinking outside the square. Sometimes they’re just like ‘I’ve been given this
task to do, I will do this task, I will gather around the things, I need to do my task. Is it the right task? Don’t ask me’. So they tend to be driven by [top management’s] direction...But sometimes the direction they’re given isn’t important (U5).

In situations where the BAs exercised influence over the users, another sharp difference that emerged was with respect to the role the BAs should play. While the BAs perceived that their role was to support and ‘mentor’ business users with their knowledge and expertise, the users saw the BAs’ practices as interference. Interestingly, the users did not appreciate an excessive ‘solution-orientation’ from the BAs:

[The BAs] can be used inappropriately with an assumption that they can solve anything because I think they’re part of the solution but they’re not the solution. So they need to be part of a team of people who are looking for a solution as opposed to saying ‘hand it over then I’ll come up with the goods’ (U5).

The BAs and the users shared concerns about there being a lack of understanding in the early stages of analysis, but the perceptions underlying their concerns were different. While the BAs perceived that the users were unable to clearly understand and articulate their requirements in the early stages of their interactions, the users’ comments suggest that the initial analysis might be too detailed, complex, and focused on the BAs’ need to understand what might be required in the IT-based system, rather than on the users’ requirements:

[The initial analysis] may be too detailed, it may be way over the top...It is too hard, we’re getting into far too much depth and detail, but the analyst needs it to determine what’s required in the system. In the early phases you feel like you are giving all of the time, you’re giving and not getting much back...Apart from something that you really don’t quite understand (U5).

The users’ comments above suggest that the BAs may not be communicating appropriately in the early stages. Further, while the BAs’ perceived that documentation of initial discussions is useful, the users were concerned that once the initial analysis is formally documented, the document carries a certain authority that actually may not reflect the tentative nature of the initial analysis:

So certainly the information we’ve had, well it’s almost been overkill in some sense. So, you almost need to have six month’s training in Visio I think to work some of these documents that come out, some of the diagrams that come out. Somebody must spend a hell of a lot of time drawing bloody diagrams...But I also think it tends to give an
authority. Once something is documented as a flowchart like that it gives it an authority which it doesn’t deserve at that early stage (U6).

Summary

The discussion of differences in BA-User interactions suggests BAs may need to consider the following in order to meet user expectations:

- The BAs may need to reflect on their perception that users are not concerned with impact of user requirements on broader organisational issues. Perhaps, the BAs could address users’ concerns of not receiving enough information about broader organisational issues that may relate to users’ requirements. The BAs could be more involved in understanding the knowledge needs of the users, especially information that may enable the users to visualise how information systems influence organisations as a whole.

- The second area that BAs need to consider relates to the use of online systems for communicating with users and keeping track of user requests. The BAs’ inclination towards web-based systems was not well received by the users. The users expected to see a human element in the services being provided to them. The dependence upon systems alone was perceived by the users to be creating a ‘distance’ and a sort of uncertainty between them and the BAs. Interestingly, there was no indication from the users’ comments that the human element introduces uncertainty.

- Another important area of difference relates to the focus of the BAs and expectations of the users. While the users expected more analytical inputs from the BAs to help users better understand their requirements, the BAs focused on business and technical knowledge. Though pragmatic from the BAs’ perspective, this focus may not be useful in meeting their role of bridging the gap between users and IT staff.

- While some BAs perceived that they were following the strategic directions and mentoring and supporting users, the users perceived the BAs to be an outside authority that was interfering in their work. This could make it difficult for the BAs to build relationships with users, resulting in little user support for any change management that BAs would want to undertake.

- Another issue is the amount of documentation that BAs should use and develop in the initial stages of the BA-User interaction. In the initial stages the users’ understanding of their requirements was not very clear and users were not happy with the formal documentation of their early discussion. The documentation is perceived to unnecessarily impose a structure and rigidity on the initial discussions when users are only beginning to learn about their requirements.
7.2.2 Differences in perspectives between BAs and IT staff

The differences in perspectives between the BAs and the IT staff are summarised in Figure 7.4. It was interesting to note that some BAs and IT staff had a different view on the extent to which they would like to engage with the users. While the BAs were looking at their role as one of being account managers and maintaining ongoing relationships with the users, the IT staff were interested in disengaging once the requirements were documented, thus keeping user interactions to a minimum. This raises the question as to whether a ‘bridge’ is a good metaphor for the BA role and whether boundary practitioners always work as a ‘bridge’ by reconciling perspectives between other practices (Wenger 1998). Other terms such as ‘moat’, ‘protector’, ‘cushion’, and ‘dictator’ seem to be more accurate labels for the role and practices of BAs.

The BAs and IT staff perceived different problems to be causing a failure to deliver on user requirements. The BAs were unhappy with the IT staff’s inflexibility in making changes to the system and commented that the IT staff gave priority to system constraints and maintainability over user requirements. By contrast, the IT staff were of the view that it was the BAs who were unable to understand and document users’ expectations. For example IT1 commented that ‘articulating expectations into requirements sometimes does not happen well or the understanding of the requirement doesn’t capture the full expectation’.

The BAs and IT staff had different perceptions about who between the BAs and the users had a better knowledge of the systems. The BAs felt that they had more knowledge than the users and felt offended at the idea that their system knowledge was considered to be on a par with the users. By contrast, the IT staff felt that the users had a better knowledge of the system:

> Sometimes talking to IT can be a frustrating experience because I feel like I’m treated as though I were just a user from time to time. When I report something I am returned with a response of “No, no, that’s not what the system is doing,” and I’ve done a lot of testing in my time (BA1).

> The [Users are] working with the system all the time. So they have that expertise whereas the BAs don’t. The [BAs will] only be looking at problems that relate to the system (IT2).

BA1’s frustration of being treated as ‘just a user’ is perhaps indicative that BAs consider the users to have little understanding of the systems the users work on. Such an attitude, irrespective of what might be the case, may not be useful, as the BAs may fail to understand from the users, the intricacies of the users’ work practices and the role information systems play in the users’
work. Interestingly, the IT staff seem to have a view that considered the users to have better system knowledge than the BAs.

Figure 7.4 Differences in perspectives between BAs and IT staff

<table>
<thead>
<tr>
<th>BAs’ perceptions and expectations</th>
<th>IT staff’s perceptions and expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceive the need to engage with users on an ongoing basis</td>
<td>Expect to be disengaged with users once the requirements are documented</td>
</tr>
<tr>
<td>Perceive that users’ requirements are ignored due to inflexibility of IT staff</td>
<td>Perception that the requirements documented by the BAs do not capture the expectations of the users</td>
</tr>
<tr>
<td>Expect IT staff to acknowledge that the BAs’ knowledge about the system is better than the user</td>
<td>Perceive the BAs knowledge of system is second to that of the users</td>
</tr>
<tr>
<td>Focus on business and technical knowledge</td>
<td>Perception that BAs’ domain expertise could reduce creativity</td>
</tr>
<tr>
<td>Expect detailed and signed requirements at start of the project</td>
<td>Expect more analysis from the BAs</td>
</tr>
<tr>
<td>Tend to provide technical details in specification</td>
<td>Perception that technical details in functional specifications result in poor design</td>
</tr>
<tr>
<td>Problem oriented ‘As is’ focus</td>
<td>Solution orientated ‘To be’ focus</td>
</tr>
<tr>
<td>Provide detailed documentation to IT staff as IT staff should understand the motivation for and impact of their programming work</td>
<td>Perception that a lot of detail in the documentation is inappropriate or unnecessary for the IT staff</td>
</tr>
<tr>
<td>Perception that IT staff is self-centred: single-minded focus on their technical objective</td>
<td>Perception that BAs are interested more in document sign off than in preparing documentation that helps technical work</td>
</tr>
<tr>
<td>Perception that it should be simple for IT staff to respond to changing requirements</td>
<td>Perceive BAs are ignorant of the impact some new requirements may have on the technical work</td>
</tr>
</tbody>
</table>
The BAs emphasised the importance of both business and technical knowledge in their work. However, IT staff had a different emphasis. The IT staff, like the users, were of the view that good BAs need not have expert domain knowledge. In fact, the IT staff suggested that excessive business knowledge could even be detrimental for business analysis:

*A lot of people also think that to be a good business analyst you need to know an awful lot about the domain...I'm not necessarily of that belief...I think the danger with bringing someone who’s got a great deal of domain expertise to a business analyst’s role is that often their thinking is blinkered. So again, I would think a good business analyst would be someone who’s potentially new or relatively new to the domain area* (IT3).

Interestingly this comment is in contrast with the suggestion in literature that the prior functional experience in cross-functional boundary spanning is a requirement for effective boundary spanning (Ancona and Caldwell 1990). Further, the IT staff expected BAs to give more analytical inputs and were clearly not impressed by their business knowledge alone. The view that the BA role was more about analysis and critical thinking abilities was also highlighted by the development team manager:

*My number one gripe about business analysts, the term is BA and I see a lot of B, I see almost no A* (IT4).

Not only did BAs value business knowledge so that the users could trust them, they also considered having a technical background to be important in dealing with IT staff:

*I’ve been in many situations where developers will try to say “Oh we can’t do that.” But if you have a technical background you’ve got the confidence to grill them a bit further, you often find it’s they don’t want to do it, too much work* (BA7).

Technical knowledge is considered important as it helped BAs to recognise IT staff’s attempts to avoid delivering on certain requirements. This seems to be in agreement with the earlier observation that BAs’ need for technical knowledge might not be entirely motivated by acquiring the ability to translate between users and IT staff.

The BAs’ emphasis on technical knowledge does not match with what users and IT staff expect of the BA role. There is an expectation from the IT staff that BAs need to have an open mind and a willingness to analyse the situation without pre-conceived ideas. Even though technical knowledge may make it easier for BAs to work with the IT staff, we need to ask the question: Is the emphasis on technical knowledge really serving the interests of users and IT staff or is it helping in making it easier for the BAs to monitor the technical work of IT staff? The BAs are concerned that without adequate technical knowledge they would be unable to get the IT staff to
do their work. The BAs perceive a pragmatic knowledge boundary (Carlile 1997) with the IT staff, i.e., a difference in technical knowledge is seen to prevent them in doing their business analysis work.

The BAs may tend to emphasise problem analysis in their work and consider themselves to be concerned with the early part of the IS project lifecycle. In contrast, the IT staff seem to expect the BAs to monitor the project on an ongoing basis and provide continuity by taking ownership of requirements until they are delivered. The IT manager expected the BAs to remain engaged beyond the analysis phase and ‘provide that continuity to do the work up front, capture the requirement, validation, making sure that the understanding is clear and then having a role through the life of project to make sure that intent is still on track’ (IT3).

Another area of difference between the BAs and IT staff was around the requirements documentation. The BAs were happy with as much detail as was possible while documenting user requirements. Quite clearly there is a perception that all requirements can be documented in detail and signed-off by the business right at the start. However, the development team manager preferred more agility:

    I’ve seen business analysts write up a spec 300 pages or something. Dump it on the table, someone signs it off who has not read the 300 pages. This document full of defects goes into development, development puts more defects into it and we have our testing cycles blown out (IT4)

The differences were not only about the length of the requirements documentations but also about the level of technical details in specifications that came from the BAs to the IT developers. The BAs seem to be inclined to provide specifications to a very technical level for the programmers:

    Normally in a BA role we probably document to a pretty low level but in terms of what the programmer would want there’s always a few more questions so there’s always another level that they might want more information (BA9).

However, the IT staff were not pleased with this level of specification. The level of details took away flexibility in designing systems. IT4 had commented that the ‘functional specs are down to pseudo code level in a lot of cases and there’s almost no room to design’ (IT4). The IT staff also expected the BAs to not only focus on analysing the problem domain but also on working towards the solution:

   Whilst there’s some people who think it’s heresy to talk about the solution…I believe it’s thinking not just about the ‘as is’ situation, but asking the questions about the ‘to be’ (IT3).
Interestingly, there seems to be a conflict between the expectations of the IT staff. The IT staff expect the BAs to be more solution-oriented, but they were not happy when the IT staff went down to the extent of specifying the pseudo-code for solutions.

Some BAs expected the technical staff to understand the background of the projects and how their programming work would impact the organisation. In order to achieve this, they provided detailed documentation to the IT staff. The IT staff on the other hand considered that a lot of detail in the documentation is inappropriate or unnecessary for the IT staff:

*They don’t care, that’s the technical people. They just say ‘I don’t care just tell me what I’ve got to do. Don’t care about all this stuff’. You say, ‘well no, you need to get an idea of what’s going on’. But it’s ‘no, just tell me what button goes where, this, that etc.’* (BA13)

[The BAs] usually provide too much documentation…which is good because that covers their side but I don’t need to see all the documentation…And so they’ll say ‘we’ve got all of these flow charts and everything else’ and I’ll kind of say ‘okay can you make it into an easier flow chart for me’…It’s nice to have but from my side of it I don’t need it. If I see six documents I might need to reference them but they’re not what I’m running off the whole time, I’m running off notes and things that I’ve picked up (IT5).

Although the BAs’ attempt at ‘educating’ the developers seemed to follow suggestions that developers should shift their focus from technology development toward business context, processes and culture (Baskerville et al. 2000, p. 400), from the IT staff’s perspective the detailed information about non-technical organisational issues was not central to their work.

The BAs perceived that the technical staff had a single-minded focus on achieving their own technical objectives without realising that the aim of development efforts was to deliver business value. The technical staff perceived the BAs were interested in document sign off and a large part of what ended up in the documentation was not needed by them:

*You can be working a security expert who’s just so security driven that it just drives you nuts and it’s about working with them to figure out what is an acceptable level of security in their mind. An acceptable level of security is locking it down like the FBI but then it’s about saying to them ‘well you know we’ve got to relax a bit’* (BA13).

*I just find that especially with the BA stuff there’s a lot of fluff in between [what we need from the documents] and they’ve got to do it, yet most of the time it’s got to be
read by auditors or upper management to sign off so they’ve got to put that stuff in (IT5).

While the BAs perceived the technical staff to be inflexible in pursuit of technical objectives, the technical staff felt that BAs had little idea of the impact that some new requirements may have on the extra technical work required:

_I don’t think they really understand that difference. If they say ‘can you please add one extra field’, that could take 10 minutes. ‘Oh we want to be able to put all claims into the system instead of just some’, that’s days, weeks maybe. And I don’t think in their minds they know what the difference is. So maybe that’s where you could bridge a gap of understanding (IT5)._

**Summary**

The discussion of differences in BA-IT interactions suggests BAs may need to consider the following in order to meet user expectations:

- One area of concern would be the documentation that BAs present to the technical staff. The excessive detail in the documentation was perceived by the technical staff to be unnecessary, technical details in the documentation were seen to result in poor design, and the documented requirements were considered to not be reflective of users’ expectations. Considering that the IT artifact would be central to meeting user expectations, it seems that there is much scope for BAs to better support the technical staff. It is interesting to note that the dissatisfaction of the IT staff with the documentation contradicts the view that the business analysis practices are programming driven (Castro et al 2002).

- Another concern is that the IT staff expect BAs to have a better understanding of the system and the extent of technical work that would be required if users changed their requirements. The IT staff’s may also tend to eliminate scope creep by the using the BAs as a ‘shield’ for minimising direct interactions with the users.

The potential concerns in BAs’ practices may be understood further by taking a tripartite view of the differences that the BAs seem to experience with the users and IT staff. For this purpose, Figure 7.3 and 7.4 are summarised in Figure 7.5.
<table>
<thead>
<tr>
<th>Users' perceptions and expectations</th>
<th>BAs' perceptions and expectations</th>
<th>BAs' perceptions and expectations</th>
<th>IT staff's perceptions and expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A lack of information about issues that affect other departments</td>
<td>Users should be more involved in understanding broader issues</td>
<td>Engage with users on an ongoing basis</td>
<td>Disengage with users once the requirements are documented</td>
</tr>
<tr>
<td>Expect more face to face and telephone interactions</td>
<td>A web-based system would be effective for managing client’s request</td>
<td>Requirements ignored due to inflexibility of IT staff</td>
<td>Requirements do not capture the expectations of the users</td>
</tr>
<tr>
<td>Expect a solution focus</td>
<td>BA role to involve problem-focused analysis</td>
<td>Expect IT staff to acknowledge their knowledge about the system is better than the user</td>
<td>BAs knowledge of system is second to that of the users</td>
</tr>
<tr>
<td>Expect specialist BA skills rather than business knowledge</td>
<td>Users' faith in BA’s ability is related to BA's domain knowledge</td>
<td>Focus on business and technical knowledge</td>
<td>Domain expertise could reduce creativity; More analysis expected</td>
</tr>
<tr>
<td>Expect BAs to enable reflection and add value to information</td>
<td>Experience difficulty in getting information</td>
<td>Prefer detailed and signed requirements at start of the project</td>
<td>Expect detailed documentation to have defects that would get amplified</td>
</tr>
<tr>
<td>Little emphasis on electronic tools</td>
<td>Emphasise use of electronic tools</td>
<td>Tendency to provide technical details in specification</td>
<td>Technical details in functional specifications result in poor design</td>
</tr>
<tr>
<td>Expect use logical line of enquiry</td>
<td></td>
<td>Problem oriented “As is” focus</td>
<td>Solution orientated “To be” focus</td>
</tr>
<tr>
<td>BAs single-minded focus on strategic direction is rigid and lacks creativity</td>
<td>Driven by strategic goals and business case to streamline users</td>
<td>Provide detailed documentation to IT staff as IT staff should understand the motivation for and impact of their programming</td>
<td>A lot of detail in the documentation is inappropriate or unnecessary for the IT staff</td>
</tr>
<tr>
<td>BAs interfere in the users domain and drive solutions on their own</td>
<td>Mentoring business users with knowledge and expertise</td>
<td>IT staff is self-centred: single-minded focus on their technical objective</td>
<td>BAs are interested in document sign off and not in making documentation that helps technical work</td>
</tr>
<tr>
<td>Initial analysis difficult to understand and focused on BAs’ needs</td>
<td>Users unable to clearly understand and articulate their requirements in the early stages of their interactions</td>
<td>It is simple for IT staff to respond to changing requirements</td>
<td>BAs ignorant of the impact some new requirements may have on the technical work</td>
</tr>
<tr>
<td>Documentation to be postponed till the requirements become clearer</td>
<td>Detailed documentation of outcomes of initial analysis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 7.5 Boundaries in the work of business analysts
To conclude, the findings advance our understanding of boundary practices. First, a boundary practice with a designated enterprise of connecting other practices is likely to introduce new boundaries. While the BAs are designated to span the boundary between users and with IT, the role of the BA introduces new boundaries. This suggests that ‘boundary practitioners’ will face challenges not only in connecting the different practices (users-IT) but also in negotiating the boundary that are evident between them and such practices (BA-Users and BA-IT staff). The BAs will need to span boundaries with users and boundaries with IT staff in order for them to successfully span the user-IT boundary. Suggestions that boundaries shape communities (Abbott 1995; Hernes 2004) and practices within the communities reinforce boundaries (Zietsma and Lawrence 2010), raises more concerns for boundary practices. For example, if the pursuit of technical and business knowledge, as opposed to the pursuit of analytical skills expected by users and IT staff, becomes the objective of BAs, it may become institutionalised in their practices. The resulting practices would further prevent BAs from meeting the expectations of the users and IT staff. The boundary practitioners’ excessive focus on their own interests and objectives has been noted as a risk for boundary practices, as it may prevent them from creating connections (Wenger 1998, p. 115).

