Riitta Hekkala

THE MANY FACETS OF AN INTER-ORGANISATIONAL INFORMATION SYSTEM PROJECT AS PERCEIVED BY THE ACTORS
RIITTA HEKKALA

THE MANY FACETS OF AN INTER-ORGANISATIONAL INFORMATION SYSTEM PROJECT AS PERCEIVED BY THE ACTORS

Academic dissertation to be presented with the assent of the Faculty of Science of the University of Oulu for public defence in OP-sali (Auditorium L10), Linnanmaa, on 28 January 2011, at 12 noon

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Abstract

This interpretative grounded theory study describes and analyses the actual lived experiences of project members who worked in a three year long inter-organisational information system (IOIS) project. The IOIS project was a Nordic project which spanned four user organisations (Alpha, Beta, Gamma and Delta), two suppliers (Eta and Zeta), two national organisations (Lambda and Kappa), a research organisation (Epsilon) and a Ministry who funded the project. The project was carried out between 2004 and 2006. The data was elicited by means of in-depth interviews (narrative stories), observations of project meetings, diaries, project memoranda and emails sent by project members to each other during these years. Other secondary data (the data from previous projects) was also analysed.

Feelings and emotions as a research object are acknowledged to be a very demanding research area. The terms ‘feelings’ and ‘emotions’ are partly used interchangeably in this study, though these concepts are also partly distinguished in this study: feeling is what is felt, and emotion is what is shown; feeling is classified as a subjective experience whereas emotion involves emotional performance where social conventions have a significant role.

The Glaserian grounded theory method was used as the technique for theory building. Three core categories were identified: Governance, Power and Emotions. There were also relationships between categories: Governance contributed to issues related to Power which in turn impacted on Emotions and vice versa. The categories not only defined the nature of the core theme but also formed a connection between themselves. The emergent category Emotions demonstrates that emotions influence structure and that emotions are intimately linked to social structures of power, and shows that ‘inequality’ is an essential part of that theme.

This study shows that emotions have a remarkable role in the work of an IOIS, and that they have an affect on decisions. The study also finds that feelings and emotions are the basis of action (Power), and that emotions easily trump the intellect. At a higher level of abstraction, the scaling up process produced one core theme: Emotions of Control, and this study builds a substantive theory of Emotions of Control.

Keywords: emotions and inter-organisational information system project, feelings, Glaserian grounded theory study, narrative stories
Hekkala, Riitta, Organisaatioiden välisen tietojärjestelmäprojektin monet näkökulmat toimijoiden kokemana
Oulun yliopisto, Luonnontieteellinen tiedekunta, Tietojenkäsittelytieteiden laitos, PL 3000, 90014 Oulun yliopisto
Oulu

Tiivistelmä
Tämä tutkimus on keskusteltu organisaatioiden välisen tietojärjestelmäprojektin jäsenten kokemuksista. Organisaatioiden välillä toimii Ylämainen projekti, joka koostuu neljästä käyttäjäorganisaatiosta (Alpha, Beta, Gamma, Delta), kahdesta toimittajasta (Eta, Zeta), kahdesta kansallisesta organisaatiosta (Lambda, Kappa), tutkimusorganisaatiosta (Epsilon) ja ministeriöstä, joka rahoitti projektin. Projektin toteutui vuosina 2004 – 2006. Aineisto saatiin svmäkšastettujen (narratiiviset tarinat), projektitapaamisten havainnoimisesta, päiväkirjojen, projektimuistoja ja projektijäsenten toisille lähettämien sähköpostien avulla. Toissijaista aineistoa (aineistoa edelleen projektista) analysoitiin myös.


Tutkimus asioittaa, että tunteilla on merkittävä rooli organisaatioiden välisen tietojärjestelmäprojektin yksikkölylylyssä, ja että tunteet vaikuttavat päätöksenteossa. Tutkimus asioittaa myös, että tunteet ovat toiminnan perustana, ja että tunteet vievät helposti voiton järjestö. Korkeamman tason käsitteellistäminen tuotti yhden päätteen, kontrollin tunteet, ja tämä tutkimus rakentaa teemasta substantiivisen teorian.

Asiakirjat:
Glaserilainen grounded teoria tutkimus, narratiiviset tarinat, tunnetilat ja organisaatioiden välisen tietojärjestelmäprojekti, tunteet
Publications

This dissertation work is a monograph by nature. However, it is worth mentioning that the following publications have been published during the dissertation project or are under review at the time of writing.

**Refereed articles in international journals**

Hekkala R & Urquhart C (2010) Power issues in an Inter-Organisational IS Project. (This article is under review for the European Journal of Information Systems (EJIS).

**Refereed articles in international conferences**

Hekkala R, Newman M, Urquhart C & Heiskanen A (2011) Emotions in leadership in an IOIS project. The article has been accepted to HICSS-44 conference.


Hekkala R, Urquhart C & Heiskanen A (2009) ‘Growing into the project culture: Organisational learning and knowledge work in an inter-organisational IS project.’ International Conference on Organisational Learning, Knowledge and Capabilities (OLKC), April 2009, Amsterdam, the Netherlands.


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Oulu, 21st November 2010

Riitta Hekkala
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BSP</td>
<td>Basic Social Processes</td>
</tr>
<tr>
<td>EI</td>
<td>Emotional Intelligence</td>
</tr>
<tr>
<td>GT</td>
<td>Grounded Theory</td>
</tr>
<tr>
<td>GTM</td>
<td>Grounded Theory Method</td>
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<tr>
<td>HCI</td>
<td>Human Computer Interaction</td>
</tr>
<tr>
<td>ICT</td>
<td>Information Computer Technology</td>
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<tr>
<td>IO</td>
<td>Inter-Organisational</td>
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<tr>
<td>IOS</td>
<td>Inter-Organisational System</td>
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<td>IOIS</td>
<td>Inter-Organisational Information System</td>
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<td>IOSS</td>
<td>Inter-Organisational Sharing System</td>
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<td>IOR</td>
<td>Inter-Organisational Relationship</td>
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<td>IS</td>
<td>Information System</td>
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<td>ISD</td>
<td>Information System Development</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>QDA</td>
<td>Qualitative Data Analysis</td>
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1 Introduction

1.1 Rationale for the study

Explanations for human behaviour have been sought over many decades – even centuries – by many scientists in various disciplines. For example, Abraham Maslow introduced a psychological theory of human needs (Maslow’s Hierarchy of Needs) in his 1943 study *A Theory of Human Motivation*. Many historical texts can serve as an example to us that our natural abilities and dispositions have hardly changed at all over time; human nature has arguably not changed very much. Groth (1999) has stated that our basic social habits and the way we prefer to pattern interpersonal relationships are also remarkably stable.

It is known that social and behavioural aspects associated with information systems (IS) continue to present complex challenges to researchers and practitioners alike, although information system development (ISD) has for decades been recognised as an intensely political and technical process (Ahn & Skudlark 1997, Keen 1981, Kotlarsky & Oshri 2005, Levina 2005, Noble & Newman 1993).

Working with software and computers involves a large amount of human communication and interaction, and this communication is unavoidable. These systems are built for people and with people. ISD also requires a large number of substantive, social, organisational, and intellectual investments. Organisational elements have been acknowledged as important aspects since the beginning of software and IS work (e.g. Argyris 1971).

One of the most urgent interests in the IS field is how project team members collaborate together. Collaborational issues have become more and more important over recent decades (Kotlarsky & Oshri 2005, Levina 2005, Levina & Vaast 2008, McGrath & Papazafeiropoulou 2007, Sarker *et al.* 2000) and one result of this is that studies at the individual level are more important (e.g. Klein & Myers 1999, Wasko *et al.* 2004). The IS field has grown a great deal over recent decades, and has also become more multidisciplinary (Avison & Elliot 2006, Hirschheim *et al.* 1995).