7.3 Business analysis as a boundary practice

In this section, I now draw together threads from all previous discussion of the three cases and try and present a more general understanding of business analysis as a boundary practice. I discuss both what I have understood about business analysis by viewing it as a boundary practice, and insights I have gained into boundary practices in general from the work of BAs.

7.3.1 BAs as boundary practitioners

In order to understand business analysis as a boundary practice, the nature of the BA role in general and in relation to spanning boundaries will be discussed (See Figure 7.6).
Figure 7.6 BAs as boundary practitioners
Wenger (1998, p. 114) argues that the role of boundary practice is to ‘deal with boundaries and sustain a connection between a number of other practices by addressing conflicts, reconciling perspectives, and finding resolution’. It is thus a description of the practice of BAs, in that they connect users and IT staff through addressing conflicts, negotiating differences in perspective, and attending to resolve multiple and at times conflicting perspectives and objectives (As discussed under the themes boundary role perspective, interactions with users, and interactions with IT staff).

This perspective may be further developed by discussing how organisational settings may result in different emphases in the role of boundary practices. This is evident in my findings that suggest that while the BAs are designated to span the boundaries between users and IT staff, as boundary practitioners, they are likely to have different views on who they represent while acting as a conduit between two parties (Wenger 1998). For example, the BAs had different views on whether they represented the users or the IT staff or whether their role was perceived as a business or IT role. This tended to result in them operating in different ways: business-orientated vs. IT-orientated, problem-focused vs. solution-focused, strategic-focus vs. operational focus (see Figure 7.7). The ‘Balanced orientation’ may appear to be what we might want to achieve in an organisation. In this orientation, the BA is seen as mid-way between the users and IT staff and the BAs and their skills sets are not biased towards either users or IT staff. The BAs’ relative influence in the tripartite arrangement enables them to ‘listen’ equally to either side. However, this may neither be the best nor the desired orientation in organisations, as different business environments, different organisational strategies, and different capabilities may imply a need for differing orientations. In practice, as a result of contextual factors, the BAs may perceive themselves to be ‘closer’ to the users and ‘distant’ from the IT staff. In Uni 1 we saw possibilities of BAs settling into this orientation. The strength of this position is a potential increase in BAs’ business orientation that enables them to be viewed as ‘insiders’ in the user community. But the limitation is that the BAs may tend to focus less on the potential solutions. In contrast, the BAs may perceive themselves to be ‘closer’ to the IT staff and ‘distant’ from the users. In this position the BAs may become ‘IT oriented and solution focused’ and consider their role to be technology centred.
The location of the BAs in the organisation structure may also be a deliberate strategy adopted in organisations to orient them to be closer to business, IT, or the senior management. My findings suggest that the BAs may also be positioned in organisations to operate with a strategic focus. In order to bring about alignment with organisational strategy, the BAs challenged both users and IT staff during projects. This may result in users and IT staff being more ‘distant’ from the BAs (see Strategic Focus in figure 7.7). The location of the BAs in the organisational structure, the status of BAs in the organisation, the BAs’ background, and the nature of their present work could all influence the orientation of BAs and the outcomes of the boundary spanning work.

However, Wenger’s definition (1998) does not account for all the observed practices in this study. Thus I argue that boundary practices may not always maintain connections by reconciling perspectives between the practices that they are designated to connect. In this research there is evidence that a designated boundary practice may, by design or under other influences, sustain a connection between practices by keeping the practices at a distance from each other and not by bringing them closer. Such boundary practices may see their role to be ‘protecting’ a practice from interacting with other practices. For example, as was the case in Uni 1, the IT staff used the BAs to ‘protect’ them from interactions with users. BAs may also, as seemed the case in Expressmail, see their role to ‘protect’ the users from interactions with the IT staff (See Figure 7.8). Such arrangements seem contrary to what boundary practices are expected to be doing. In the cases I studied, it seemed that when reconciling differences between two other cohorts was,
or became very difficult possibly because of long-standing attitudes and entrenched counterproductive behaviours, the BAs, consciously or unconsciously, may find it easier to keep groups apart (and hence function to ‘protect’ one group or the other), than they do to either ‘bridge’ or bring together these factions. This is clearly a phenomenon that merits further research in a future study.

Figure 7.8 A Designated boundary practice ‘protecting’ users and IT staff

‘Boundary practitioners’ (i.e., members of a boundary practice) are likely to perceive themselves as making significant contributions in organisations, have varied role expectations in organisations, and face ambiguity associated with their role (Goolsby 1992). The findings of this study largely support Goolsby’s (1992) claims about role ambiguity. The BAs perceive themselves to be making useful contributions to the organisation irrespective of the actual influence they might have in the organisation. For example, they consider their role to be that of a change agent and consultant and one that is necessary for acquiring, developing, and maintaining systems in large organisations. Organisations have varied expectations of the BAs. For example, other than the traditional role of understanding project-specific user requirements, organisations may expect BAs to undertake project management tasks or take up the role of managing relationships with clients. In some organisation, the BAs may be expected to keep
organisational stakeholders focused on strategic objectives. The boundary practitioner role may be viewed with some ambiguity in organisations where there is ineffective communication about the role. For example, some BAs commented that they themselves and the users were not aware what the BA role was supposed to achieve. The role may be clearly differentiated from roles such as the SMEs by emphasising that the BAs require specialised analysis skills and knowledge other than the business knowledge that the SMEs may possess.

The boundary practice work requires a relatively higher degree of tolerance for uncertainty and the ability to deal with conflict (Friedman and Podolny 1992). For example, the BAs found it difficult to get information from both the users and the IT staff. This caused uncertainty for the BAs. Further, the BAs facilitated the progress of projects by liaising with users and IT staff, often having no influence on the decision making, resulting in further uncertainty. This leads to frustrations when BAs do not have enough information to respond to questions from users and IT staff.

One characteristic that has been associated with effective boundary spanners in cross-functional collaboration is the individual’s prior functional experience (Ancona and Caldwell 1990). It is interesting to note that the tendency to appoint subject matter experts in the BA role is indicative of the tendency to value functional experience. However, for boundary practitioners, domain knowledge alone does not necessarily result in satisfaction in the groups being spanned. Thus, my research suggests that prior functional experience may be somewhat less important than a high level of skill and knowledge of the specific expertise the boundary role is expected to bring to the table. BAs are meant to be analysts, and there is evidence from my research that possessing a high degree of analytical skill was more important and more highly valued than previous experience either in a business domain or in IT.

### 7.3.2 Practices within the boundary practice of BAs

The CoP lens was employed in this research to gain insights into the interactions amongst the BAs and into the nature of shared understanding and learning that occurs amongst them. In this section I articulate my understanding on these aspects for the boundary practice of business analysis (see Figure 7.9).
Figure 7.9 Practices within the boundary practice of BAs

- **Work allocation**
  - Individual / combined task responsibility
  - Allocating work to individual BAs
  - Project size
    - BA’s skills and experience
    - Provide learning opportunity
    - Ad-hoc / availability
  - Impact on specialisation
  - Potential for less variety in BA work
  - Practice of recruiting contractors

- **Shared understanding**
  - Need for shared understanding / Compliance
  - Working on same system / joint work assigned
  - Aware of differences in organisations’ expectations
  - For learning from experienced members
  - Not being ‘disruptive’

- **Learning**
  - Informal / learning from each other
  - Formal learning (less emphasised)
  - Need support for mutual interactions
  - Important for a new team or when differences in experiences of BAs
  - Allows for collective reflection
  - Creativity and bringing change
  - Becoming competent / learning from others
  - Improve networking and employment
While the work of boundary practitioners suggests that shared understanding between them and the practices they connect is more important, there are areas where shared understanding amongst the boundary practitioners themselves is required. For example, where a number of BAs are required to span the boundaries of a number of departments to align the departments’ processes and practices, a shared understanding amongst the BAs as to their aims, objectives, approaches and tools, for example, would be important. For example, a number of BAs may be working on apparently independent tasks but the tasks could be related in terms of relating to the same organization-wide information systems, business processes, and the like. Further, my study revealed that the BAs’ attempt to comply with practices within their group may support the adoption of common, shared practices. Finding a balance between the understanding built across the practices they span, and the understanding within their own practice is clearly a challenge for BAs and likely also for boundary practitioners in general (see Figure 7.10 below).

![Diagram](image)

**Figure 7.10 Shared understanding in the work of business analysts**

Although the BAs were aware that their interactions with users and IT staff were different, there was little awareness of what and how tools, processes, and documentation could be adopted to respond to the differences. The interactions with the BAs left me with the impression that they did not consider the means (skills, tools, processes, and documentation) they could use to customise their interactions with users or with the IT staff. This raises concerns as to whether the artifacts used by BAs effectively serve the purpose of connecting the users and the IT staff. The results from this study suggest that they do not. I found evidence of dissatisfaction in both user and IT groups in this regard. The implications are serious for boundary practices, in that adopting appropriate technology (broadly used) to span practices is at the heart of their own practice. One could speculate as to whether a failure in this regard manifests itself in the
continuing differences between BAs and users and BAs and IT staff that were evidenced in this study.

One of the characteristics highlighted for effective boundary spanners was the ability to reflect on the usefulness of existing artifacts and create and promote new artifacts (Levina and Vaast 2005a). There is little evidence of this in my findings and I accept that this may be difficult. However, given the task of managing two interactions, I find it interesting that business analysts as boundary practitioners are neither reflective on the effectiveness of the artifacts they are employing, nor are demonstrating any proactive approach of developing new artifacts which might enhance their effectiveness at the boundaries of their practices. I am unaware if this is the case with other boundary practices, but this phenomenon seems to deserve more attention, and indeed further research, in the specific case of business analysts.

A potential challenge for boundary practices might be to be able to balance the efforts invested in spanning boundaries and those used for organising internal processes and support. For example, the BAs found that they spent most of the time interacting with users and IT staff and spent comparatively less time organising their internal group processes, interacting as professionals with one another, reflecting on their practices. Thus opportunities for collective learning, improving practices, and developing new artifacts may be relatively few. There are interesting theoretical implications associated with these limited interactions within the group. Wenger’s (1998) theory of learning and the CoP concept is based largely on learning from interactions within social configurations. For boundary practices however, the interactions within their own community are not the focus of their work. Therefore, the learning opportunities for boundary practitioners are clearly different to those of other communities of practice. They will undoubtedly learn from the practices they span, but it raises interesting issues around the development of BAs over time, if learning is largely occurring from practices outside their own. I believe that this is another issue warranting further research.

It is interesting to compare the findings on BAs as boundary practitioners with the characteristics of boundary spanners that were discussed in chapter 3. The view that to be effective at boundary spanning, there is a need for individuals to be well connected internally (Tushman and Scanlan 1981a) and for cohesion amongst the boundary spanners (Barcellini et al. 2008), may not necessarily apply for boundary practitioners. For boundary practitioners, the connections that seem to matter more are at the boundaries of the practices that they connect.
7.4 Discussing findings in relation to the adopted theoretical perspectives

In chapter 2, I argued that a useful research perspective would be one that adopts a tripartite perspective on work practices of BAs, recognises the social nature of work practices of BAs, focuses on roles and ‘practices’ of BAs, and is theoretically informed by CoP and boundary practice perspectives (Wenger 1998). In following Walsham’s (1995) suggestion for use of theory in interpretive studies, I used the concepts of CoP and boundary practice to ‘scaffold’ my initial empirical work and then during data analysis I removed the ‘scaffolds’ and remained open to field data.

In this section, I will discuss the empirical findings in relation to the theoretical concepts and their underlying assumptions. This discussion is based on suggestions that researchers need to reflect as to whether their findings are theoretically grounded (Goldkuhl and Cronholm 2003). The boundary practice concept has not been systematically applied in research and therefore it has not been developed further than being viewed as a type of practice that connects other practices. First I discuss the findings in relation to the CoP perspective. Next, I will build on this discussion to present a conceptual understanding of the boundary practice concept.

7.4.1 The CoP concept and the findings from the practice of business analysts

Although practice researchers have no universally accepted definition of the term ‘practice’, their conceptualisations have a common element - the shared nature of practices. This is referred to as the distinct social ontology of practice theories (Goldkuhl 2006). The practices are associated with a specific social system (Schulz 2005), seen to be organised around a shared practical understanding (Schatzki 2001), shared routines (Whittington 2006), and serve to sustain mutual engagement (Wenger 1998).

Wenger’s (1998) CoP concept makes explicit what these practices may be. The central assertion in the CoP theory is that these practices belong to a social configuration. In order to illustrate the association between the practices and the social configuration, Wenger (1998) classified practices by using three conceptual dimensions - mutual engagement, joint enterprise, and shared repertoire (see section 3.4.1, CoP Evolution and conceptual dimensions). These three dimensions will be considered in relation to my findings about the practice of BAs.
Mutual engagement in the context of boundary practices

The mutual engagement (ME) dimension suggests that actions of individual become meaningful as a result of engagement among individuals in the same social configuration (Wenger 1998). However, Wenger’s (1998) assertion may not accurately describe the situation in boundary practices (see Figure 7.11). Given that most interactions of the BAs are with members of other practices, and thus there is relatively reduced engagement amongst the BAs themselves, this suggests the BAs’ meaningful actions are derived largely outside of the group of BAs. The social configuration that is important for the BAs is thus that formed with users on the one hand, and with IT staff on the other, or through what I have labelled ‘boundary engagement’. Assuming BAs are typical of other boundary practices, Wenger’s (1998) assertion needs modification in the context of a boundary practice. My findings suggest that:

The actions of an individual engaged in a boundary practice become meaningful as a result of boundary engagement with individuals in other social configurations that the boundary practice connects (see Figure 7.11).

The ‘boundary engagement’ of BAs suggests that the BAs’ understanding of what constitutes meaningful action is influenced by the BAs interactions with users and IT staff and not so much by the BAs’ mutual engagement with one another. Given that ‘being included in what matters is a requirement for being engaged’ (Wenger 1998, p.74), and ‘what matters’ in the BA work is their work at the boundaries, I would argue that the meaningful action in a boundary practice is results from ‘boundary engagement’ rather than ‘mutual engagement’.

![Figure 7.11 Engagement and meaningful actions in a boundary practice](image-url)
Given that the engagement within the group is limited, there could be challenges related to learning and knowledge management within the group of BAs. Unlike for CoP where learning is matter of participation in what is considered as important within the CoP, for boundary practices learning is largely arising from participations in boundary interactions. This suggests that members of a boundary practice do not learn in the same way as the members of a CoP and that there are different learning arrangements that either persist or are required for members of boundary practices. My findings suggest that the learning that BAs emphasise is the learning that is acquired during their interactions with stakeholders and by acquiring a variety of work experiences. This is fundamentally different from the notion of learning within the CoP where mutual engagement is seen as the main source of learning. Let us consider Wenger’s (1998) statement:

*The relations that constitute practice are primarily defined by learning. As a result, the landscape of practice is an emergent structure in which learning constantly creates localities that reconfigure the geography* (p.131).

For the BAs the sites that become places for learning are those that involve the BAs’ interactions with the users and IT staff. Thus, a key theoretical contribution from this research is to argue that for boundary practices, the concept of mutual engagement needs to be reconceptualised as boundary engagement, where meaningful action for the boundary practitioner is derived from engagement with practices other than their own. The findings in my research suggest the need to further seek insights into learning that occurs at ‘boundaries of social practices’ (Akkerman and Bakker 2011, p. 1).

**Joint enterprise in the context of boundary practices**

Wenger (1998) explains that joint enterprise arises as a result of negotiations amongst the members of a CoP as they engage with each other. Further, joint enterprise does not simply mean an agreement but represents the development of mutual accountability amongst individuals in a CoP. Given my reconceptualisation of mutual engagement as boundary engagement for a boundary practice, a reconsideration of the concept of joint enterprise is thus called for, as joint enterprise arises as a result of mutual engagement. Thus we need to consider whether joint enterprise should better be considered as ‘boundary enterprise’ in which the mutual accountability critical to the BAs was with users and IT staff, or at the boundaries of another practice. The BAs worked on independent tasks and their accountability was more towards the project stakeholders (in groups other than their own) than with each other. As ‘being involved in what matters’ in the BA work shifts from within the group of BAs to the boundaries they span with users and IT staff, the mutual accountability that is important in the
BA work also appears to shift to the boundaries. Thus, I argue that for boundary practices, boundary engagement (engagement with practices other than their own) is the site of the development of mutual accountability, thus requiring another slight shift in Wenger’s (1998) theory as it applies to boundary practices.

**Shared repertoire and its efficacy in dealing with boundaries**

Wenger (1998) suggests that a shared repertoire includes activities, tools, and methods that the members in a CoP use. Two observations can be made with respect to the shared repertoire of BAs. First, the BAs used similar activities, tools, and methods, evidence of their shared repertoire. Second, while the engagement was more at the boundaries, and joint enterprises emerged also at the boundaries (boundary enterprise), the tools, processes, and artifacts used by the BAs reflected little customisation for the boundaries.

For the BAs, dealing with the users and the BAs involves ‘living in two worlds’. The boundary engagement (*to be involved in what matters*) and boundary enterprise (*relations of mutual accountability*) for BAs are different in dealing with the users and IT staff. For example, when the BAs ‘live with the users’ what matters is the articulation and documentation of user requirements (for example) and the mutual accountability revolves around the progress of user-BA interactions. In ‘living with IT staff’ what matters is the representation of user requirements in the technical system design and development (for example), and mutual accountability centres on the progress in BA-IT interactions. Therefore, arguably the shared repertoire may need to be, or indeed, should be customised for the two boundary engagements and the boundaries enterprises that result from these engagements.

To summarise, the empirical findings suggest that for a boundary practice the critical dimensions of engagement and enterprise may be located at the boundaries. The shared repertoire of the boundary practice would arguably be more effective if it were customised for boundary engagements. The tools, processes, and other artifacts that the BAs use need to help the BAs understand and contribute to what is considered important at each boundary (boundary engagement) and enable mutual accountability to be developed and sustained at each boundary (boundary enterprise). This implies then the need to consider “boundary repertoire(s)”, the artifacts employed at the various boundaries to support boundary engagement and boundary enterprise at each boundary. Again, this requires a modification of Wenger’s (1998) theory when the practice of interest is in fact a boundary practice.

In the next section I build on this discussion to present an improved theoretical explanation of the boundary practice concept.
7.4.2 Theorising the boundary practice concept

The boundary practice perspective adopted to inform this research was discussed in chapter 3 and is illustrated in Figure 7.12. As discussed in the previous section, the CoP concept may not be an adequate abstraction for boundary practices. An abstraction that is reflective of the empirical findings is illustrated in Figure 7.13.