Especially in geographically distributed IS projects there is a need to understand whether and how social aspects contribute to successful collaboration (Kotlarsky & Oshri 2005, Levina & Vaast 2008, Sarker & Sahay 2004). It is argued that we are less rational than we like to believe. Emotions seem to be the...
source of both cohesion and conflict (Groth 1999). Sometimes we have trouble understanding our emotions and difficulty realising how we can control them. Emotions come and go, and sometimes it even feels like they have their ‘own set of rules’ which often makes us slaves to our emotions.

Given this fact we should pay critical attention to the emotions in Inter-Organisational Information System (IOIS) projects as well. We have every reason to believe that major parts of existing organisational and psychological theories are also valid in the age of information technology (IT) (e.g. Groth 1999).

Emotions (McGrath 2006), power (Silva 2007) and inter-organisational (IO) governance issues (e.g. Croteau & Bergeron 2009) have been acknowledged to be more and more important in the IS field. In the 21st century, IO projects have also become more and more common as a consequence of globalisation and standardisation in IS. IOIS have appeared to be a key factor for organisations growth (Daniel & White 2005).

Over the past decade we have seen increased globalisation, with an attendant increase in IOIS projects, as multinational firms and organisations seek to standardise ISs across regions and countries (King & Torkzadeh 2008, Sarker et al. 2010). This trend is exacerbated by the standardisation required for ERP systems, and ever lengthening supply chains. How then can we respond to the challenge of ever more complex IS projects that span several organisations?

So far IOISs – and especially their implementations with several stakeholders – have received only minor attention in the IS research (Evaristo et al. 2004, Hausman et al. 2005, Salmivalli 2008). There has also been a lack of research in public sector IOIS implementation (Allen et al. 2002, Allen 2003, Salmivalli 2008). It is difficult to say if IOIS projects are more prone to failure than other IS projects, as little research has been done in this area. It is logical to assume that an IOIS project has built in complexity due to the number of organisations involved, and the scale of such projects. There is also the issue that, with large projects, things change over time, and the project management structures may find it difficult to respond appropriately.

The importance of social issues in ISD has long been acknowledged (Kotlarsky & Oshri 2005), yet again studies on how relationships affect IO collaboration are unknown in IS research. These projects – where the IS is implemented in several organisations – are increasingly common with the advent of globalisation and multinational companies (Levina & Vaast 2008, Sarker et al. 2010).
At the same time as bringing many different kinds of challenges – requiring many kinds of expertise and skills to work with several individuals and organisations – IO settings are more complex than intra-organisational implementations (Allen et al. 2000, Munkvold 1999, Nurmi et al. 2007). It is also believed that ISs in organisations have a constant expansion impact on business strategies in organisations (Elgarah et al. 2005).

Also of great interest in the IS field is how project team members collaborate, and experience leadership, given that IS projects fail at an alarming rate with many organisational consequences (Keil et al. 2000, Lytinen & Robey 1999, Myers 1994). One stream of research claims that most IS development and implementation failures are known to occur for human and organisational reasons (Griffith & Northcraft 1996, Laudon & Laudon 2006, Yardley 2002, Yeo 2002). Collaboration issues are therefore extremely important (Kotlarsky & Oshri 2005, Levina 2005). When there are several different organisations involved in a common project instead of a single organisation, collaboration becomes even more demanding. The complexity of IT projects is increasing, and hence requires careful project management to reap the benefits of IT.

The most common reason for the failure of large projects has been said to be organisational and political resistance to change (e.g. Allen et al. 2000). Managers’ ability to work with people and organisations is therefore just as important as managers’ technical awareness and knowledge (Noble & Newman 1993). It has been suggested that to be more successful in the future, we should understand and learn from failures (e.g. Sauer 1999). Given the growing complexity of IOISs and their implementations in several organisations, there is an increasing need for organisations to manage social relationships alongside innovations and goal achievements.

The emotions are said to play a large role in decision-making and collaborative issues (Goleman 1998, Mayer et al. 2002) among other areas, yet to date literature on IS projects largely ignores the substantive studies of emotions (McGrath 2006). Emotional experiences within IS projects have not been explored in detail in IS research, unlike other research in organisational behaviour where the emotional experiences of workers in the workplace have assumed greater primacy (Ashkanasy 2004, Lord et al. 2002, Sturdy 2003).

Additionally, although the study of emotions in organisational settings has attained considerable prominence, there is still a lack of studies of the relationship between emotion and performance (Ashkanasy 2004). Recent research on emotions (Scott & Myers 2005, Sturdy 2003) has also demonstrated a need for
new ways of conceptualising, analysing and understanding emotions. Scott and Myers (2005) suggest that scholars should examine the positive and negative contributions of socialisation processes, particularly as they relate to emotion management.

Understanding socialisation processes can be seen to be very important. We can all agree that interpersonal communication is vital in our lives in order to enable the development of positive relationships with each other. We create these relationships by sharing our thoughts, feelings and behaviours with others. In addition to our basic needs we all need to work with other people, and I would claim that we want to feel secure about ourselves: everybody wants to become respected, accepted and valued.

Technologies have developed swiftly and different business innovations have transformed the global landscape to greater and greater degrees. The development of IS has received considerable prominence in both popular and academic literature over the past 50 years, and new methods for designing systems, new approaches for analysis, and new implementation strategies have rapidly multiplied. Since the 1970s IS, its discipline and its theories have been the subject of much discussion and research from very different viewpoints (e.g. Avison & Elliot 2006).

IS researchers have a long tradition of utilising theories from other disciplines such as economics, computer science, psychology, and general management. Interdisciplinary studies and different theoretical and conceptual foundations have benefited the IS context widely (e.g. Baskerville & Myers 2002, Urquhart et al. 2010, Wade & Hulland 2004). One good example of this is Kern’s and Willcock’s (2000) article which integrates theoretical concepts from organisation theory, social exchange theory and relational contact theory with existing research on IT outsourcing. It is also highlighted in the IS field that grounded theory could be used in order to build theories from within the field itself (Urquhart et al. 2010).

In this study the research approach used is the Glaserian grounded theory method (GTM) (Glaser 1978, Glaser 1992, Glaser 1998, Glaser 2003, Glaser 2004), and this is used as both the method of data analysis and the technique for theory building. GT is applicable to largely uninvestigated fields with little existing theory. It can also be used when a new perspective on the phenomenon is sought. The GTM can be adopted when the aim of the study is to create new theoretical structures, identify new concepts, specify previous concepts, or to define the core concepts relating to a research problem. The method is suited to research in which basic social processes (BSP) are studied, to areas where there is
little theory, or where the research area is complex. In this case the GTM is very useful because it gives a window into emotions and project management processes. Furthermore there is little existing theory on IOISs and their implementations. ‘The emotions’ as a research area is also very demanding and complex.

The basic principle of Glaserian GTM is that the phenomena and events which occur in the world are connected to each other in highly multifilament way – the world is integrated and will integrate all the time. One basic thought of classic GTM is also that different BSPs have different and multiple kinds of common factors. It is the duty of the GT theorist to find this BSP when she/he is studying the meanings of events for people (Glaser 1978). It is also highlighted in the IS field that GTM is particularly suitable for studying processes (Orlikowski 1993, Urquhart 2007, Urquhart et al. 2010).

Building a theory is one of the greatest strengths of grounded theory (GT) and another strength is its ability to ‘point to dozens of instances in the data that relate to it’. Urquhart et al. (2010) state that the nature of data can be seen in GT as twofold as well: data can be seen as a strength of GT but also as the Achilles heel of the method. One reason for this, it has been suggested might be the bottom up derivation of the generated theory which makes it difficult to think abstractly. (p. 372.)

1.2 Research focus and questions

The IOIS project studied, ViWo, was a Nordic public sector organisation collaboration, which aimed to implement an IOIS of benefit to all of its user organisations. The development of ViWo involved the computerisation of work processes to facilitate office work, the consolidation of information across organisations, and the management of key activities. The organisations collaborated with the relevant Ministry, suppliers and consultants. I will give more information on the complex background of the IOIS project in Chapter 4, in which the findings are also presented, and doing so should help with the interpretation of these findings.