![Diagram of boundary practice concept](image)

**Figure 7.12 Adopted theoretical perspective: Business analysis as a boundary practice**

- **JE** Joint enterprise
- **ME** Mutual engagement
- **SR** Shared repertoire
- **BP** Boundary practice
- **CoP** Communities-of-Practice

![Diagram of emergent perspective](image)

**Figure 7.13 Emergent perspective on boundary practices**
The emergent perspective in Figure 7.13 questions the emphasis of the three dimensions of CoP for a boundary practice and the following observations can be made. First, given the nature of individual liaison work and the amount of time spent in spanning boundaries, the dimension of mutual engagement amongst the boundary practitioners (members of boundary practices) is less evident. Being involved in what matters for the boundary practitioners is not so much a matter of engagement amongst the boundary practitioners as it is between the boundary practitioners and the members of the CoP that they connect. This engagement, I refer to as boundary engagement (indicated in Figure 7.13 as B Eng). Second, considering Wenger’s (1998) suggestion that engagement results in a joint enterprise (relations of mutual accountability), the lack of engagement amongst the boundary practitioners would translate into little need for mutual accountability, that is little joint enterprise. The boundary practitioners’ boundary engagement may emphasise relations of mutual accountability with the members of the CoP that they connect. This enterprise, I refer to as boundary enterprise (indicated in Figure 7.13 B Ent).

The third observation relates to the shared repertoire (SR) of BAs as boundary practitioners – their tools, methods, and artifacts. As depicted in Figure 7.14, the SR, though shared by the groups of BAs, seems to be disconnected from the requirements of the practices that the BAs span and raises concerns as to whether their SR supports the BAs in their much needed capabilities to ‘live in two worlds’. The nature of differences between the BAs and the users and between BAs and the IT staff suggests that perhaps some of the difficulties in BA work are due to the lack of this capability. The extent to which the BR of BAs would be able to bridge the gap between the requirements of the users and the technical solutions proposed by IT staff, may perhaps depend on the extent to which the tools, methods, and artifacts are developed for meeting the challenges of spanning the two unique boundaries (see Table 7.1).
Table 7.1 The Challenges involved in the spanning boundaries with users and IT staff

<table>
<thead>
<tr>
<th>Boundary with...</th>
<th>Challenges</th>
</tr>
</thead>
</table>
| **Users**        | • Issue identification, classification, and understanding  
                    • Emphasis on non-technical issues  
                    • Making explicit differences amongst the users  
                    • Managing differences through formal processes  
                    • Ongoing monitoring of requirements  
                    • Accounting for the context of requirements  
                    • Allowing for users’ learning about their requirements over time  
                    • Enabling users to articulate requirements  
                    • Matching user needs with packaged software  
                    • Managing user expectations within the systems constraints  
                    • Contingency in managing users’ expectations  
                    • Informing users of importance of BA role  
                    • Being an interface to IT |
| **IT staff**     | • Keep IT staff engaged with the changing nature of user requirements  
                    • Manage the details in documents to improve relevance for IT staff  
                    • Reduce the ‘how’ in the documents and emphasise the ‘what’  
                    • Manage expectations that BAs should be solution oriented  
                    • Improve understanding of impact requirements have on IT staff’s work  
                    • Provide analysis for IT staff as well  
                    • Deal with potential difference in technical skills and power  
                    • Align user requirements with technical solutions proposed by IT |

It would be useful to arrive at ways by which the SR can support the boundary engagement and sustain boundary enterprises of BAs. In order to provide an effective connection, the methods, tools, and activities need to be customised for supporting boundary engagements and sustaining boundary enterprises with users and IT. The repertoire needs to be shared not only amongst the BAs but also with the practices the BAs are attempting to connect. As we have established that different practices that are connected by the BAs have different interests and objectives, the repertoires supporting activities at these different boundaries may well need to be tailored or configured to suit these differing requirements. This is indicated as BRu (Boundary Repertoire-User) and BRit (Boundary Repertoire-IT) in Figure 7.14.
While Figure 7.14 illustrates the example of the BAs in our study, a more generalised reconceptualisation of Wenger’s theory for boundary practices, illustrating some of the key findings of this research is provided in Figure 7.15 below.

**Figure 7.15 Conceptualising boundary practices**

**BRu**  Boundary repertoire-User

**BRit**  Boundary repertoire-IT

**BP**  Boundary Practice

**BRCoP_{A/B}**  Boundary repertoire-CoP_{A/B}
7.4.3 The Efficacy of the boundary practice perspective

As discussed in chapter 3, most previous research into the role of requirements analysis participants adopts a perspective that emphasises either the user-analyst dimension or the user-IT developer dimension and largely ignores the analyst-IT developer dimension. Even the more recent analysis of the various roles in IS projects seem to ignore the tripartite nature of interactions. For example, Millerand and Baker’s (2010) analysis is focused on user and developer roles alone and fails to highlight the mediation role that BAs often play in IS projects. The little emphasis on analyst-IT interaction might imply that this interaction is considered relatively unproblematic and that the practices and interests of the analysts and the more technical IT staff are considered to be similar. This could be based on the view that the analysts and the technical staff in many cases are located in the same departmental unit and, therefore, perceived to have similar practices.

The boundary practice perspective has been effective for gaining insights into the roles and practices of BAs and allowed me to investigate the potential assumption that analysts and IT have similar practices and perspectives. My findings suggest that the practices and perceptions of BAs and the technical IT staff differ quite substantially. Therefore, the outcomes of business analysis activities may be dependent on not only effective management of BA-user interactions but also on managing the differences in perspectives during the BA-IT interactions. Ignoring the differences in perspectives in the BA-IT interaction suggests an unquestioned assumption that the effectiveness of understanding and delivering on users’ requirements rests only on the BA-user interaction. For example, scholars have noted that user-analyst interactions will govern how the issue raised in initial interactions evolve (Urquhart 1999). However, my research extends this and suggests that the BA-IT interaction plays a significant role in the framing, evolution, and delivery of users’ requirements. My findings suggest that factors in the analyst-IT interaction such as the relative influence of the technical staff, system constraints identified by the technical staff, and the technical staff’s attitude towards changing user requirements play a very important role in BAs interactions with the users and influence how the users’ requirements may evolve.

Based on the adopted boundary practice perspective and the findings, I conclude this chapter with a revision of the definition of business analysis in BABOK 2.0. The following definition is proposed for business analysis as a boundary practice:

*Business analysis is a boundary practice that serves as a liaison among various stakeholder practices (such as users and IT staff) to first, understand how their various objectives relate in a problem domain, second, to help the relevant
stakeholder practices to learn and articulate their requirements, and finally, being mindful of the impact on and impact of business requirements, enable negotiations amongst the practices to arrive at a shared understanding of the problem domain and solution requirements.
8.1 Introduction

A number of insights and findings that resulted from my research have been discussed in chapters 5, 6, and 7. I would like to briefly summarise and highlight the major findings of this research. In terms of research question 1 (What insights into the roles and practices of BAs emerge by using a CoP theoretical lens?), which was largely focused on using the conceptual elements of mutual engagement, joint enterprise, and shared repertoire, for understanding practices of business analysts (BAs), the major findings that emerged are as follows:

- The conceptual elements of mutual engagement and joint enterprise in Wenger’s (1998) theory of Communities-of-Practice (CoP) are less evident in boundary practices. It appears that in boundary practices, some of these notions change. For the boundary practitioners, being involved in what matters is not so much a matter of engagement amongst the boundary practitioners as it is between the boundary practitioners and the members of the CoP that they connect (boundary engagement). The boundary practitioners’ boundary engagement may emphasise relations of mutual accountability with the members of the CoP that they connect (boundary enterprise).

- Although the BAs seemed to emphasise a shared repertoire of tools and documentation, there seemed little reflection and awareness amongst the BAs for using a different approach (supported by the use of different and appropriate methods, tools, and documentation) in interacting with users and with IT staff. This I have discussed in chapter 7 as the need for two distinct boundary repertoires (BRu and BRit) which are shared not only amongst the BAs but also with the users and the IT staff. This finding may generalise to include all boundary practices, not just those between users and IT as investigated in this thesis.
A boundary practice may find it challenging to balance the efforts invested in spanning boundaries and those used for organising internal processes and mutual support.

The BA role expectations and practices are perceived by BAs to vary between organisations. This variation was perceived by the BAs to be related to the tools, methods, and the ‘ways of doing things’. The location of BAs in the organisation structure was also perceived as an influence on their practices.

In terms of research question 2 (What constitutes boundary work in the practice of BAs?), which was focused on understanding the work of BAs as a boundary practice in a tripartite arrangement with users and IT staff, the major findings are as follows:

- A boundary practice with a designated enterprise of connecting other practices is likely to introduce new boundaries. ‘Boundary practitioners’ (members of boundary practices) will face challenges not only in connecting practices but also in spanning the new boundaries that they introduce.
- The boundary practice perspective on business analysis highlights that in the tripartite arrangement there are differences in perspectives between not only users and IT staff, but also between BAs and users and BAs and IT staff.
- The perspectives of users and IT staff on the practices of BAs and some of the perspectives of BAs raise concerns as to whether BAs effectively span the boundaries between users and IT staff.
- Boundary practices may not always work by reconciling perspectives between the practices that they are designated to connect. A designated boundary practice may, by design or under other influences, sustain a connection between practices by keeping the practices at a ‘distance’ from each other and not by bringing them ‘closer’.

The rest of this chapter is organised as follows. In section 8.2, I will reflect on my learning with respect to business analysis practices that I investigated in the three cases. In section 8.3, I will discuss implications of my findings for practice. In section 8.4, I consider future research that could be conducted on the basis of the findings of my research. Finally, I will conclude the dissertation with the final reflections on the strengths and limitations of my research.
8.2 Reflections on the practices of business analysts

It is appropriate that I start my reflection with reconsidering the following concerns that motivated my research on the practices of BAs:

*This research is focused on the concerns that IS failure is potentially related to the challenges in identifying information requirements and bridging the requirements-design gap, there are challenges arising from the perspectives and approach adopted in business analysis, and that there is a need for improving understanding of work practices of BAs (Chapter 1).*

In light of these concerns, it is pertinent to discuss the rationale for having the BA role. As discussed in chapter 1, an information analyst role was created a few decades ago (see Teichroew 1971) when the need for specialisation in the analyst’s role was recognised. The role of the information analyst was proposed as one of being a mediator between the users and the technical designers. The label ‘information analyst’ did not seem to gain much traction in industry, but in recent years, it is the BA role that has emerged in organisations as a mediator to ‘bridge’ the gap between the users and IT staff.

Although the findings from the three cases cannot be used to generalise business analysis practices, if the business analysis practices in these three cases, and the reactions I got from the users and IT staff, are indicative of what is generally going on in organisations, I think we need to reflect upon whether or not the aim of narrowing the gap between business and IT which led to the creation of the BA role has been achieved, and how we may respond to the suggestion that there is a need for considerable improvement in business analysis practices (ESI International 2011).

Throughout chapters 5, 6 and 7, I provided examples of how the practices of BAs, performed most likely with diligence and good intentions, was not perceived positively by either the users nor the IT staff. Specific examples included the use of formal documentation and modeling notations in the early stages of interactions with users, preference for using online systems for supporting users, assuming the role of ‘mentor’ and becoming champions for organisational objectives, attempting to improve IT staff’s involvement by providing detailed documentation, and emphasising business and technical knowledge rather than the analytical component of their work. Quite clearly, there is a disconnect between the BAs’ practices and the expectations of the users and IT staff. This disconnect suggests that many challenges in business analysis do arise from the perspectives and approach adopted for business analysis.
Given that BAs are largely responsible for bridging the gap between the users’ requirements and IT staff’s design, this disconnect also warrants a reflection on some of the attitudes displayed by the BAs. The attitudinal issues apparent from the comments of BAs suggest why relational difficulties may arise in BA-User interactions and how the tools, documents and methods may not be able to resolve challenges in BA-User interactions. To the contrary, they may create more problems. Some BAs had an understanding that the documentation used by BAs was not appropriate for users. There was, however, no alternative approach that the BAs adopted, despite this understanding. The best solution a BA suggested was ‘business people aren’t used to [process flow diagrams or use cases]. But if you can show them the same thing all the time, they will get used to it’.

It appears there may be a more fundamental issue that is underlying this disconnect - BAs’ lack of empathy with the stakeholder groups. Although the BAs were aware of the users and IT staff belonging to different ‘worlds’ and speaking different ‘languages’, the BAs showed little interest in seeing the ‘worlds’ of the users and IT staff from the perspective of the users and IT staff. It was not evident that the BAs were working towards adapting ‘practices’ (activities, perspectives, and artifacts) to be effective in their liaison work in these two ‘worlds’.

The current repertoire of the BAs is quite clearly not meeting the expectations of the various stakeholder groups. The expectation that BAs would be able to bridge the gap between users and IT staff seems to fail despite the methods and tools used by the BAs. This perhaps is reflective of a view on requirements held by the BAs in that a requirement is something to be ‘taken’ from the users, documented, and passed on to the IT staff. For example, a BA explained what was involved in their work:

> It’s generally the user has a requirement. So what you work towards in the direction of the IT is documentation, diagrams, workflow, generally sort of prose based description of ‘as is to ‘to be’ and going through that process is very much “ I’ll write this down and hand it to [IT]”.

This was followed by taking the response of the IT staff and communicating it to the users. With this approach, the BAs may tend to behave more like carriers for messages. Given the nature of their work the BAs might be more effective, if they saw their role in terms of facilitating ongoing learning on the part of one group about the other.

The challenge for the BAs in the ‘bridging’ role is to effectively manage the power differential in the tripartite arrangement. Given that users and IT staff would have their own set of constraints and ‘interests’, the BAs would be expected to meet the expectations of their bridging
role by balancing the constraints and ‘interests’ of the two groups in the context of the existing power differential amongst the BAs, users and IT staff. For example, if IT staff’s constraints and ‘interests’ become a central concern of the BAs, the influence of IT staff is evident not only on meeting user expectations through what the IT staff deliver through their design and development efforts, but also on requirements elicitation. In such situations, the BAs, in their interactions with users, may actually do the work of IT staff by pre-empting a lot of objections that the IT staff may have. Although this is not to suggest that BAs, intentionally or unconsciously, reveal erroneous information to users (Appan and Browne 2012), it seems plausible that in pre-empting objections of the IT staff, the BAs may tend to provide limited possibilities and options to the users to explore their requirements. Thus, what is termed as users’ requirements, may be regarded as a tripartite construction of requirements because of the de-facto interference of the IT staff directly or through the practices of the BAs.

Therefore, the tripartite construction of requirements suggests that changing a single participant group’s frame of reference (Bostrom and Heinen’s 1977a) may not be enough. Perhaps it is more reasonable to propose that it would be helpful if all the participant groups in business analysis were made more aware of their different and multiple perceptions. Given that the role of BAs is to span boundaries with the users and IT staff, it becomes critical for the BAs to be aware of the perceptual differences between not only users and IT staff but also between themselves and users and between themselves and IT staff. However, it is not evident that the BAs were aware of this responsibility.

The findings present challenges for the educators in the IS discipline. From the cases investigated, it appears that the career path of BAs was invariably one of progressing from other roles (IT or business) into the BA role. Formal education and training was not evident in the pathway to the role of BA. This presents an opportunity to IS academics to reflect on whether the practitioners’ lack of emphasis on formal training is related to a lack of adequate education and training options. However, IS academics may also need to reflect upon whether those BAs that do get formal university qualifications are ‘educated’ to deal with the challenges that boundary practitioners face in organisations.

The professional organisations also have a role to play in resolving the challenges that BAs face. The International Institute of Business Analysis (IIBA) and Australian Institute of Business Analysis (AIBA) respectively promote a body of knowledge (BABOK 2.0) and competency development framework (AIBA) for the professional development of BAs. These continue to emphasise tools, methodologies, and documentation, and offer comparatively little advice for dealing with the relational and attitudinal difficulties that the BAs seem to face in their boundary spanning work. While there can be little doubt that knowledge of tools methods
and the like is important, how effective can these be when there is little empathy, relatively unsophisticated communication practices and the like?

Further, the view of business analysis practices taken in some literature promoted by the professional organisations could be further developed to account for practical realities. For example, BABOK 2.0 recognises the liaison role of BAs and emphasises a solution orientation:

Business analysis is the set of tasks and techniques used to work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization, and to recommend solutions that enable the organization to achieve its goals (IIBA 2009, p 3-4).

My findings suggest that BAs may not be always expected to recommend solutions and often may not have enough influence to recommend solutions.

Another example is the suggestion in BABOK 2.0 to view the domain of analysis to correspond either to the entire organisation or to organisational units. However, given that there seem to be differences in perspectives between BAs and IT staff that work in the same organisational unit, the BAs may be more effective in viewing a problem domain to involve various organisational practices. Such a view is in agreement with findings that reject unity of organisations (Goguen 1994; Orr 2006) and argue that boundaries of organisational practices may not align with boundaries of organisational units (Wenger 1998). Therefore, BAs should be encouraged to view the domain in many different ways rather than being limited by organisational and departmental boundaries alone. This would allow BAs an opportunity to make explicit all distinct perspectives and concerns that may be relevant to a given situation.

My findings suggest that BAs would also need to explicitly consider the IT staff as stakeholders with its distinct set of requirements in the form of constraints, resources, and capabilities. Even in cases where the solution requirements do not involve an IT centric solution, the BAs may need to understand the impact of all solution requirements on the IT staff and their resources. The perspective of IT staff having their own set of requirements could be made more explicit in the BABOK 2.0’s categorisation of requirements as requirements of the organisation as a whole (business requirements), requirements of stakeholder groups (stakeholder requirements), and characteristics of solutions (solution requirements).

Further, it appears that the relationship between the stakeholder, solution, and business requirements is, in practice, not likely to be as linear and rational as proposed in BABOK 2.0. For example, the BAs may formulate the solution requirements from the business requirements
and both the stakeholders and the IT staff may be expected to follow those requirements. In other cases, the solution requirements may be defined by the IT staff. In which case, the stakeholder requirements then merely appear to be the stakeholders’ response to the constraints imposed by the IT staff. However, it was not evident that the BAs are approaching the problematic situations with the awareness of such consequences of their work practices.

8.3 Implications for practice

In order to improve business analysis outcomes, managers in relevant decision making roles could reflect on the following fundamental question: How do we get individuals in the BA role that are able to do a thorough analysis, see fine details, and foreground issues that people would have not recognised as problematic? In my study, I noted a tendency to appoint subject matter experts to BA roles. Their appointment is arguably driven by thinking that as BAs, their familiarity with the business domain would enable them to effectively document requirements. While this may be the case in some instances, my findings suggest that the users are more interested in the BA’s analytical skills that help the users to understand and articulate user requirements than they are in the BA’s domain knowledge. To the contrary, familiarity with the business domain was perceived as a disadvantage for a BA as it was seen as preventing a thorough analysis and questioning of any assumptions that relate to user requirements and background processes. This lack of appropriate depth in analysis may contribute to a failure to document the assumptions and background information related to the requirements. The users seemed aware of the dangers of ‘incomplete’ requirements. There was an interesting comment by a user that seems relevant here: ‘anything that the user doesn’t decide, the IT person has to decide’. This would suggest that if any contextual details surrounding a particular requirement are left out, there are chances that the details may either be overlooked in the solution or the technical developers may be taking decisions on the details. From these concerns evident in the cases that I investigated, one gets an impression that the case for appointing an individual to a BA role on the basis of subject matter expertise alone may not be a strong one.

The BAs and others who have a stake in business analysis outcomes could consider the following suggestions for deriving better outcomes from their interactions with users. First, in understanding requirements, the BAs should deal early with SMEs rather than SME’s managers who have the responsibility of signing off on agreed requirements. As a result of leaving out SMEs, requirements analysis may focus on system outputs and not sufficiently on the intricacies of the process and functionality of the system. When this occurs, the functional inadequacies surface later when the user acceptance test is done with SMEs. Second, in agreement with
Pawlowski and Robey’s (2004a) findings that IT professionals work as knowledge brokers between business units, the BAs may help users’ better understand their requirements by spanning boundaries between not only IT and users but also between the various user groups.

Third, business analysis practices should accommodate the changing nature of users’ requirements. The users learn about their requirements over a period of time and therefore the initial articulation of requirements needs to be considered tentative. The challenge therefore, is to support the users and BAs to improve the understanding and articulation of user requirements. This may perhaps require adoption of activities, attitudes, and artifacts that recognise that requirements are learnt. For example, it may need a fundamental rethink as to whether the business analysis artifacts such as ready-to-use standard templates, modelling notations with their underlying rules, and elicitation techniques effectively support the participants in the tripartite arrangement to recognise and deal with the learnt nature of requirements. It appears that the use of formal and complex models and documentation, especially in the early stages of BA-User interactions, assumes that requirements are ‘ready’ to be modelled. Considering users’ perspective, this complexity only delays the learning and a clear articulation of user requirements. Although the users were appreciative of the BAs’ ability to support the logical articulation of user goals and required resources, the users were concerned that complexity can often make the analysis meaningless for the users.

The findings of my research do not support the suggestions in the literature that business analysis is programming-driven (Castro et al 2002). By contrast, the findings suggest that there are significant differences between the BAs and IT staff with regards to business analysis practices. BAs’ increased awareness of the technology and application architecture may be useful to manage interactions but the efficacy of such interactions will largely depend on managing boundaries between the BAs and IT staff. There are some concerns that BAs could address with regards to their interaction with the IT staff. First, the documented requirements should support the IT staff in achieving their aim of developing feasible designs. To achieve this, the BAs should manage the extent of technical details they include with the requirements. From the IT staff’s perspective, this allows the IT staff to explore a greater number of technical design choices. Second, the IT staff, like the users, may be receiving a lot of documentation that they may not require. The BAs may be inclined to provide more information to the technical staff to improve their understanding of broader issues, but such information needs to be included in a way that the IT staff does not perceive it as ‘cluttering’ up the user requirements that they are required to meet through their technical work. Quite clearly, the documentation needs to improve in ways that it supports ‘boundary engagement’ and development of a ‘boundary enterprise’ in the BA-IT interactions as well as in the BA-User interactions.
The nature of the practices of BAs has significant implications for the professional development of BAs. A large proportion of business analysis work seems to be undertaken by individual BAs working on their own with users and IT staff. Therefore, BAs, by virtue of being in boundary spanning roles, are likely to experience less engagement within their own team. The virtually ‘solitary’ nature of boundary spanning work, limited mutual engagement, and limited reliance of BAs on formal training, suggests that there should be a focus on providing adequate professional development opportunities for the BAs. One way to achieve this focus is to consider how work allocation itself may result in professional development. For example, it would be useful to provide a variety of work experiences for BAs through work allocation strategies. For example, it may be useful for BAs to be allocated a variety of jobs in separate sections of the organisation, rather than always being assigned to similar type tasks. Another approach could be through the physical design of the BAs’ office space. BAs should be given an open office space to work in close proximity. An overlap in their assigned tasks and specific roles would also enhance mutual engagement amongst the BAs. However, learning on the job may not always be an effective and efficient way to improve the knowledge and skills of BAs who are entering new business domains.

The professional development opportunities should also consider the boundary spanning nature of BAs’ work. The importance of boundary engagements (i.e., being involved in what matters to the users and IT staff) and boundary enterprises (i.e., relations of mutual accountability with both users and IT staff) for the BAs suggests that the BAs need to learn to ‘live in the worlds’ of users and IT staff. Further, learning strategies would be effective in the tripartite arrangement if they not only enable the BAs to learn how to ‘live in the two worlds’ but also enable the users and IT staff to learn about each other and about the ‘world’ of the BAs. The aim of having both users and IT staff to expand their knowledge beyond their respective domains (Baskerville et al. 2000) should be the aim of such learning strategies.

In implementing such learning strategies, BAs would be expected to learn and facilitate learning across boundaries. There are implications for approaches that BAs may use to this end. First, BAs, more than the other participant groups involved in business analysis work, may need to be aware of and make explicit the differences in the perspectives between the participant groups, and aim for a achieving a shared understanding amongst the participant groups. The discussion in chapter 7 on the potential boundaries in the work of BAs demonstrates one way of making the differences explicit. The recognition of such boundaries ‘enables learning since it creates a collective need to take more into account some unfamiliar perspective[s] or practice[s]’ (Akkerman 2011, p.21). Second, attempts to encourage learning at the boundaries of practices would need to be mindful of suggestions that practices are ‘emotionally freighted sites’ of
expert activity (Edwards 2011, p. 33). For example, there were emotions evident in the IT staff’s attachment to the programming practices and resulting artifacts. Any facilitation of learning, and unlearning, would need to deal with the emotions attached to the various practices.

There are further implications for professional development of BAs in organisations where the focus of the BA role is not so much on project-specific requirements analysis but more on becoming ‘account managers’ and managing relationship with users on an ongoing basis. The client focus is consonant with suggestions that a service mind set should be adopted for systems and projects (Alter 2010). Adopting this perspective, however, has implications for skills, knowledge, and attitudes that may be required by the BAs. For example, in such environments, the BAs would be viewed and trained not so much as BAs with a mindset to work on projects for limited duration and specific project aims but as relationship managers that would perhaps need a more relational and long-term approach to their work. In order to ‘manage’ clients’ use of information systems, the BAs may also need to develop training skills.

The ‘account manager’ role has implications for staffing arrangements that organisations employ for recruiting BAs. It appears that short-term arrangements that many organisations rely on for staffing IS projects may not be appropriate for BAs required to serve as relationship managers. The occupants of the ‘account manager’ role would need a mindset to take a long-term view of the task of establishing and maintaining relationships with stakeholder groups. Further, the stakeholder groups may be less willing to invest in building relationships with BAs who are employed for short-term arrangements. The same could be said for the BAs working in short-term arrangements in the ‘account manager’ role.

In addition to improving interactions with users and providing professional development opportunities, another concern for the relevant organisational decision makers would be the location of BAs in the organisation structure. My findings suggest that organisation design decisions for locating boundary practitioners in the organisational structure could be significant. For example, their location in the organisation structure could influence the users’ and IT staff’s perception of the BAs as ‘insiders’. The BAs’ focus and perception about their role may also be influenced by their location in the organisation structure (see Figure 8.1). Arguably, in the balanced orientation, one may expect the BAs to be viewed as ‘insiders’ by both the users and the IT staff and act as a ‘bridge’ between the two. However, the BAs’ location in a business area may result in them being viewed by IT as ‘outsiders’ and the BAs’ location in the IT department may result in them being viewed by the users as ‘outsiders’. In cases where BAs are reporting directly to the senior management, both the users and the IT staff may view them as ‘outsiders’, resulting in the need for considerable boundary spanning efforts by the BAs to connect the users and the IT staff. However, when they are reporting to the top management, they may also have
power to actually get things done. Given the various possibilities, it would appear that different organisational circumstances may warrant positioning the BAs in any of these configurations.

The three cases left me with the impression that apparent relative influence of the BAs in the tripartite arrangement with users and IT staff may have implications for the BAs’ practices. The introduction of the BAs as a ‘bridge’ between the users and IT staff may introduce nuances in the power asymmetry that are more complicated than the view where either users or IT are seen to have power over each other (see Figure 8.2). In organisations with power dynamics such as that illustrated in scenario A below, the BAs face the challenge of meeting user expectations due to the power differential between the users and IT staff. This perceived status difference and unequal power equation inhibits BAs to understand requirements from the users and deliver those requirements. For example, if the BAs are dominated by the IT staff then the latter’s agenda, such as ensuring system maintainability and minimising scope creep, are likely to be pursued by the BAs. The BAs may experience increased frustration as a result of uncertainty, the attitude of the IT staff, and the perception of having little influence on the outcome of requirements analysis. These differences between BAs and IT staff can become more emphasised when BAs view themselves to be ‘inferior’ by virtue of having no technical skills.
Figure 8.2 Relative influence of BAs in the tripartite arrangement

Although scenario B may give an impression that BAs being least influential are still dominated by the IT staff, the ‘support’ of the users, who have the most influence, may enable the BAs to balance out any domination of the IT department in meeting their ‘bridging’ role responsibility.

In scenario C, it is the BAs that exercise a considerable degree of power over the users and IT. In the scenario of this type in my research, the BAs served not so much as a bridge between users and IT, but more like a force guiding both users and IT towards the broader organisational goals. The users, however, may view the BAs as interfering in their work and as being unqualified to provide solutions to their problems.

The findings also indicate areas that may be useful for motivating BAs. The main motivator for the BAs appears to be a variety of work experience, as they perceived that it provided them the domain knowledge to work on projects of different kinds. The need to match BA’s experience, skills, and knowledge with the allocated work needs to be balanced with their need to work in new areas for gaining new experience. Since work experience was the main source of learning, adding variety to their work experience was seen as important by the BAs. This might imply that BAs may prefer moving between projects, operational units, organisations, and industries. A centralised pool of BAs would allow BAs to be allocated to different projects and operational units. Such efforts are likely to result in variety in the BAs’ work experience.
8.4 Suggestions for future research

There are a number of interesting themes that have been revealed through the course of undertaking my research, and these could be pursued in future research projects.

My research revealed concerns that subject matter expertise may not be an absolute necessity to be a good BA, as it may prevent a thorough analysis, may lead to a lack of analysis of context and the intricacies of user requirements, and may result in more hastily performed analyses, which may overlook different perspectives and key issues in problem analysis. A significant research direction therefore would be one that explores how business analysis practices could enable a thorough analysis and question assumptions that relate to user requirements and background processes. Given the importance of such practices, future research may ask the following questions:

- What are stakeholders’ (various user groups and IT staff) perceptions of the subject matter expertise of individuals in the BA role and its impact on the effectiveness of analysis?
- What are the perceptions and expectations of subject matter experts in the BA role with regards to understanding of organisational issues and documenting of user requirements?

The findings may have implications for the extent to which specialisation and professionalisation is required in the BA role. It appears that, while users and IT staff expects BAs to have a specialised skill set for undertaking analytical work, the BAs themselves seemed to be following the view that hybrid roles (roles that have knowledge of two areas) are needed to bridge the user-IT gap (Mann 2002). The findings may provide an improved understanding of whether occupants of the BA role need a specialist skills set pertaining to their role as analysts or does subject matter expertise alone makes them suitable for the BA role. This would support more informed decisions about the ongoing debate as to whether or not SMEs should be placed in the BA role. The knowledge areas and competencies in the business analysis body of knowledge could be reviewed in light of the findings, providing an improved understanding to aspiring BAs about knowledge areas and competencies that they would need to be effective in their work.

Another useful research direction is to understand the nature of agile business analysis practices. There is an increasing interest of scholars in this area (see Unhelkar 2010, 2012a, b). Although agile approach is viewed as beneficial, it has been suggested that depending on the nature of IS projects, an agile approach should be used together with the formal traditional approaches, in order to get the right balance between agility and required planning and control (Al-Maharme and Unhelkar 2009). Recent empirical evidence suggests that direct access by developers to users is not that common in agile practices (Ramesh et al. 2010) and business analysts would
therefore continue to play a critical role as intermediaries. A research focus on agile business analysis practices would be useful to understand the impact of agility on business analysts’ roles and practices and the resulting outcomes for projects and organisations. It may also be useful in that my research revealed that both users and IT staff had reservations about the performance of BAs, particularly around the issue of how much, and what type, of documentation is required and indeed, useful. Greater agility in BAs’ practices may help to achieve a better balance between analysis and documentation, for example.

My study suggests that the BAs apparently did not reflect on how tools, processes, and documentation could be adopted in spanning the boundaries with the users and IT staff. Some BAs questioned the appropriateness of the tools and documentation that they frequently used to understand and document user requirements, yet apparently planned to persist with such tools. This was despite some evidence to suggest that these tools, processes, and documentation were not valued particularly by either users or the IT staff. Therefore, a future research area with potential for interesting and useful insights relates to the tools, processes, and documentation used in boundary practices, and how these can be developed and implemented such that they support two quite separate spheres of interest (users and IT staff). Interestingly, the research literature is also relatively silent on this issue. Taking note of suggestions that technology use influences boundary spanners’ understanding of the boundaries (Lindgren et al. 2008) and that an artifact can push boundaries (Lee 2007), the following research directions would be useful to pursue:

- Given that the users and IT staff are ‘living in different worlds’, how can tools methods, and activities of BAs be customised to span the distinct boundaries with users and IT staff? What are the consequences, if any, of a lack of customisation?
- How do the BAs’ interactions at the boundaries with users and IT staff influence each other?
- What is the impact of uncertainty in BAs’ work? Are the documentation, tools, and processes effective in dealing with the challenge of uncertainty that arise in the conduit role?

The insights resulting from such efforts are much needed to develop resources that would support BAs to be effective in their boundary spanning work.

Another useful research direction would be one that focuses on improving learning amongst the BAs. Given the informal nature of learning in BA role, research could be conducted to understand what mechanisms for learning and development would enable the BAs to develop in their roles. It is important to note that the BA who is new to a team may have considerable
experience as a BA but in a new organisational environment may still need to undergo considerable learning. Such efforts should also recognise that mutual engagement may not be very high due to the boundary spanning nature of their work, where a majority of their time is spent in liaising with stakeholders. Therefore, much needed insight may result from research into the potential of combining learning strategies of BAs with those of the users and IT staff. The efforts in this direction would also provide insights into the less understood phenomenon of learning at the boundaries of practices. For example, scholars have called for researching how actors at boundaries interpret the impact of inter-practice differences on their practices and what resources the actors use to respond to the perceived impact (Guile 2011).

Future research may also provide additional theoretical insights into the boundary practice concept. First, we need to understand further how boundary practices seem to operate in organisations. This would give us insights into the motivations of boundary practitioners and outcomes for organisations in which the boundary practices operate. More specifically, the following questions may be asked:

- What contextual factors may influence boundary practices to be more focused on the interests of a particular CoP amongst the practices being connected?
- How can we recognise that such orientations exist and persist in organisations? To what extent are organisational stakeholders aware of these orientations and their consequences?
- How do the tools, methods, and activities used by boundary practices make it easier for its members to serve one CoP?
- How do boundary practices emerge in the role of ‘protecting’ one CoP from another?

An improved theoretical understanding would also translate into a better understanding of boundary practices such as the business analysts that operate in different contexts.

A second research direction would be useful in investigating further the finding in this research that the mutual engagement and joint enterprise concepts may not be that evident in boundary practices. Insights in this direction would contribute towards further development of the boundary practice concept. To this end, future research might investigate issues that relate to the boundary engagement, boundary enterprise, and the boundary repertoire of boundary practices. The insights that result will be useful for the boundary practitioners and organisations as we may be able have an improved understanding of boundary practices. The research questions that may be pursued are summarised in Table 8.1 and briefly discussed next.
Table 8.1 Research suggestions for developing the boundary practice concept

Boundary engagement requires that the boundary practitioners are involved in what matters to the members of the CoP they connect. Insights into the approach boundary practitioners take to participate at the boundaries of the CoP may provide an understanding of this engagement from the perspectives of both, the boundary practitioners and the members of the CoP. The understanding of the extent to which the involvement of boundary practitioners is accepted by the CoP may provide insights into the nature of influence boundary practitioners can actually have on the CoP.

The role of organisational context in influencing boundary engagements seems important and needs to be investigated. There will be some boundary practices that will be able to engage more meaningfully than others with the members of CoP that they connect. Insights into the role
organisational context plays in influencing boundary engagements are much needed to support such engagements.

Boundary enterprise involves establishing shared relations of mutual accountability as a result of boundary engagements. Future research efforts could be invested in understanding the nature of mutual accountability that boundary practitioners develop through boundary engagements. It would be useful to understand the basis of mutual accountability, how it develops, and how the work of boundary practitioners and CoP is influenced by it.

It seems critical to conduct additional research into the tools, methods, and activities of the boundary practitioners to achieve an improved understanding on how they support boundary engagements and boundary enterprises. There are two challenges that boundary practitioners might face. The first challenge is to customise their tools, methods, and activities for each boundary and the second is to reconcile expectations of participations at the various boundaries. It seems the challenges in the work of boundary practitioners may persist unless their tools, methods, and activities reflect practices that are responsive to the participant groups that they are connecting. The IS practitioners and researchers, based on their research findings, could suggest ways by which the boundary repertoire can support boundary engagement and sustain boundary enterprise.

To conclude, the concerns raised in the findings present an opportunity for future IS research that is relevant to practitioners as well as the research community. The research directions suggest that collaboration between researchers and practitioners would be useful to pursue research goals of improved understanding and making required change in practice.

8.5 Reflections on the strengths and limitations of this research

In this last section of the dissertation, I attempt to reflect on the research project with the aim of discussing the strengths and limitations of my research.

Although the initial motivations for this research were largely concerned with business analysis and IS failure, as my knowledge of the literature grew, I was able to include theoretical interests that could be pursued in the study. As I became aware that the boundary practice concept is under developed and has not been systematically applied in research (Email from E. Wenger, 9th May 2010), I saw my research to also be an opportunity to seek theoretical insights into the boundary practice concept. I also began to view my research as practice research that aims to develop knowledge through situational enquiries into local operational practices and contribute useful knowledge to both practitioners and the research community (Goldkuhl 2011).
motivations for studying work practices of BAs, therefore, were not limited to the challenges in business analysis, but also included my interest in improving theoretical understanding and the development of relevant concepts. In the research, I was able to pursue both these interests. The two interests rather then being in competition with each other in my research project, supported each other. For instance, an improved theoretical understanding of business analysis allowed for findings that have more relevance for practitioners and the need to provide specific outcomes for BAs led me to adopt a useful theoretical lens to frame and conduct research.