This study had a unique approach – no framing questions were used; the focus was on the experience of the project member. The researcher was interested in the actual lived experiences of project members who worked in a three year (2004–2006) IOIS project. The basic principle of this study is that experiences cannot be studied sufficiently as a matter external to the thoughts of the people
involved. Thus, experiences are considered as something that the members of an IS project are capable of and qualified to assess when asked to do so. The basic thought of the research is that a human’s thoughts or actions are not straightforwardly rational or bound to a situation.

In this study it can be seen that the terms ‘feeling’ and ‘emotion’ are often used interchangeably. The researcher’s viewpoint here is close to that of Fineman. Fineman (2003) distinguishes these concepts (feeling and emotion) and emphasises that feeling is what is felt, and emotion is what is shown. Feeling is therefore classified as a subjective experience whereas emotion is emotional performance where social conventions play a substantial role. Fineman (2003) emphasises that feelings are more difficult to recognize.

The overarching research question addressed by this thesis is: what are the major emotional issues in an inter-organisational project in a Nordic public sector project?

This research question is followed by specific research questions which mirror the core categories of that study. The research questions addressed by this interpretivist thesis are as follows:

Research Question 1: What is the role of governance in an IOIS project?
Research Question 2: What is the role of power in an IOIS project?
Research Question 3: What is the role of emotions in an IOIS project?

And the final research question, Research Question 4, is the result of the scaling up process applied to grounded theory:

Research question 4: What is the role of Emotions of Control in an IOIS project?

1.3 Thesis Overview

This dissertation consists of six chapters. Chapter 1 gives an insight into the thesis, presents the research questions and concludes with an overview of the thesis. Chapter 2 presents the preliminary literature review: a review of the literature in the areas of IS, IS development and implementation, project governance, power and emotions.
Chapter 3 presents the research methodology. It outlines the use of Glaserian grounded theory method and multiple sources of data, and outlines the philosophical issues of the thesis. It also justifies the methods of data collection.

Chapter 4 explains the research case, considers grounded theory as a method of data analysis and provides a part of the process that was adopted for the analysis of data, and finally presents three emergent core categories (Governance, Power and Emotions) of the thesis.

Chapter 5 considers grounded theory as a method for theory building and provides the process of scaling up the substantive theory. Then it presents the emergent core theme: Emotions of Control. Chapter 5 presents substantive theory which is then related to the existent and extended literature. It discusses the research findings in the light of the research questions and existing literature. This substantiates and develops the emergent theory of Emotions of Control.

Chapter 6 is a summary of the main findings of this thesis. It also discusses whether the research of emotions is a challenge or opportunity, and discusses the theoretical, methodological and practical contributions of this research and gives suggestions for further research.
2 Literature review

It should be pointed out that, because this is a Glaserian grounded theory study, the literature review supplied here is what Urquhart and Fernández (2006) would call a ‘non committal’ or preliminary literature review. The idea is that the emergent theory of the study determines the relevance of the literature review. This is, of course, to avoid the possibility of concepts from the literature being imposed on the analysis. Thus, I proceed with an ‘open mind rather than an empty head’ (Dey 1999). Once the theory has emerged, it is then the duty of the grounded theorists to engage their emergent theory with the existing literature.

Much of the literature review is hence revisited in Chapters 4, 5 and 6, where findings and discussions are presented. So the purpose of this chapter is to create a relevant overview of the research area. In other words, this chapter is not an inclusive chapter about IS, its development and implementation issues, project coordination issues, project governance issues or emotions. Instead, this chapter gives a general overview of these themes. This study can be classified as a multidisciplinary study, and the research focus is new to the IS area, so a large number of concepts and theories from other disciplines are utilised to define that research area.

This literature review contains five streams of literature which I consider to be relevant to my research problems. The literature reviewed and analysed in this chapter relates primarily to general IS issues, coordination issues, project governance issues, power issues and emotions. First, I discuss aspects of information systems (IS), inter-organisational information systems (IOIS) and IOIS projects. This chapter presents different kinds of definitions of inter-organisational system (IOS) and different kinds of paradigmatic perspectives on IOS. In this preliminary literature review I try to provide a framework for IOS and their implementation processes by combining different research approaches. So this study focuses on IOS implementation issues and inter-organisational relationships (IOR) issues. These issues are discussed in Section 2.1 and its subsections.

Secondly, I discuss coordination and mutual understanding between people, and project coordination and coordination theory. Section 2.2 also discusses virtual team issues and knowledge across boundaries issues. Then Section 2.3 discusses project governance (the concept and process of governance issues, highlighting some main issues of IT governance) and IO governance and IO relationships, project management issues and power issues in IS projects. Section
2.4 explores power issues in IS projects and more widely as well, and Section 2.5 discusses emotions and gives an insight into perspectives on emotions, discusses emotions in organisational behaviour, emotions and organisational studies, methodological issues to do with emotions, and emotions in IS literature. Section 2.6 provides a short summary of the literature review.

2.1 General literature review on information systems (IS), inter-organisational information systems (IOIS) and IS projects

It has been held that IS (the discipline) is not comparable to IT. It has been stated that the field of IS has a greater focus on the interactions between people and organisations: that IT investigates ‘hard’ issues while IS focuses on ‘soft’ issues (Avison & Elliot 2006).

The study of computers and IS has been active since the rapid technological innovations of the 1950s, with varying intensities, focuses and methodologies. The multiple perspectives on IS show that the study of IS is a multidisciplinary field. There is no single theory or single perspective which dominates. Several researchers have investigated many aspects of the IS field, and the development of IS has constantly provided different opportunities to contribute to that area in many different ways. In general, the field can be divided into technical and behavioural approaches. Information systems are sociotechnical systems. There has been a growing interest in investigating organisational issues alongside the technology. (Argyris 1971, Avison & Elliot 2006, Hirschheim et al. 1995.)

Information communication technology (ICT) has long been a part of everyday life and a very remarkable factor in organisations. IT has brought a large number of different opportunities to the organisations and has for example continually increased innovation possibilities and competitive advantages (Daniel & White 2005).

ISD involves social and ethical dilemmas alongside technical intervention (Hirschheim et al. 1995, Laudon & Laudon 2006) and as stated, information systems have become more common in a variety of organisations in the 21st century. Information systems are implemented to help the organisations’ daily work and improve the effectiveness and efficiency of the organisations (e.g. Hevner et al. 2004, Laudon & Laudon 2006).
2.1.1 Defining information systems (IS) and inter-organisational information systems (IOIS)

A reduced definition of an information system is that it is a system that contains information. This could be any system, such as a system of paperwork, but more commonly we think of them as computer systems (Perry 2003). Perry (2003) has emphasised that in practice, ‘IS tends to refer to large-scale organisational computer systems. ISs are not therefore an area of research, but things – they are a form of technology (although not necessarily a piece of technology)’. (Perry 2003: 232.)

An information system has also been described as a system which includes interaction between people, devices and procedures (Avison & Fitzgerald 1995) or as a set of interrelated components that collect, process, store and distribute information to support many different things like decision-making and control in an organisation (Laudon & Laudon 2006, Laudon & Laudon 1998). Laudon and Laudon (2006) have stated that information systems contain information about significant people, places, and things within the organisation or in the environment surrounding it.

An information system is also defined by Avison and Fitzgerald (1995: 23) as ‘a system which assembles, stores, processes and delivers information relevant to an organisation (or to society), in such a way that information is accessible and useful to those who wish to use it, including managers, staff, clients and citizens. An Information System is a human activity (social) system which may or may not involve the use of computer systems’.

There have been various different ways of defining information systems: the definitions above are just some examples. As noted by Avison and Elliot (2006) the emphasis has been on technology, management, organisation or society. IS is a kind of phenomenon as well, which has been defined variously, using, for instance life cycles (e.g. Huisman & Iivari 2006, Lucas 1985), or different paradigmatic dimensions (Hirschheim et al. 1995, Iivari 1991). Traditional life-cycle approaches present information system development through distinct different stages (see e.g. Lucas 1985). The different approaches and methodologies differ from each other in how they see reality and the nature of knowledge (Hirschheim et al. 1995, Iivari 1991).