In my research project I was able to undertake an explicit reflection on my paradigmatic assumptions and relate them to planning and implementation of my research. For example, on the basis of my ontological and epistemological beliefs, I was able to justify the selection of research method, data collection method, and data analysis method. The selection of interpretive case study as the research method, interviews as the data collection method, and the use of practice theory to ‘scaffold’ (Walsham 1995) my research, was justified by the interpretive paradigm that I adopted in the research. While some of chapter 5 makes for a fairly dry reading, I believe I have demonstrated a sound understanding of the research process, the research design, and the data analysis techniques involving abstraction by coding and categorisation.

Further, in implementing the research design and discussing the findings, I have been mindful of validity criteria for interpretive research. As discussed in chapter 4, in order to discuss the validity claims of my interpretations, although I was in agreement with the view that no single predefined set of validity criteria is sufficient to judge a unique instance of interpretive research (Rolfe 2006), I followed suggestions that interpretive researchers make explicit their reflections pertaining to research practices and analytical processes (Mauthner and Doucet 2003). In chapter 4, I also reflected on the research paradigm, research design, and validity claims for findings of this research. I was also aware that others would have more confidence in my research findings if I addressed some of the issues highlighted by the established validity criteria. Therefore, I discussed how steps were taken to ensure trustworthiness and authenticity.

The research is not without its limitations. First, my research findings are based on research on only three cases that involved 25 interviews. Therefore, I cannot claim with certainty that my findings are representative of how things are in the practice of business analysis and boundary practices in the broader business environments. This explains why I have attempted to present my findings as somewhat tentative.

Second, I started out as an inexperienced researcher. Although I have learnt a lot over the last four years, I am relatively inexperienced in conducting interviews and using data analysis
techniques, and must therefore acknowledge that this may have limited my ability in dealing with the large amounts of qualitative data and interpreting that data as effectively as someone with a lot of experience.

The third potential limitation relates to the nature of intervention in practice research. Goldkuhl (2011) explains that, in order to make contributions to local practice (the site being researched) the intervention can be at three levels - diagnostic, design, and implementation - resulting in three types of contribution to local practice. The diagnostic intervention results in knowledge about the condition of the local practice, the design intervention may propose how the situation may be changed, and the implementation intervention is concerned with making changes to the practice. This research was primarily concerned with improving understanding of the practices of business analysis and the boundary practice concept. Thus it relied primarily on making diagnostic interventions in multiple local practices and proposing ways in which practice in general may be improved. It, however, remains limited by the absence of implementation type of intervention. An implementation type of intervention would be useful with regards to ‘testing’ the outcomes proposed by diagnostic and design interventions and perhaps achieving some desired practical outcomes for the work practices of business analysts.

**Concluding remarks**

The aim of this research was to undertake practitioner-grounded research into the roles and practices of BAs who are expected to bridge the gap between the users’ requirements and the design proposed by the IT staff. The exploratory nature of research provided many insights and led to some suggestions for future research. Therefore, while this research project may be over, the research journey has only begun.


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Appendices

Appendix 1  Developing the interview protocol

Appendix 1.1  Research questions, case level questions, and interview questions

<table>
<thead>
<tr>
<th>Research Question 1: What insights into the roles and practices of business analysts emerge by using a CoP theoretical lens?</th>
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<tbody>
<tr>
<td><strong>Case level questions (CLQ)</strong></td>
</tr>
<tr>
<td>CLQ1. Do business analysts working together in a single organisational unit share a common purpose?</td>
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<tr>
<td>CLQ2. Do sustained mutual relationships (harmonious or conflicting) persist in the group of business analysts?</td>
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</table>
### CLQ3.
Are there shared ways of engaging in doing things together?
- Is the majority of your work done individually or does it involve working in the team of business analysts?
- What kind of work is done individually and in teams?

### CLQ4.
Is there a widespread and shared awareness of each others’ competencies, strengths, shortcomings and contributions?
- What has been your experience in project team work?
- Do you know other business analysts well enough to utilise their strengths in accomplishing team goals?

### CLQ5.
Is there rapid flow of information and propagation of innovation?
- Do you learn methods, tools, techniques from other business analysts? Do you learn the practical “tricks of the trade” from other business analysts?
- What are the formal and informal ways by which information and knowledge is shared between the businesses analysts?
- Is there a process that allows for reflection over such processes? Do you see the communication to be open enough for an effective outcome?

### CLQ6.
Are their common tools, methods, techniques and artifacts?
- What tools do you use in your work?
- Are you expecting any new tool to be introduced? Any work-arounds?
- What processes do you use in your work?
- Are you expecting any process modifications? Any work around?
CLQ7.
Is there a shared perspective among the group of business analysts on organisation, organisation problems, problem solving, intervention strategies and practices?

• What do you think is the strategic direction of your organisation? What is its mission? What is it trying to achieve?
• Does your department have a mission statement / plan? How is your department / team contributing to the organisation?
• What does your work involve? What are the problematic situations or areas presented to you for analysis?
• What is your experience in relation to achieving a common understanding of a problem in business analysis?
• When you are working on a project, how do you approach the problematic situation? Is there a formal process or method that governs your approach and resulting action? How prescriptively do you follow the method?
• What things are most important for business analysts to perform in their role?
• Where did you learn about business analysis? Are you continuing to learn? What are you learning about and in what ways?

Research Question 2: What constitutes boundary work in the practice of business analysts?

<table>
<thead>
<tr>
<th>Case level questions (CLQ)</th>
<th>Interview question</th>
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</thead>
</table>
| CLQ8. What is the level of awareness the group of business analysts have regarding their role as a bridge between problem owners and stakeholders? | • Through your work, do you see providing some kind of connection between stakeholders? Can you give an example from your recent work?
• What is the nature of connection that your work provides? What do you bring about?
• How do senior managers, middle managers, information system users and IT people understand your role? Are you seen and identified as a business person or an IT person? Do managers identify you as belonging to IT? Do IT persons see you as “one of them”? Does that understanding influence interactions?
• Users and IT solution developers probably have their own view on the situation. How important is it for you to get them to see each other’s point of view?
• Is there a role for you to enable learning and knowledge/practice sharing among stakeholders? Are you able and empowered to perform in such a role?
• To what extent were you able to induce stakeholders to come to a shared understanding of the problem? In what ways have you been able to influence the working of senior managers, middle managers, information system users and IT people?
• What methods, tools, and techniques in business analysis would allow for some kind of learning among stakeholders? |
<table>
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<tr>
<th>CLQ9.</th>
<th>What is the level of awareness the group of business analysts have about the possibility that disposition to information may differ between stakeholder?</th>
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</table>
| • Your work involves interacting with both users and IT developers. What are the main issues that emerge in these two types of interactions? Are these interactions different?  
• Do you see glaring differences in understanding requirements among stakeholders?  
• What are the different perspectives that you have noted in any of your recent business analysis work? Can you give an example? How do users and technical developers view the organisational problem in that work? |

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<tr>
<th>CLQ10.</th>
<th>How does the group of business analyst use methods and tool make explicit the world views of stakeholders?</th>
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</table>
| • Do you think that different methods, tools, techniques are needed to deal with users and IT developers?  
• How do you represent the point-of-views of managers and users to IT developers and vice versa in your work? |

<table>
<thead>
<tr>
<th>CLQ11.</th>
<th>How do they feel about their work of engaging different stakeholders being central to their work? Are they happy about moving from stakeholder to stakeholder rather than being at the core of one practice?</th>
</tr>
</thead>
</table>
| • What do you feel about your work that involves “solving other people’s problems”?  
• Do you ever consider being either a user or the IT developer rather than be a bridge between them?  
• What are the contributors to your job satisfaction? What reduces your job satisfaction? |
### Appendix 1.2  Interview guides

#### 1.2.1  Interview guide for interviews with BAs

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is the composition and reporting structure of your team/department in the organisation? Are the BAs all in one department? Is it the IT department?</td>
</tr>
<tr>
<td>2</td>
<td>As a business analyst, what do you think is your role in the team / department?</td>
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</tbody>
</table>
| 3 | How do you see your role in comparison to other people in the department?  

*(Would you find the BAs role a lot different than other people in the Team/ department?)*  

Do you see your role as an IT role or essentially a business role? |
| 4 | Through your work are you getting closer to your personal/ professional goals?  

What career path do you see for yourself?  

Do you think business analysts in the organisation work towards same or similar goals? |
| 5 | Is the majority of your work done individually or does it involve working in the team of business analysts?  

What kind of work is done individually and in teams? |
| 6 | How would you describe your interactions /relationships with other business analysts in your department?  

Do you get to socialise and interact with those analysts who are not working on the same project as you?  

Do you think your work allows for time and effort required for maintaining a rapport at a personal level? |
| 7 | What has been your experience in project team work? Do you know other business analysts well enough to utilise their strengths in accomplishing team goals? |
| 8 | What tools do you use in your work? Are you expecting any new tool to be introduced?  

*(Work-around?)* |
| 9 | What processes do you use in your work? Are you expecting any process modifications?  

*(Work-around?)* |
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<tr>
<th></th>
<th>Question</th>
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<tr>
<td>10</td>
<td>Do you learn methods, tools, techniques from other business analysts? Do you learn the practical ‘tricks of the trade’ from other business analysts? What are the formal and informal ways by which information and knowledge is shared between the businesses IS analysts? Is there a process that allows for reflection over such processes? Do you see the communication to be open enough for an effective outcome?</td>
</tr>
<tr>
<td>11</td>
<td>What do you think is the strategic direction of your organisation? What is its mission? What is it trying to achieve?</td>
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<tr>
<td>12</td>
<td>Does your department have a mission statement / plan? How is your department /team contributing to the organisation?</td>
</tr>
<tr>
<td>13</td>
<td>What does your work involve? What are the problematic situations or areas presented to you for analysis?</td>
</tr>
<tr>
<td>14</td>
<td>What is your experience in relation to achieving a common understanding of a problem in business analysis?</td>
</tr>
<tr>
<td>15</td>
<td>When you are working on a project, how do you approach the problematic situation? Is there a formal process or method that governs your approach and resulting action? How prescriptively do you follow the method?</td>
</tr>
<tr>
<td>16</td>
<td>What things are most important for business analysts to perform in their role?</td>
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<tr>
<td>17</td>
<td>Where did you learn about business analysis? Are you continuing to learn? What are you learning about and in what ways?</td>
</tr>
<tr>
<td>19</td>
<td>Through your work, do you see providing some kind of connection between stakeholders? Can you give an example from your recent work? What is the nature of connection that your work provides? What do you bring about?</td>
</tr>
<tr>
<td>20</td>
<td>Your work involves interacting with both users and IT developers. What are the main issues that emerge in these two types of interactions? Are these interactions different?</td>
</tr>
<tr>
<td>21</td>
<td>Do you think that different methods, tools, techniques are needed to deal with users and IT developers?</td>
</tr>
<tr>
<td>22</td>
<td>How do senior managers, middle managers, information system users and IT people understand your role? Are you seen and identified as a business person or an IT person? Do managers identify you as belonging to IT? Do IT persons see you as ‘one of them’? Does that understanding influence interactions?</td>
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<td>Question</td>
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<tr>
<td>23</td>
<td>How do you represent the point-of-views of senior managers, middle managers, information system users to IT developers and vice versa in your work?</td>
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<tr>
<td>24</td>
<td>What do you feel about your work that involves “solving other people’s problems”?</td>
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<tr>
<td>25</td>
<td>Do you ever consider being either a user or the IT developer rather than be a bridge between them?</td>
</tr>
<tr>
<td>26</td>
<td>What are the contributors to your job satisfaction? What reduces your job satisfaction?</td>
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### 1.2.2 Interview guide for interviews with users

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<th>Question</th>
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<tr>
<td>1</td>
<td>What is the role of your department/team in the organisation? What is the role assigned to You?</td>
</tr>
<tr>
<td>2</td>
<td>What are the applications/software that are used in your department? Are these developed and supported internally in the organisation?</td>
</tr>
<tr>
<td>3</td>
<td>What kind of support do you need from the IT department for doing your work?</td>
</tr>
<tr>
<td>4</td>
<td>Are these applications used by other departments? Are there any differences between your requirements and those of the users in other departments?</td>
</tr>
<tr>
<td>5</td>
<td>What role do BAs play in helping your department?</td>
</tr>
<tr>
<td>6</td>
<td>What tools and methods do the BAs use in interacting with you? What type of documentation is involved?</td>
</tr>
<tr>
<td>7</td>
<td>Are you able to see point of view of the IT staff or of the users in other departments in your interactions with BAs?</td>
</tr>
<tr>
<td>8</td>
<td>What are difficulties in interacting with BAs?</td>
</tr>
<tr>
<td>9</td>
<td>What areas of your work have been influenced/changed by BAs?</td>
</tr>
<tr>
<td>10</td>
<td>Do you see BA as a business role or IT role?</td>
</tr>
</tbody>
</table>

### 1.2.3 Interview guide for interviews with IT staff

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is the role of your department/team in the organisation? What is the role assigned to You?</td>
</tr>
<tr>
<td>2</td>
<td>What kind of software/applications support do you provide to the users? Are these developed Internally in the organisation?</td>
</tr>
<tr>
<td>3</td>
<td>Are there any differences between requirements of different users/departments?</td>
</tr>
<tr>
<td>4</td>
<td>What role do BAs play in helping your department?</td>
</tr>
<tr>
<td>5</td>
<td>What tools and methods do the BAs use in interacting with you? What type of documentation is involved?</td>
</tr>
<tr>
<td>6</td>
<td>Are you able to see point of view of the users in your interactions with BAs?</td>
</tr>
<tr>
<td>7</td>
<td>What are difficulties in interacting with BAs?</td>
</tr>
<tr>
<td>8</td>
<td>What areas of your work have been influenced/changed by BAs?</td>
</tr>
<tr>
<td>9</td>
<td>Do you see BA as a business role or IT role?</td>
</tr>
</tbody>
</table>
Appendix 2       Data analysis strategy

Appendix 2.1     A Segment of interview transcript

Thank you for coming.
You’re welcome.

Have you read the information statement? Obviously you have. I’ll just repeat the four areas we are looking at in this interview. Basically to understand how you develop a shared practice and how you view your work. The third aspect acting as a bridge between business and IT. The last thing is we’re trying to see how your role can bring about learning in an organisation. So the questions are basically based on that, all this stuff, and we just try and follow this. The first thing which we would like to understand is how your role and your department fits into the organisation structure, what are your views on that?

Okay. Well I’ve only been working for this organisation for a couple of months now, but to the best of my understanding the work involves as a part of systems and training as a specific group business ownership of the principle system, in this case being Xsys. That training seems to have become sort of part of that process where if we are on behalf of the user group developing enhancements to the program or initiating requests for repairs to the program, that what we do there is act as a conduit between the user and IT in the way of drafting requirements and confirming that they are in fact what’s required, going through the testing process, confirming that the changes meet the requirements and then approving for implementation. That works in well with training because obviously any change and especially any new features to a program requires the user group to be informed as to the new practices.
**Do you see your role as essentially an IT role or a business role or what are your views on that?**

Well I consider it more as business and I think probably because I came from business. As a business analyst I suppose you can come from different directions. If the person had an IT background they might consider themselves closer to IT. But I think the most important thing with any system to remember is that it’s to serve a purpose which is to serve business and especially when we’re working with computer systems these days that are supposed to be user friendly, that the process should be less about the technical aspects and more about the outcomes, what the system does, making sure that it does what’s expected and that any enhancements go to being a general improvement to the system and to the way business runs things. So with electronic systems, what we should be looking at, at all times is how does this serve the user group, how does this serve business? So I would consider myself close to business.

| Seeing role as a business role |
| Relating role perception to background |
| Serving business |
| Giving technical issue less importance |
| Feeling close to business |

**Your work, is it helping you get closer to your professional goals and personal goals?**

I don’t think I have any particular professional goals. I came by this work accidentally. I was asked by a former employer, a member of my former employment group to give it a try and it turned out something that I really enjoyed. I like the work because I think it’s useful, it’s interesting and it’s dynamic. It’s nice to be working in an environment where you’re looking at making steps towards continuous improvement. I think that’s really important in businesses especially. Where I came from, previously I was working for a government agency with a lot of long term employees who sort of came to work and did the exact same thing every day. It was something that I thought I didn’t want to do on long term. So in terms of the kind of work that I’d like to be doing, this is it, this is the work.

| Lacking professional goals |
| unplanned start as BA |
| **enjoying working in the BA role** |
| Making continuous improvement |
| Relating previous work experience |
| Disliking routine work |
**Do you have a career path from here or anything you aspire towards?**

Well, in terms of business analysis I am aware that I started doing BA work only three or four years ago and the different organisations defined business analysis with different terms and they also have different requirements by way of experience using methodologies, language, systems in order to be able to have their staff meet the requirements of the actual business analysis role. So, the aim for me at least in the short to mid-term is about accumulating a variety of experience in the work and I suppose having done the job only once before, I was only a Business Analyst in the eyes of my former employer. Now I’m a Business Analyst in the eyes of two and I have literally doubled my usefulness as a BA and am working towards sort of I guess a more generic definition of what a BA is because I have met the requirements of two organisations now to fulfil that role and it’s very, very different work between the two.

**Does your work involve individual effort or does it involve team work?**

It’s a combination. I think that’s common of BA work everywhere that what generally happens is an understanding has to be reached in a group environment, especially if you’re working with a large system. I can understand why BAs would work independently all the time if they were working on a small component over and over again, but otherwise when you’re dealing with a large database which is the case here and in the case of my last job, it’s a team environment where we have an understanding in terms of the system of behaviour, of methods for analysis, of understandings of use of language or use of templates. The outcomes themselves need to be consistent, but obviously to make the best use of a team, that work needs to be sort of cut into slices and that’s where the independent work takes place liaising independently with user groups or with members of IT, taking the lead...
on certain areas of a product to become I suppose in a BA sense, the subject matter expert for that function or that specific area. Obviously that’s beneficial by way of being able to summarise that in BA terms for the rest of the team without requiring the team to come with you on that learning process. So it’s a mixture.

<table>
<thead>
<tr>
<th>Becoming subject matters expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relying less on team</td>
</tr>
</tbody>
</table>

Okay. Do you get to socialise and interact with BAs in your team and the BAs in other departments?

Yes. So far it’s been – and I’m not a full bottle on the organisation as a whole – but I have obviously been working as a team in the BA space here in systems in training, but then also the BAs in [IT Department]. I guess ‘socialise’ is an interesting term because you can end up I suppose socialising with anybody irrespective of the work they do or whether or not you cross paths. You’re probably more likely to socialise with people because you cross paths. I have become friendly with one of the people in [IT department] and we’ve had conversations about the work that she does versus the work that I do and there seems to be correlation, but not much of an overlap.

<table>
<thead>
<tr>
<th>Working with BAs outside team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delinking socialising and work</td>
</tr>
<tr>
<td>Socialising outside team</td>
</tr>
</tbody>
</table>

Is that because of the nature of work, you find it more interesting to interact with people doing different work? Or there’s just no reason?

Not in particular, no. I don’t find people who do BA work anymore interesting than everybody else.

| Socialising outside team |

Now when you work in a team, for example you’re in a team here, are you able to easily assess the strengths and weaknesses of others and use that in your work? Is it a conscious thing?

I don’t think it’s a conscious thing. I think that my strategy usually is where it comes to the division of labour, I try and put my hand up for the thing that I’m

| Valuing new work opportunities |
not familiar with which at the moment is everything. But I guess the idea is that for the purposes of accumulating skills, the important thing to work as a team is to make sure that everything gets done and that necessarily and from time to time there will be opportunities for people to volunteer for work and it will become clear that a certain component of it is the unpopular part. I wouldn’t consider myself necessarily very adept at assessing other people’s strengths and weaknesses. I think that those sorts of things come out and should best be assessed by someone in a position of management (that’s management’s work to do) and that the work’s never equitable. You can’t expect a person who does the same job as you for the same team to work the same hours, to provide the same output. The output should be measured as a whole as what the team provides. So, I guess it’s kind of the communist perspective according to their means and I suppose that if I were in a position of management I would take it upon myself to make those assessments, but I haven’t yet.

<table>
<thead>
<tr>
<th>Okay. The next two questions are basically asking about what tools do you use and what processes do you use basically?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Okay. Tools? I suppose electronically we have a variety of tools that we use for the purposes of drafting use cases or they’re called functional specifications here. We work with a series of Word templates. We use the likes of Visio for our process mapping. We are also now in the position to start using electronic learning tools. I used Camtasia in my previous job, but we’re using a different one.</td>
</tr>
</tbody>
</table>

| recognising unfamiliarity in new role accumulating skills categorising work as popular/unpopular disliking peer assessment seeing manager as a performance appraiser recognising unequal BA performance preferring team appraisal seeing manager as a performance appraiser |

| Using variety of electronic tools Team use of tools; speaking for team Relating previous work experience |
### Appendix 2.2 List of focused codes

<table>
<thead>
<tr>
<th>List of focused codes from Case 1 (Uni 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledge IT department power, Acting as a conduit, Addressing user knowledge gaps, Aligning users, Aligning with organisational strategy, Allocating work in team, Analysing reported issues, Anticipating useful new tools, Appreciating manager’s innovativeness, Appreciating process standardisation, Appreciating training standardisation, Aspiring for team knowledge, Aspiring private sector work, Aspiring to work on bigger projects, Assessing different use of system, Assessing user commitments, Assessing user expectations, Assessing user requirements, Assuming little knowledge in interaction, Balancing contradiction in user requirements, Balancing internal focus and external focus, Being approachable to users, Being closer to Business, Being confident of other BAs, Being constrained by time, Being diplomatic, Being disconnected with organisational strategic direction, Being treated as insiders by IT, Being treated as outsiders by business, Building image as a BA, Clarifying BA role to stakeholders, Classifying requirements, Classifying user issues, Combining individual and teamwork, Comparing IT and user interaction, Comparing with BAs outside the team, Complying with team, Critically viewing enhancement, Criticising attitude of IT people, Criticising IT department culture, Criticising user attitude, Dealing more with IT, Delaying focus on system, Differentiating user and IT interests, Disliking not having adequate knowledge, Documenting interaction for transparency, Documenting interaction for troubleshooting, Enjoying change agent role, Enjoying problem solving role, Enjoying work in the BA role, Expecting a learning curve, Experiencing lack of user willingness and effort to understand, Explaining system constraints to users, Feeling empowered in BA role, Feeling frustrated as a conduit, Feeling rewarded by delivering product, Feeling status difference with IT department, Finding simple work-arounds, Following common sense, Frustrated with not dealing early with end-users/SME(Subject matter experts), Getting users to talk to each other, Having common understanding with other BAs, Hesitation in questioning IT department, Importance of BA role, Incorporating slight differences in user requirements, Informing users of new practices, Initiating new process, Involving all users in formulating business rule, Keeping oneself approachable to users, Knowing what other BAs do, Knowing what other BAs know, Lack of process for issue management, Lacking influence to change IT practices, Lacking process for change management, Learning to work in new job context, Learning formally, Learning from BAs outside the team, Learning from each other, Learning informally in team, Learning on the job, Learning to do tasks in formal training, Learning to speak two languages, Learning what outside BAs do Via formal training programs, Living in two worlds, Maintaining status quo at new job, Managing user expectations, Meeting user expectations, More influence on users to change practices, Openly communicating within team, Preferring team appraisal, Proactively adding what IT wants, Providing reliable tools to users, Putting clients before team needs, Putting system constraints before requirements, Rejecting rigidity in ways of doing things, Relating role perception to background, Representing users, Role of system ownership, Seeing customer service role for BA, Seeing role as a business role, Seeing role as an IT role, Seeking clarity in interaction, Sharing innovation and creative ideas, Socialising outside team, Understanding work style of other BAs, Understanding BA role/work, Understanding differences in user interests, Understanding organisation achievement and goals, Uni-directionally processing requirements, Using variety of electronic tools, Valuing communication in BA role, Valuing detailed and specific user requirements, Valuing new work opportunities, Valuing requirement writing skills, Valuing variety in BA role, Variation in BA definition, Viewing IT and user interactions as separate, Wanting process changes/review, Working in a consultant’s role, Working individually, Worrying more about users’ understanding, Understanding role in organisational context</td>
</tr>
</tbody>
</table>
### Additional focused codes from Case 2 (Expressmail)

Accountability to team lead, Acknowledging role of governance, Acting as a personality bridge, Adapting to changing user requirements, Adapting requirement gathering to scale and complexity of project, Adapting to stages in the SDLC, Allocating work by application functionality, Allocating work by BA experience, Being a boundary role, Being closer to IT, Building working relationships with users, Challenged by document complexity, Challenges of learning in bigger teams, Changing role for business analysts, Dealing with complexity in communication, Dealing with lack of understanding of business process, Dealing with multiple interpretations, Dealing with organisational changes, Difficulties in planning for resources, Doing tasks in automatic pilot, Escalating issues, Expecting better resource planning, Explaining IT staff's distance, Explaining IT staff's inflexibility, Learning by reflection, Making a distinction between theory and practice, Negotiating from a position of respect, Preferring agile approach, Presenting a single interface for users requirements, Prioritising requirements, Realising constraints of automated tools, Relying on documenting quality requirements, Relying on pictures to communicate, Relying on templates for structure, Relying on thinking and intuition, Seeing opportunities in organisational problems, Seeing possibilities of multiple interpretations, Understanding role of BSA, Understanding role of SME, Understanding business and IT view of SDLC, Understanding conflict with users, Understanding context in user communications, Understanding politics, Understanding role in organisational context, Using analogies familiar to users, Volunteering for tasks during allocation, Writing specifications for IT staff.

### Additional focused codes from Case 3 (CompX)

Explaining hierarchy in team, Acknowledging user's better understanding of the system, Acting as a negotiator, Adopting approach to other BA s' strength and weaknesses, Aspiring for a business role, Balancing business and IT solution, Challenging IT staff, Complying as a contractor, Customising interaction with IT, Customising interaction with user, Dealing with external stakeholders, Dealing with turnover, Documenting process at several levels, Enjoying room for flexibility and creativity, Facilitating business to manage investment lifecycle, Handling resistance to change, Keeping CoP membership informal, Learning from outsiders, Managing personality conflicts, Mentoring stakeholders, Moving towards standardisation, Problem and solution orientation, Providing support for strategic goals, Providing a portfolio of services, Reflecting on usefulness of documents, Relying on visual process maps, Representing context of requirements, Undertaking project management tasks, Using a mix of methodologies, Using collaboration space for learning, Using the internet for research, Variation in templates used.

**Table 9.1 A List of Focused codes**
## Appendix 2.3 Organising codes for memo writing

<table>
<thead>
<tr>
<th>Group</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles</td>
<td>Role of system ownership; Acting as a conduit; Informing users of new practices; Relating role perception to background; Variation in BA definition; Being diplomatic; Understanding BA role/work; Enjoying change agent role; Feeling empowered in BA role; Dealing more with IT; Valuing variety in BA role; Importance of BA role; Clarifying BA role to stakeholders; Working in a consultant’s role; Enjoying problem solving role; Representing users; Valuing new work opportunities; Building image as a BA</td>
</tr>
<tr>
<td>Motivators</td>
<td>Valuing new work opportunities; Feeling rewarded by delivering product; Enjoying work in the BA role; Enjoying change agent role; Enjoying problem solving role; Aspiring private sector work; Aspiring to work on bigger projects; Importance of BA role</td>
</tr>
<tr>
<td>Work style</td>
<td>Combining individual and teamwork; Openly communicating within team; Preferring team appraisal; Complying with team; Maintaining status quo at new job; Working individually; Knowing what other BAs know; Being confident of other BAs; Allocating work in team; Putting clients before team needs; Balancing internal focus and external focus; Aspiring for team knowledge</td>
</tr>
<tr>
<td>Tools, methods, and approach</td>
<td>Using variety of electronic tools; Appreciating process standardisation; Anticipating useful new tools; Rejecting rigidity in ways of doing things; Initiating new process; Finding simple work-arounds; Lacking process for change management; Wanting process changes/review; Lack of process for issue management; Following common sense; Delaying focus on system; Viewing IT and user interactions as separate; Putting clients before team needs; Balancing internal focus and external focus; Aspiring for team knowledge</td>
</tr>
<tr>
<td>Tasks</td>
<td>Providing reliable tools to users; Analysing reported issues; Classifying requirements; Informing users of new practices; Critically viewing enhancement; Assessing user commitments; Assessing user expectations; Assessing different use of system; Meeting user expectations; Clarifying BA role to stakeholders; Classifying user issues; Informing users of new practices; Assessing user commitments; addressing user knowledge gaps; Sharing innovation and creative ideas; Finding simple workarounds</td>
</tr>
<tr>
<td>Demotivators</td>
<td>Being constrained by time; Feeling frustrated as a conduit; Frustrated with not dealing early with SME(Subject matter experts); Being treated as outsiders by business; Disliking not having adequate knowledge; Explaining system constraints to users; Putting system constraint before requirements</td>
</tr>
<tr>
<td>Skills</td>
<td>Valuing requirement writing skills; Learning to speak two different languages</td>
</tr>
<tr>
<td>Interactions</td>
<td>Assuming little knowledge in interaction; Seeking clarity in interaction; Uni-directionally processing requirements; Comparing IT and user interaction; Documenting interaction for transparency; Documenting interaction for troubleshooting; Viewing IT and user interactions as separate</td>
</tr>
<tr>
<td>Interactions with BAs</td>
<td>Socialising outside team; Having common understanding with other BAs; Understanding work style of other BAs; Sharing innovation and creative ideas; Knowing what other BAs know; Being confident of other BAs; Comparing with BAs outside the team; Learning from each other; Learning from BAs outside the team</td>
</tr>
<tr>
<td>Group</td>
<td>Codes</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Interaction with users</td>
<td>Understanding differences in user interests; Managing user expectations; Keeping oneself approachable to users; Frustrated with not dealing early with SME(Subject matter experts); Experiencing lack of user willingness and effort to understand; Assessing user requirements; Assessing user expectations; Meeting user expectations; Classifying user issues; Valuing detailed and specific user requirements; Worrying more about users understanding; Criticising user attitude; Being treated as outsiders by business; Involving all users in formulating business rule; Incorporating slight differences in user requirements; Balancing contradiction in user requirements; Explaining system constraints to users</td>
</tr>
<tr>
<td>Interaction with IT staff</td>
<td>Criticising attitude of IT staff; Criticising IT department culture; Feeling status difference with IT department; Hesitation in questioning IT department; Dealing more with IT; Seeing role as an IT role; Being treated as insiders by IT; Proactively adding what IT wants</td>
</tr>
<tr>
<td>Learning</td>
<td>Learning on the job; Learning to work in new job context; Learning formally; Learning for training others; Learning informally in team; Appreciating training standardisation; Expecting a learning curve; Learning from each other; Learning from BAs outside the team; Knowing what other BAs do; Learning to do tasks in formal training; Learning what outside BAs do Via formal training programs ; Learning to speak two languages; Disliking not having adequate knowledge; Aspiring for team knowledge</td>
</tr>
<tr>
<td>Alignment</td>
<td>Aligning with organisational strategy; Being disconnected with organisational strategic direction; Aligning users; Getting users to talk to each ; Lacking influence to change IT practices; More influence on users to change practices; Acknowledge IT department power; Informing users of new practices</td>
</tr>
</tbody>
</table>

Table 9.2 Organising codes for memo writing
Appendix 2.4  Examples of memos written for raising codes to categories

Memo 1: BAs’ understanding of their role

The data and the resulting codes suggest that this group of business analysts (BA) have been concerned with understanding what their role is and how that fits into what is expected of them in the organisation. Before we delve into the various roles we would like to consider what might be influencing their perception.

- Analyst’s background influences role perception

In an analyst’s perception of the BA role, there was a reference to how the background of an analyst influences this perception:

“Well I consider it more as business and I think probably because I came from business. As a business analyst I suppose you can come from different directions. If the person had an IT background they might consider themselves closer to IT.”

- Analyst’s present work and interactions influence role perception

This appeared to be a consistently reflected in the analysts’ perception with one exception. One member of the team perceived the role as a being close to IT despite having a business background:

“I just feel maybe my background because I have worked in a lot of student ops areas and I’m still connected with a lot of them with the work I do, I feel there’s more of a in the middle. But, our work probably on a day to day basis deals more with [IT department].”

This indicates that background is not always sufficient to influence how BAs perceive their role. In this case it is clearly the kind of work one is doing and who one is interacting more with on-the-job.

- Self clarity of role and clarifying role to stakeholders

A significant issue was related to lack of clarity in the role of BA. This was true for BAs themselves not being clear about their role and also for them to feel that the stakeholders were also not clear. This could be partly attributed to the department being relatively new. But it seems the role itself contributed to the lack of clarity. One BA explained how the role was relatively new and people were not aware of it:

“It’s my experience in a social situation that very few people know what a business analyst does and if they do, they generally interpret it as an alternative to what I do.”

Another BA expressed the same in the organisational context:

“We have a lot of work I think as far as telling the organisation what we do and what our specific expertise are and stuff like that because I don’t think that’s very clear. So, in a sense,
Although the people and student ops may know a little bit about what we do, it’s still not very clear I don’t think.”

Therefore, BA’s perception of their role is likely to be influenced by:

- Their work background and associated skills
- The nature of work and interactions

Depending upon these, the role was seen by the BAs as an IT role or a business role. An understanding of role allows them to clarify it further with stakeholders:

“I wouldn’t say we’re 100 percent clear in what our roles are. I would say that we need to clear that up before we start saying to customers – that doesn’t help the customer’s unsureness of what we are.”

Summary:

<table>
<thead>
<tr>
<th>Category</th>
<th>BAs understanding of their role</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focused codes</strong></td>
<td>Understanding BA role/work; Relating role perception to background;</td>
</tr>
<tr>
<td></td>
<td>Clarifying BA role to stakeholders</td>
</tr>
<tr>
<td><strong>Characteristics</strong></td>
<td>The BAs have a role that interacts with both IT department and</td>
</tr>
<tr>
<td></td>
<td>business. In that context they seem to consciously and subconsciously</td>
</tr>
<tr>
<td></td>
<td>evaluating their role in relation to the two</td>
</tr>
<tr>
<td></td>
<td>• Role understood as IT role</td>
</tr>
<tr>
<td></td>
<td>• Role understood as business role</td>
</tr>
<tr>
<td><strong>Conditions in which</strong></td>
<td>• Understanding influenced by background and skills</td>
</tr>
<tr>
<td><strong>the category arises, is</strong></td>
<td>• Understanding influenced by nature of work and interactions</td>
</tr>
<tr>
<td><strong>maintained, or changes</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Consequences</strong></td>
<td>It positions the BAs somewhere on the bridge between the IT</td>
</tr>
<tr>
<td></td>
<td>department and business. The distance from the two determines the</td>
</tr>
<tr>
<td></td>
<td>nature of trust that exists in the two relationships</td>
</tr>
<tr>
<td><strong>Related categories</strong></td>
<td>• M2: Valuing Variety in the role</td>
</tr>
</tbody>
</table>


Memo 2: Valuing variety in BA role

• Aware of varied expectations from BAs in organisations

It was clear that the analysts considered BA role to be a generic role and different situations specify what exactly will be expected of a BA. As one BA put it:

“...different organisations defined business analysis with different terms and they also have different requirements by way of experience using methodologies, language, systems in order to be able to have their staff meet the requirements of the actual business analysis role. So, the aim for me at least in the short to mid-term is about accumulating a variety of experience in the work...”

There was some indication that the different images of the role at times could create misconceptions in expectations from them. Such misconceptions may influence how the BAs perceive their competence for the role. For example, the assumption of BA having a greater IT knowledge made the BAs painfully conscious of lacking those skills:

“Essentially you become bilingual when you learn IT because you have to learn a language, a programming language and you have to be able to do things in the background to make things in the front end look the other way other people. In a sense what they do is magic and it's something that I've never had any skills for.”

• Variety in work contributes to positive self-image

The analysts in the group also showed a liking for a variety in work that is allocated to that. For them it was important to be doing a variety of work for them to be recognised as BAs. Thus the image of BA was complete if one had worked in different work situations. This relationship between variety in work experience and a positive self-image was explained by one analyst:

“...the aim for me at least in the short to mid-term is about accumulating a variety of experience in the work and I suppose having done the job only once before, I was only a Business Analyst in the eyes of my former employer. Now I’m a Business Analyst in the eyes of two and I have literally doubled my usefulness as a BA...”

This category explains that variety in work is valued because:

• That prepares them for different types of organisations that have varied expectations form BAs and
• A variety of work experience improves their self-image as a BA.
Summary:

| Category                      | Valuing Variety in their roles                                                                 |
|-------------------------------|-------------------------------------------------------------------------------------------------
| Focused codes                 | Valuing variety in BA role; Variation in BA definition; Building image as a BA; Valuing new work opportunity |
| Characteristics               | The BAs are aware of the fact that undertaking a variety of work is important for them.          |
|                               | • Seeking variety to get diverse work experience                                               |
|                               | • Seeking variety for self-image                                                               |
| Conditions in which the category arises, is maintained, or changes | This attitude is found across the team and seems intrinsic to the role.                         |
| Consequences                  | • Creates opportunity for learning                                                              |
|                               | • Helps in work allocation in teams                                                             |
|                               | • Proactive BAs seeking new work opportunities.                                                 |
| Related categories            | • M1: Understanding of BA role                                                                  |
|                               | The expectations from this role is likely to be related to the BAs seeking new opportunities and areas of work |

Memo 3: Acting as a conduit

As expected, the BAs were well aware of their liaison role between the business and IT. The data reveals that the bridging role had several dimensions to it. Depending on the understanding that the users had about their role (See Memo 1) they saw themselves providing some sort of connection between the business and IT.