It has been pointed out that there is no single way or orthodox paradigm for investigating information systems (e.g. Hirschheim & Klein 1989, Iivari 1991, see also Perry 2003). Instead, it has been stated that we need the ability to pose
traditional philosophical questions in the context of ISD: questions that have been the subject of discourse by philosophers and social thinkers (Hirschheim et al. 1995: 5).

An elaborated and popularised model of paradigmatic issues that focuses on ontological and epistemological issues was provided by Burrell and Morgan (1979) and this model has been very widely utilised in the definition of IS and ISD (e.g. Bell 1996, Hirschheim et al. 1995, Urquhart 1999). Burrell and Morgan (1979) identified four paradigms in sociology and organisation theory: 1) functionalist, 2) interpretive, 3) radical structuralist and 4) radical humanist. The model of Burrell and Morgan (1979) has however been criticised, in particular for the subjective-objective dichotomy it presents (Boland 1989).

The concept of the inter-organisational system (IOS) has it origins over 40 years ago, when Kaufman (1966) expressed the idea that interconnections between computer systems may bring changes and improvements to organisations’ operation and have an influence on the organisations’ productivity. Almost twenty years later it was Barret and Konsynski (1982) who used the term ‘inter-organisational sharing system’ (IOSS) for the first time, and it was Cash and Konsynski (1985) who presented the umbrella concept ‘inter-organisational system’ (IOS) to describe systems which are used in an inter-organisational manner.


As attention has long been placed on IOSs and their implementations, numerous IOS concepts, frameworks and perspectives have been presented (Robey et al. 2008). One very frequently cited definition of an IOS is ‘an automated information system shared by two or more companies’, as presented by Cash and Konsynski (1985: 134). Bourdeau et al. (1998: 14) defined IOSs as ‘types of information systems that permit the coupling of transactions between organisations, making them more efficient and responsive’.
Definitions of IOSs are later closely linked to electronic commerce and other fields (Cunningham & Tynan 1993, Gerst et al. 2005, Li & Williams 1999). According to Gerst et al. (2005: 2), IOSs ‘refer to the computer and telecommunications infrastructure developed, operated and/or used by two or more firms for the purpose of exchanging information that supports a business application or process. These firms are suppliers and customers in the same value chain, or strategic partners or even competitors in the same or related market.’

IOSs have been classified in many different ways (Robey et al. 2008). For example, Barret and Kosynski (1982) presented a five-level typology based on the level of a firm’s participation in an IOS, and Elgarah et al. (2005) have analysed IOSs through four different paradigmatic perspectives.

From among these various classifications, we can discern many distinctive characteristics of how the IOS has been defined. Examples include 1) on the basis of the relationships supported (Barret & Kosynski 1982, Bakos 1987, Lasher, Ives & Jarvenpaa 1991, Cunningham & Tynan 1993, Kumar & van Dissel 1996, Bensaou & Venkatraman 1996), 2) on the basis of various roles of IOS (e.g. Bakos 1987, Schlueter-Langdon & Shaw 2002) and 3) on the basis of horizontal and vertical linkages (e.g. Hong 2002).

Definitions of the IOS on the basis of the relationships supported depend in particular on the level of firms’ participation in the IOS (Barret & Kosynski 1982), the relationships between customers and suppliers (Bakos 1987, Lasher et al. 1991), the nature of the buyer-seller relationship (Cunningham & Tynan 1993), and inter-firm relationships (Bensaou & Venkatraman 1996). Kumar and van Dissel (1996) have presented a three-part classification of IOSs: 1) pooled information resources (an inter-organisational sharing of common IS/IT resources; e.g. common databases, common communication networks), 2) value/supply chain IOS (supporting customer-supplier relationships: pipeline management systems), 3) networked IOS (reciprocal interdependences between organisations).