- Conduit for representing users

One purpose that the analysts suggest for the bridge is that it enables them to be representatives of business to the IT department:

“We are essentially representatives of the user group to IT and it’s my experience generally that there is that trust that we will go to IT asking for exactly what they wanted…”

Such a role obviously assumes closeness to business in comparison to IT department. This closeness or otherwise is also related to the distance of the BAs from the IT department and the business in the organisation structure. In this case, the BAs were equidistant from the two and this perception of representing the users in trust is likely to be a result of the analyst’s perception of BA role as discussed in Memo 1. Here the BA role is seen as business role with closeness to business. This reflected in the group’s new initiative, where they are going to allocate faculties among themselves and become designated representative for those faculties:

“Look, it’ll be coming from each of the BAs where we’re looking at representing your faculty and looking at your processes…”
• **Conduit for representing IT**

There was another dimension to being a conduit and this involved being representative of the IT department and going on to interact with the business in that capacity. In this case we were unable to see an explicit reference to this role in the data. However, there was some indication of such an attitude being adopted. For example, one BA saw the role as being essentially an IT department role and being closer to IT department didn’t see that the users trusted them enough:

“I think the business probably see us as [IT department], but not fully. Like we’re sort of like “Yeah, I’ll do it. I like you enough. I’ll talk to you,” but I think at the moment because we are close to them and we’re the ones delivering the information about why things can’t go the way they want it, we’re a little bit outsiders to them. But [IT department], treat us like insiders because we’re working on the products that they’re working on, we’re the ones liaising with them about the issues on the majority of the occasions and we also speak their language. So they treat us more like we’re part of their group whereas the business, unless it’s not student ops, probably you’re an outsider a little bit.”

**Summary:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Acting as a Conduit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focused codes</strong></td>
<td>Acting as a conduit; Representing users; being closer to user; being closer to IT</td>
</tr>
<tr>
<td><strong>Characteristics</strong></td>
<td>The category describes the bridging role that BAs play in mediating between the IT department and business</td>
</tr>
<tr>
<td></td>
<td>• Conduit for representing users</td>
</tr>
<tr>
<td></td>
<td>• Conduit for representing IT</td>
</tr>
<tr>
<td><strong>Conditions in which the category arises, is maintained, or changes</strong></td>
<td>The role is the basic requirement of the BAs work. Starting with understanding requirements and up to acceptance testing the conduit role remains active</td>
</tr>
<tr>
<td><strong>Consequences</strong></td>
<td>An entire range of activities and tasks result from the conduit role. The conduit is responsible for various roles like communication, change agent, problem solving, alignment etc.</td>
</tr>
<tr>
<td><strong>Related categories</strong></td>
<td>• M5: Attaching importance to BA role</td>
</tr>
<tr>
<td></td>
<td>The conduit role provides empowerment to the BAs</td>
</tr>
</tbody>
</table>
### Appendix 2.5 Summary tables for discussing themes

#### Case 1: Uni 1

**Theme: BAs’ understanding of their role**

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| BAs’ understanding of their role        | Understanding BA role/work; Relating role perception to background; Clarifying BA role to stakeholders | • Understanding influenced by background, nature of work and interactions  
• Role ambiguity  
• Client relationship management |
| Valuing variety in BA role              | Valuing variety in BA role; Variation in BA definition; Building image as a BA; Valuing new work opportunity | • The BAs are aware of the fact that undertaking a variety of work is important for them.  
• Seek variety to get diverse work experience and that it improves self-image |
| Attaching importance to BA role         | Feeling empowered in BA role; Importance of BA role; Role of system ownership; Enjoying change agent role; Enjoying problem solving role; Working in a consultant’s role | • Necessity of having a ‘third party’ for maintaining information systems.  
• Empowerment seen to arise from their role as problem solver, changed agent, and consultant |
| Job satisfaction in the BA role         | Feeling rewarded by delivering product; Enjoying work in the BA role; Enjoying change agent role; Enjoying problem solving role; Aspiring private sector work; Aspiring to work on bigger projects; Importance of BA role | • Satisfaction in the role related to empowerment and in delivering system enhancements to users  
• Aspirations for working on bigger projects in the private sector |
| Comparing with BAs external to the team | Comparing with BAs outside the team; Learning from BAs outside the team; Learning what outside BAs do Via formal training programs; Knowing what other BA do; Learning to do tasks in formal training | • BAs compare their training programs, processes, skills and traits with BAs in other departmental units |

Table 9.3 The BAs’ understanding of their role - Categories, codes, and summary of BAs’ perspectives (Uni 1)
<table>
<thead>
<tr>
<th><strong>Theme:</strong> Practice work within the group of BAs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category</strong></td>
</tr>
</tbody>
</table>
| Complying with Team | Complying with Team; Maintaining Status-Quo at new job; Learning to work in new job context | • Need for compliance based on awareness of how practices differ between organisations and to avoid being too disruptive to older BAs in the team  
• Compliance at a level higher than routine ways of doing work |
| Having Common Understanding with BAs within the team | Having Common Understanding with other BAs | • Size of Xsys and an integrated data base requires common understanding among BAs  
understanding about system behaviour, methods of analysis, use of language and templates  
• Understanding amongst the BAs shaped at the boundaries in their interactions with the users and IT staff.  
• Perspective differ between the newer and well established member of team |
| Understanding work style of other BAs in the team | Understanding work style of other BAs; Knowing what other BAs know; Being confident of other BAs; Knowing what other BAs do | • Understanding practices from established members to the newer members is considered an important process  
• BAs were also aware that different members of the team would have different style of work and different strengths and weaknesses |
| Learning Informally | Learning Informally team; Learning on the job | • Learning on the job important for BAs  
• Progression to BA role without formal training  
• Aspire for formal BA training |
| Learning from each other | Learning from each other; Openly communicating within team; Sharing innovation and creative ideas | • Shared office space provides access to discussions and interactions involving other BAs in the team; An important source of learning  
• Reliance on shared innovation and creative thinking  
• Tolerance for diverse perspectives because of differences in experience and background |
| Aspiring for formal learning | Learning formally; Learning to do tasks in formal training | Seeking formal training for:  
• Understanding the broad spectrum of skills and attitudes required  
• Role specific training courses Trainer’s skills for training Xsys users  
• Opportunities for networking and recognising new practices |
<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combining Individual and Team Work</td>
<td>Combining individual and teamwork; Working individually</td>
<td>• The work of BAs in a team is a combination of team work and individual work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Work in team for common understanding and Work Individually in liaison activities</td>
</tr>
<tr>
<td>Difficulty in Allocating Work in Team</td>
<td>Allocating Work in Team</td>
<td>• Work allocation is dependent upon BAs being aware of each other’s strengths and weaknesses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Work allocation is ad-hoc</td>
</tr>
<tr>
<td>Using Processes in BA work</td>
<td>Rejecting rigidity in ways of doing things; Appreciating process standardisation; Lacking process for change management; Lack of process for issue management; Initiating new processes</td>
<td>• Established procedural guidelines and attitude of established team members a source of frustration for newer members</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Appreciate standard processes that are documented</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No formal process for improving internal processes and interacting with users and IT staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Change management plan needs to be drawn out by BA in parallel to writing the requirements documents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Initiating process of BA working as account managers for managing relationships with departments</td>
</tr>
<tr>
<td>Using documentation</td>
<td>Documenting interaction for transparency; Documenting interaction for troubleshooting</td>
<td>• Documents contribute to formalising work and for the purpose of improving transparency and troubleshooting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Improve users’ familiarity of documents</td>
</tr>
<tr>
<td>Using tools for BA work</td>
<td>Using variety of electronic tools; Anticipating useful new tools</td>
<td>• The BAs used a variety of electronic tools for different purposes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The mix of tools suggests that BAs need tools for documenting requirements and processes, managing knowledge, and interacting with clients.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Little reflection on whether use of distinct tools and processes would be more effective for interacting with the users and IT staff</td>
</tr>
</tbody>
</table>

Table 9.4 Practice work within the group of BAs - Categories, codes, and summary of BAs’ perspectives (Uni1)
<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acting as a conduit</td>
<td>Acting as a conduit; Representing users; Being closer to IT</td>
<td>• Aware of their liaison role but contradictory views on whether they were representatives of users or the IT staff</td>
</tr>
</tbody>
</table>
| Frustrations in the conduit role      | Being constrained by time; Being treated as outsiders by business; Frustrated as a conduit; Frustrated with not dealing early with SME (Subject matter experts) | • Dealing largely with complaints and positive work not feedback to them  
• Deal with users and IT groups’ different set of KPIs and priorities and balancing the two compromises quality  
• IT non-committed about giving deadlines  
• Dealing first with managers with responsibility for signing off requirements delays dealing with users of systems; Managers have an output focus; end users have the focus on the intricacies of the process |
| Being a Diplomat                      | Being diplomatic                                                                                       | • Practice diplomacy with both IT and users in communicating outcomes of discussion at either boundaries  
• BAs assess that straightforward communication would upset users and IT staff |
| Speaking two languages                 | Learning to speak two languages                                                                          | • Acknowledge the user and IT live in different worlds and are unable to talk directly with each other |
| Putting clients’ needs before team needs | Putting clients before team needs; Balancing internal focus and external focus                          | • A challenge to achieve a balance between time spent on organising team processes and the time spent on dealing with IT and users |
| Viewing IT and user Interactions as separate | Uni-directionally processing requirements; Viewing IT and user interactions as separate; Worrying more about users understanding | • This represents the BA view of treating the two interactions as separate and not as a conduit for mediating one continuous interaction  
• The two interactions are separate in term of timing  
• The use of verbal communication is more with users; Written communication used more with the IT staff  
• More effort is needed to bring about understanding in users than with the IT staff |
| Seeking clarity in all interactions   | Assuming little knowledge in interaction; Seeking clarity in interaction; Criticising IT department culture; Valuing requirement writing skills | The category represents how BAs ensured clarity in their interactions with stakeholders  
• Assuming no knowledge  
• Re-confirming one’s understanding  
• Rely on oral/written communication |
### Theme: Boundary role perspective

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disliking not having adequate knowledge</td>
<td>Disliking not having adequate knowledge; Aspiring for team knowledge</td>
<td>A lack of knowledge within the team and dependence on external sources for information can be a cause for frustration</td>
</tr>
<tr>
<td>Working on alignment</td>
<td>Aligning with organisational strategy; Being disconnected with organisational strategic direction; Getting users to talk to each; Aligning users; Lacking influence to change IT practices; more influence on users to change practices</td>
<td>The imperatives of organisational alignment do not seem to be central to the way the BAs approached their routine work</td>
</tr>
</tbody>
</table>

Table 9.5 Boundary role perspective - Categories, codes, and summary of BAs’ perspectives (Uni 1)
<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classifying user issues</td>
<td>Classifying user issues; Classifying requirements; problem orientation</td>
<td>• Incidents/ issues raised by users reveal little about the nature of problem with Xsys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Classification of issue an important step towards issue resolution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Problem focus, rather than a solution focus, encouraged in the work of BAs</td>
</tr>
<tr>
<td>Understanding differences in user requirements</td>
<td>Understanding differences in user interests; Incorporating slight differences in user requirements; Balancing contradiction in user requirements; Involving all users in formulating business rule; Valuing detailed and specific user requirements; Assessing different use of system</td>
<td>• BAs coming to terms with the fact that users of Xsys could have different requirements even though they may appear to be involved in a similar kind of work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Generalising requirements for users had been problematic in the past</td>
</tr>
<tr>
<td>Dealing with lack of user involvement</td>
<td>Experiencing lack of user willingness and effort to understand; Assessing user commitments; Criticising user attitude; Keeping oneself approachable to users</td>
<td>• BAs deal with lack of user willingness to understand issues, especially technical issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• BAs realise the importance of communication despite low level of user involvement</td>
</tr>
<tr>
<td>Managing user expectations</td>
<td>Managing user expectations; Assessing user expectations; Meeting user expectations; Explaining system constraints to users; Delaying focus on system</td>
<td>• Managing user expectations a challenge considering the constraints imposed by Xsys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• At times intervention from higher authorities is required to manage expectations</td>
</tr>
<tr>
<td>Supporting users</td>
<td>Providing reliable tools to users; Finding simple work-around; Addressing user knowledge gaps; Informing users of new practices</td>
<td>• Relating practices of one group of users to other groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Open to providing work around solutions to users even if they were not official</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Address poor knowledge levels and train for new practices required due to system and process change</td>
</tr>
</tbody>
</table>

Table 9.6 Interactions with users - Categories, codes, and summary of BAs’ perspectives (Uni 1)
## Theme: Interactions with IT Staff

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| Dealing with attitude of IT staff| Criticising attitude of IT people; Criticising IT department culture          | • Find it difficult to get information  
• Not pleased with IT staff’s disregard of their system knowledge  
• IT staff’s attitude that technical knowledge of the system gives them a better idea about user’s requirements is seen to be problematic  
• IT staffs give system maintainability a priority over user requirements  
• IT staff perceived to be lacking the culture of customer-orientation. This is attributed to over-dependence on technology for communication rather than more direct forms of communication |
| Seeing Status Difference with IT staff | Feeling status difference with IT department; Hesitation in questioning IT department power; Proactively adding what IT wants | • View difference in role status with IT staff due to differences in technical skills and power  
• Status and power difference affects BAs ability to be unbiased in understanding user requirements and delivering on those requirements |
Case 2: Expressmail

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAs’ understanding of their role</td>
<td>Relating role to personality; Clarifying BA role to stakeholders; Understanding BA role/work; Understanding role of SME; Understanding role of BSA; Variation in BA definition</td>
<td>Perception that the BA role would be suitable for certain types of personalities • Difficulty in establishing importance of BA role within project • Role of BA ambiguous in industry and under-emphasised in university courses • Consider SMEs role to be clearly distinct from the BA role • ‘Good’ BAs do not tend towards technical solutions and have different skills from BSAs • BA and BSA role separation may be difficult in practice</td>
</tr>
<tr>
<td>Attaching importance to BA role</td>
<td>Enjoying change agent role; Enjoying problem solving role</td>
<td>BAs more of change implementers and less of change initiators • Problem solving role of BAs preferred over operating routine business operations</td>
</tr>
<tr>
<td>Job satisfaction in the BA role</td>
<td>Enjoying work in the BA role; Valuing variety in BA role; Enjoying problem solving role</td>
<td>Enjoy bridging role and interactions with both IT and business staff • Ongoing learning in BA role makes it attractive</td>
</tr>
</tbody>
</table>

Table 9.8 BAs’ understanding of their role - Categories, codes, and summary of BAs’ perspectives (Expressmail)
<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complying with Team</td>
<td>Accountability to team lead</td>
<td>• The accountability to the team varied between permanent and contracted staff</td>
</tr>
</tbody>
</table>
| Learning Informally          | Learning on the job                                | • Learning process as ‘osmosis’ suggests that learning is informal, gradual and may not always involve a conscious effort by the BAs to learn  
|                               |                                                    | • Learning BA role without formal training/education                                        |
| Learning from each other     | Learning from each other; Challenges of learning in bigger teams; Learning by reflection; lack of helpful documentation | • The challenges of learning from each other seem to arise when the BAs are either physically distant or there is little overlap in the nature of projects they are working on  
|                               |                                                    | • Issues of ethical conduct and professional code of practice are not only seen as relevant to the BA professionals but require them to reflect collectively about professional conduct  
|                               |                                                    | • Information on Expressmail intranet not of value in business analysis work                |
| Aspiring for formal learning | Learning formally                                   | • While high weighting given to qualifications is justified by the need to have BAs that have sound IS concepts, empirical evidence suggests greater emphasis on informal, on the job training acquired learning amongst the BAs |
| Combining Individual and Team Work | Combining individual and teamwork; Working individually | The business analysis work is allocated to individual BAs. It is only in large projects that more than one BAs work jointly on an allocated task |
| Difficulty in Allocating Work in Team | Allocating work by application functionality; Allocating work by BA experience; Allocating work by work priority; volunteering for tasks during work allocation; Making a distinction between theory and practice | • Work allocated to BAs for different functionalities of the application  
• BA’s skills, experience, and area of interest considered in allocation of work; This may restrict variety and emphasise specialisation  
• Practice of recruiting independent contractors for managing work loads |
| Using Documentation          | Challenged by document complexity; Learning from documentation; Relying on documenting quality requirements | • Detailed requirements may become over complex  
• Documentation focus on application rather than business requirements can be problematic |
<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| Using Processes in BA work | Doing tasks in automatic pilot; Acknowledging role of governance; Dealing with excessive governance; Difficulties in planning for resources; Preferring agile approach; Understanding business and IT view of SDLC | • The processes and their activities may become a part of the BAs’ routine practices and not involve much reflection on how they go about doing their work  
• Perception that irrespective of whether waterfall or agile approach is used, IS governance is required to deliver on the requirements  
• Perception that cost of governance needs to be managed and requires research on governance practices  
• Project planning lacks emphasis on human resource requirements; This could be related to the practice of relying upon a supply of independent contractors  
• Agile approach may maximise understanding changing requirements of the users |
| Using tools for BA work | Using variety of electronic tools; Relying on thinking and intuition; Relying on pictures to communicate; Relying on templates for structure; Realising constraints of automated tools | • The BAs used a variety of electronic tools for different purposes  
• Understanding that communicating with IT staff is different from communicating with business; structured communication for the technical staff and, a less formal representation of requirement for the business  
• little reflection on whether use of distinct tools and processes would be more effective for interacting with the users and IT staff  
• Perception that automated tools could constrain business analysis and therefore not appropriate  
• A role for use of instincts in business analysis work |

Table 9.9 Practice work within the group of BAs - Categories, codes, and summary of BAs’ perspectives (Expressmail)
<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs' perspectives</th>
</tr>
</thead>
</table>
| Acting as a conduit      | Acting as a conduit; Changing role for business analysts; Being a boundary role | • Aware of their liaison role but realise that the nature of mediation is changing due to the user becoming more knowledgeable about technology  
• BA role becoming more of a support role rather than a translation role; cushion/protect the users by minimising their work/interactions with IT project staff  
• No clear understanding if they are perceived as business or IT by the users and IT staff |
| Being a Diplomat         | Adapting to stages in the SDLC                                               | • Little suggestion about practicing ‘diplomacy’ but need to be careful in their interactions towards the end of the project lifecycle                             |
| Speaking two languages   | Speaking two languages; Using analogies familiar to users                    | • Although, there was a perception that the BA role was moving away from the role of being a ‘translator’ between the users and IT staff, there was an understanding that in many cases there was a need to ‘speak two languages’  
• Using analogies that are familiar to users                                                   |
| Disliking not having adequate knowledge | Disliking not having adequate knowledge                                      | • The extent of analysis undertaken by BAs may be limited by the access to required information  
• Perception that BAs may be better supported by direct access to business / IT domain information                  |
| Working on alignment     | Understanding organisation achievement and goals; Being disconnected with organisational strategic direction; Seeing opportunities in organisational problems | • The BAs in Expressmail seemed very aware of the strategic objectives and how their role would impact on working towards these objectives |
| Frustrations in the conduit role | Feeling frustrated as a conduit; Understanding role in organisational context; Escalating issues; Dealing with organisational change | • The BAs may not be interested to move into the business or IT areas  
• Political culture may prevent access to people that have the required systems knowledge; Escalating issues rare; Issues of change in scope and its budgetary implications called for escalation |

Table 9.10 Boundary role perspective - Categories, codes, and summary of BAs’ perspectives (Expressmail)
### Theme: Interactions with users

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| Classifying user issues           | Analysing reported issues                                         | • Problems of process, business rules, and communication  
• Business centric view of issues; view lacks information of IT related issues and issues that might be related to their team |
| Understanding differences in user requirements | Understanding differences in user interests; Assessing user requirements; Valuing detailed and specific user requirements; Involving all users in formulating business rule; Incorporating slight differences in user requirements; Adapting to changing user requirements; dealing with organisational changes; Dealing with missed requirements; Having perseverance in learning; Understanding context in user communications; Adapting requirement gathering to scale and complexity of project; Prioritising requirements; seeing possibilities of multiple interpretations; Dealing with multiple interpretations | • Understanding requirements for new systems requires not only understanding user needs but also ‘understanding the code’ of old applications  
• Managing different requirements formally through a project working group that had representatives from various project groups  
• Problematic to have requirements documented at a high level without the contextual information of what, how, and why  
• Experience a challenge in understanding contexts from interactions with users  
• Requirements are not ‘out there’ as possessions of the users that they can simply deliver to the BAs  
• Empathy towards users’ learning about their requirements over a period of time; BAs understanding of requirements follows this learning |
| Managing user expectations         | Explaining system constraints to users                            | • The expectations were considered in light of the technical, budget, and time constraints  
• Managing expectations increasingly difficult at the later stages of the project; require a changing approach to manage expectations |
| Supporting users                  | Being approachable to users; Building working relationships with users; Presenting single interface for user requirements | • The BAs were aware of the need to be approachable to users and build working relationships with them  
• The BAs understood their role of being an interface to the user for accessing the services provided by the various groups that worked on the applications |

Table 9.11 Interactions with users - Categories, codes, and summary of BAs’ perspectives (Expressmail)
Theme: Interactions with IT staff

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealing with attitude of IT staff</td>
<td>Criticising attitude of IT people; Dealing with complexity in communication; Explaining IT staff’s inflexibility</td>
<td>• The IT staff was at times seen to overcomplicate the communication with the BAs&lt;br&gt;• IT staff did not expect BAs to be technically knowledgeable&lt;br&gt;• The systems background gave the BAs confidence to interact with the IT staff and be able to ensure that technical constraint are not used by the IT staff to avoid work.&lt;br&gt;• Explain IT staff’s inflexibility: Flexibility of the IT staff is related not only to the technical issues of the system and the approach of the IT staff but also to the governance processes</td>
</tr>
<tr>
<td>Seeing Status Difference with IT staff</td>
<td>Acknowledge IT department power; Negotiating from a position of respect; Understanding politics</td>
<td>• BAs were in no denial of the little influence they would have over the IT staff&lt;br&gt;• BAs were aware that organisational politics has a role to play in the process of acknowledge users requirements and responding to them</td>
</tr>
</tbody>
</table>

Table 9.12 Interactions with IT staff - Categories, codes, and summary of BAs' perspectives (Expressmail)
### Case 3: CompX

#### Theme: BAs’ understanding of their role

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| **BAs’ understanding of their role** | Variation in BA definition; Relating role perception to background; problem and solution orientation; understanding role of SME; Undertaking project management tasks; Changing role for business analysts; Being closer to business; dealing with uncertainty | • BAs’ role is not necessarily an IT role and that their analytical skills are important for analysing business problems in general  
• BAs may have a strategic role to play and need to work closely with top management  
• In small projects, BAs expected to project management work  
• The BAs’ were aware of the general tendency of BAs going into the solution mode without an adequate understanding of the problem; Technical solution being perceived as the desired outcome and SMEs familiarity with the business domain are potential reasons for a limited problem analysis.  
• Perception about the changing nature of BA work; role is broader than just understanding requirements; relatively less data modelling undertaken |
| **Valuing variety in BA role**   | Variation in BA definition ; Valuing Variety in BA role                        | • Understand that BA work different in organisations  
• BAs seem to be motivated by the challenges of working in new domain and learning from the experience |
| **Attaching importance to BA role** | Being a change agent; Feeling Empowered in BA role; Enjoying a change agent role; Enjoying problem solving role | • The BAs considered their role to be growing in importance in CompX and were pleased by the fact they were sought after by the business  
• Aware of their role was important in driving change management and that change management needed more attention  
• BAs need to consider the subtle requirements for change |

Table 9.13 The BAs’ understanding of their role - Categories, codes, and summary of BAs’ perspectives (CompX)
## Theme: Practice work within the group of BAs

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| Complying with Team               | Complying as a contractor; Variation in BA definition; Learning to work in new job context | • BAs were conscious of the need to confirm to the practices of the team; more so in the case of independent contractors  
• The process of complying with the team is linked to the process of the BAs learning from the BAs who have had more work experience in the organisation  
• Independent contractors’ emphasis on compliance may restrict creativity                                                                                           |
| Understanding work style of other BAs in the team | Adopting approach to other BAs' strength and weaknesses | • A diplomatic challenge in dealing with the weaknesses and strengths of other BAs  
• Individual BAs adopt their approaches to those of their peers in the team and engage in negotiation to achieve this                                                                                                     |
| Learning Informally               | Learning Informally; Keeping CoP membership informal                          | • BAs learn business analysis skills by working in the various BA roles  
• BAs’ on-the-job learning was supported by a community-of-practice (CoP) that gave them an opportunity to share their knowledge and experience                                                                                   |
| Learning from each other          | Learning from each other; Learning from outsiders; Using collaboration space for learning; Learning to work in new job context | • CoP membership used for interactive learning with each other  
• An electronic collaboration tool seen to be useful to complement a face to face interaction in the CoP meetings  
• CoP participation open to non-BAs emphasises the need for BAs to engage with individuals from other groups                                                                                                     |
<p>| Combining Individual and Team Work | Combining individual and teamwork                                              | • For smaller projects and assignments for business analysis, individual BAs were appointed to undertake the task. For the larger projects a number of BAs were appointed as a team with collective responsibility |
| Difficulty in Allocating Work in Team | Allocating work in team; Allocating work by BA experience | • The allocation of work to the BAs was based on their availability and experience and on the need to provide a learning opportunity to BAs                                                                                   |</p>
<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| Using Documentation       | Documenting process at several levels; Variation in templates used; Reflecting on usefulness of documents | • The use and development of excessive documentation in business analysis work can be a source of frustration for BAs  
• Excessive use of documentation may not be serving the interests of either the business or IT staff. It could be serving the BAs themselves in meeting their role expectations or ensuring organisation’s audit and compliance requirements |
| Using Processes in BA work| Using a mix of methodologies; Moving towards standardisation                  | • The process that BAs followed in the team were not based on a particular methodology but was influenced by several approaches  
• A combination of components of various methodologies may be useful in practice |
| Using tools for BA work   | Using a variety of electronic tools; Realising constraints of automated tools; Using the internet for research | • Understanding that the electronic tools need to be used together with other simple but effective practices of using the blackboards for interactive sessions  
• BAs could impose rigidity on their business analysis work by being inflexible in the use of the templates and guidelines  
• Customisation of tools is required not only at the level of organisations but also at the project level; The size of the project is seen as a measure of how much due diligence should be pursued through the use of tools |

Table 9.14 Practice work within the group of BAs - Categories, codes, and summary of BAs’ perspectives (CompX)
<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acting as a conduit</td>
<td>Acting as a conduit; Acting as a negotiator</td>
<td>• Perception that the role involves negotiating between the technical and non-technical people</td>
</tr>
</tbody>
</table>
| Speaking two languages         | Speaking two languages; Customising interaction with user; Customising interaction with IT | • Bridging the users and IT involved carrying out translation between the technical speak of the IT staff and the language understood by the users  
• Negotiations were not seen by the BAs to be merely representing either the users or the IT but ensuring that the decision making is in accordance with the business case  
• Understanding on how the BAs might customise their interactions for the users and the IT staff |
| Viewing IT and user Interactions as separate | Comparing IT and user interaction                                              | • BAs compared the interactions with the users and IT staff and suggested a different approach was required for the interactions |
| Disliking not having adequate knowledge | Learning to work in new job context                                            | • Challenging for a BA to understand the proceedings of the meetings in new roles  
• Learning on the job seems to be the way the BAs seem to learn; BAs’ frustrations suggests that it may not always be the effective and efficient way to improve the familiarity of BAs who are entering new business domains |
| Working on alignment           | Dealing with external stakeholders; Balancing business and IT solution; Managing personality conflicts; Facilitating business to manage investment lifecycle; Providing support for strategic goals; Understanding organisation achievement and goals | • BAs aware of working towards strategic objectives of the organisation. This was, however, not simple because of the auditing environment and the influence of the government  
• The challenge for organisations is to keep the right balance between one, ensuring business analysis work achieves its basis operational goals as stated in the project charter and two, auditing the project for expectations of external, influential stakeholders  
• Perception that the business was usually interested in dealing with the budgetary issues and short term pressures rather than taking a long term view of the situation |
<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| Frustrations in the conduit role | Managing personality conflicts; Acknowledging user's better understanding of the system; Aspiring for a business role; Frustrated with not dealing early with SME(Subject matter experts); Understanding politics; Dealing with organisational changes | • The potential source of frustration for the BAs could be dealing with personality conflicts; Perception that ‘regular’ BAs may not good at managing people  
• Organisational politics, restructuring, and changing priorities were also a potential source of frustration  
• Requirements are ‘lost’ because all the users at the right level of the system usage are not involved  
• Being in a role of solving other people’s problems was also a source frustration |

Table 9.15 Boundary role perspective - Categories, codes, and summary of BAs’ perspectives (CompX)
### Theme: Interactions with users

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| Understanding differences in user requirements | Adapting to changing user requirements; Dealing with changing user requirements; representing context of requirements; Understanding user requirements; Enjoying room for flexibility and creativity; Dealing with organisational changes | - The challenge for the BAs in dealing with the users was to constantly monitor what the business was doing and how their requirements were changing  
- BAs challenged by the users’ inability to clearly understand and articulate their requirements  
- Adding value to the requirements that were stated by the users was seen by BA12 as an opportunity for being creative and, more importantly, for capturing the context of the stated requirements  
- The ways in which off-the-shelf packages are sometimes used also made it difficult to deliver on the user requirements |
| Dealing with lack of user involvement          | Handling resistance to change                                                 | - Challenge is to get people involved in the change process and make them see the usefulness of the change  
- The perception that the BAs are being imposed on the users by a centralised authority to review the way the users worked does not help the cause |
| Managing user expectations                    | Educating the business                                                        | - BAs also perceived that users were unable to understand the effort that was required in the business analysis work. As a result of this lack of understanding, BAs found the users expectations on delivery were not very realistic  
- The role of BAs, therefore, involves not only discussion around the information systems and user requirements, but also ‘educating’ the users about the usefulness of formal business analysis activities |
| Supporting users                              | Supporting users; Mentoring stakeholders                                      | - BAs also perceived their role was to support user by providing users with something of value  
- The BAs in CompX perceived their role to involve sharing their knowledge and expertise with the business by mentoring the stakeholders  
- The use of words like ‘empowering’ and ‘mentoring’ suggest that BAs themselves felt empowered and knowledgeable in meeting their responsibilities |

Table 9.16 Interactions with users - Categories, codes, and summary of BAs’ perspectives (CompX)
### Theme: Interactions with IT staff

<table>
<thead>
<tr>
<th>Category</th>
<th>Focused codes</th>
<th>Summary of BAs’ perspectives</th>
</tr>
</thead>
</table>
| Dealing with attitude of IT staff | Dealing with IT staff; Challenging IT staff; Criticising attitude of IT staff; Explaining IT staff inflexibility; Customising interaction with IT | • BAs able to challenge the approach of the IT staff  
• Suggestions to the IT staff need to be supported with structured and logical arguments  
• Challenge for BAs arising from the technical staff’s focus on achieving their own technical objectives to perfection without realising that the business needs requirements were not that extreme  
• The potential source of technical staff’s single-minded focus on their technical objectives is seen to emanate from their understanding being limited to a niche technical area  
• Technical staff not interested in understanding the motivation for and impact of their work |

Table 9.17 Interactions with IT staff - Categories, codes, and summary of BAs’ perspectives (CompX)
Appendix 3  Human ethics clearance

Dear Judy and Rajiv

SUHREC Project 2009/235 A Communities-of-Practice\textsuperscript{10} Perspective on Roles and Practices of Business Analysts

Prof Judy McKay, FICT; Mr Rajiv Vashist et al

Approved Duration: 23/10/2009 To 31/08/2012 [Adjusted]

I refer to the ethical review of the above project protocol undertaken by a Swinburne Human Research Ethics Committee (SUHREC) Subcommittee (SHESC3). Your response to the review, as emailed on 16 October 2009, were put to Subcommittee delegates for consideration. Separately you will have received a communication concerning the Subcommittee's understanding regarding workplace interaction/observation. I am pleased to advise that, as submitted to date, the project may proceed in line with standard on-going ethics clearance conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the current National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.

- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.

- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants and any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.

- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project.

- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact me if you have any queries about on-going ethics clearance, citing the SUHREC project number. Copies of clearance emails should be retained as part of project record-keeping.

Best wishes for the project.

Yours sincerely

Keith Wilkins
Secretary, SHESC3

\textsuperscript{10} The approval for changing the thesis title to the current title - “A Boundary Practice Perspective on the Roles and Practices of Business Analysts” - was subsequently obtained.
### Appendix 4  Boundary spanning and boundary practices

**Appendix 4.1 Research in boundary spanning and boundary object (BSBO) across disciplines**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>References for BSBO research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information systems</td>
<td>Elbanna 2010; Gallagher et al. 2004; Gasson 2006; Hustad 2007; Kimble et al 2010; Levina and Vaast 2005a,b; Levina and Vaast 2006; Levina and Vaast 2008; Lindgren et al. 2008; Mason 2003; Pawlowski and Robey 2004a; Volkoff et al 2004</td>
</tr>
<tr>
<td>Sociology of workplace</td>
<td>Star and Griesemer 1989</td>
</tr>
<tr>
<td>Psychology</td>
<td>Amedore and Knoff 1993; Bartunek and Reynolds 1983</td>
</tr>
<tr>
<td>Public policy</td>
<td>Pulzl and Rametsteiner 2009; Williams 2002;</td>
</tr>
<tr>
<td>Linguistics</td>
<td>Anderson Wallace et al. 2001</td>
</tr>
<tr>
<td>Library and information sciences</td>
<td>Weedman 1992</td>
</tr>
</tbody>
</table>

Table 9.18 Boundary spanning and boundary object research across disciplines
### Appendix 4.2 Boundary spanning and boundary object research areas

<table>
<thead>
<tr>
<th>Research Areas</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation and new product development</td>
<td>Ancona and Caldwell 1990; Callahan and Salipante 1979; Carlile 2002; Carlile and Rebentisch 2003; Carlile 2004; Conway 1995; Dougherty 1992; Hargadon and Sutton 1997; Hsu et al. 2007;</td>
</tr>
<tr>
<td>Strategic management</td>
<td>Jemison 1984; Piercy 2009; Tyler and Stanley 2001</td>
</tr>
<tr>
<td>Research and development</td>
<td>Keller and Holland 1975</td>
</tr>
<tr>
<td>Outsourcing off-shoring</td>
<td>Krishnan and Ranganathan 2009; Levina and Vaast 2008</td>
</tr>
<tr>
<td>Information systems development</td>
<td>Gallagher et al. 2004; Gasson 2006; Levina and Vaast 2005 a; Volkoff et al. 2004</td>
</tr>
<tr>
<td>Marketing</td>
<td>Battencourt and Brown 2003; Goolsby 1992; Piercy 2009; Stock 2006; Tsarenko et al. 2004</td>
</tr>
<tr>
<td>Human resource management</td>
<td>Callahan and Salipante 1979; Russ et al. 1998</td>
</tr>
<tr>
<td>Communication, public relations, and journalism</td>
<td>Ankney and Curtin 2002; Jian and Jeffres 2008; Johnson and Chang 2000; Weedman 1992</td>
</tr>
<tr>
<td>Project management</td>
<td>Elbanna 2010; Ratcheva 2009</td>
</tr>
<tr>
<td>Corporate banking</td>
<td>Tyler and Stanley 2001</td>
</tr>
<tr>
<td>Open source software communities</td>
<td>Barcellini et al. 2008</td>
</tr>
<tr>
<td>Expatriate performance</td>
<td>Johnson and Duxbury 2010</td>
</tr>
<tr>
<td>University-Industry collaboration</td>
<td>Lee et al. 2010</td>
</tr>
<tr>
<td>Trust and role conflict</td>
<td>Battencourt and Brown 2003; Currall and Judge 1995; Friedman and Podolny 1992; Hepso 2008</td>
</tr>
<tr>
<td>Peer support</td>
<td>Bacharach et al. 2000</td>
</tr>
</tbody>
</table>

Table 9.19 Boundary spanning and boundary object research areas
Appendix 4.3  A classification of boundaries involved in boundary spanning and boundary object research

<table>
<thead>
<tr>
<th>Types of boundary involved in boundary spanning</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between organisation and environment</td>
<td>Aldrich and Herker 1977; Battencourt and Brown 2003; Callahan and Salipante 1979; Carlile and Rebentisch 2003; Currall and Judge 1995; David et al. 1982; Hazy et al. 2003; Jemison 1984; Krishnan and Ranganathan 2009; Leifer and Delbecq 1978; Leifer and Huber 1976; Lee et al. 2010; Levine and Vaast 2008; Miller 2008; O’Mahony and Bechky 2008; Piercy 2009; Star and Greismer 1989; Stock 2006; Thompson 1962; Tsarenko et al 2004; Tyler and Stanley 2001; Williamson 2002; Zdunczyk 2006</td>
</tr>
<tr>
<td>Across Professions and occupational communities</td>
<td>Bechky 2003; Kimble et al 2010; Levine and Vaast 2005a; Pulzl and Rametsteiner 2009; Weedman 1992</td>
</tr>
<tr>
<td>Across projects/programs</td>
<td>Elbanna 2010; Ratcheva 2009</td>
</tr>
<tr>
<td>Across cultures</td>
<td>Hong et al. 2010; Levine and Vaast 2008; Mason 2003</td>
</tr>
</tbody>
</table>

Table 9.20 A Classification of boundaries from boundary spanning and boundary object research
List of Peer Reviewed Papers