Studies classifying IOS on the basis of various roles of IOS (e.g. Bakos 1987, Schlueter-Langdon & Shaw 2002) have discussed the operational-level perspective (Bakos 1987), strategic-level perspective (Schlueter-Langdon & Shaw 2002) and management perspective (Eom 2005, Kumar & van Dissel 1996). Kumar and van Dissel (1996), for example, studied IOIS development projects from the cooperation and conflict management perspective. According to Kumar and van Dissel (1996), environmental forces, the motives of the cooperating parties, the enabling role of IT and the support role of IT are the main factors.
which explain the emergence of cooperative networks. They emphasise both economic and technical arguments and socio-political perspectives.

Among studies classifying IOS on the basis of horizontal and vertical linkages, the framework for inter-organisational systems elaborated by Hong (2002), for example, emphasises how horizontal linkage describes the interconnection of firms and vertical the different roles of participating organisations. Hong (2002) holds that IOISs should be examined from the viewpoint of how an organisation’s participants’ roles are linked (horizontally/vertically) and what the motivator driving the IS development is (strategic/operational). The horizontal view includes operational cooperation (information sharing, improved customer service) and resource pooling (joint IT construction, market coalition) and the vertical view includes operational coordination (value/supply chain support, buyer-seller relationship) and complementary cooperation (integrated products/services, joint marketing).

The conceptualisation of IOS has been influenced by, for example, interdependency theory (Kumar & van Dissel 1996), political theory (Bensaou & Venkatraman 1996), transaction cost theory, and inter-organisational theory. The nature of interaction has been highlighted in IOS (e.g. Elgarah et al. 2005, Klein et al. 2004). Elgarah et al. (2005) have argued that organisations can benefit from IOSs as they reduce coordination costs and greatly improve communication between business partners. Klein et al. (2004) have highlighted the fact that it is important to take into account when and where interaction takes place, and have highlighted differences between the space/time taxonomies of different IOISs.

During the time that IOS and communication technologies have been the focus of research, there has been a growing interest in the different technologies which enable the infrastructure for inter-organisational relationships (IORs) (Kern & Willcocks 2000, Elgarah et al. 2005). According to Kern and Willcocks (2000), a huge amount of research has been carried out on IORs, which has caused problems in defining the construct IORs.

Dekker (2004) has presented a framework of the control of IORs, building on transaction cost economics and organisational theory. Two control problems are identified that arise when organisations engage in IORs: 1) the management of appropriation concerns and 2) the coordination of tasks.
2.1.2 Information system development and implementation

Various approaches to ISD

ISD as a social phenomenon has been approached in several ways. Good examples are Giddens’s (1984) structuration theory (Brooks 1997, Jones & Nandhakumar 1993, Rose & Lewis 2001) and Habermas’s (1984, 1987) theory of communicative action (Lyytinen & Hirschheim 1988), both of which have been used as theoretical frameworks for a better understanding of IS development. One interesting aim has been to study social action (Gasson 1999, Newman & Robey 1992) and discourses in various ways (Alvarez 2001, Alvarez 2002, Sarkkinen & Karsten 2005).

Newman and Robey (1992) have presented process models to describe different types of events that occur over time, and specify the antecedent conditions that exist prior to a sequence of events, describe the events in the process itself, and relate those events to outcomes (see also Robey & Newman 1996: 32). Newman and Robey’s (1992) study has, for example, defined models for different types of events.

In addition to macro-level studies, micro-level studies have also been seen as important to research (e.g. Alvarez 2001, Alvarez 2002, Hirschheim et al. 1995, Sarkkinen & Karsten 2005, Wasko et al. 2004). The microstructural level is a level at which we can use social network analysis to focus on how relations, referred to as ties, relate to outcomes, for instance examining how to explain the behaviours of network members or what effects these networks have on individuals and organisations (Wasko et al. 2004).

Suchman and Wynn (1984) have examined social action and situated action. However, the viewpoints of social interaction studies have received only minor attention (see for example Urquhart 2001). Wasko et al. (2004) have pointed out that social network dynamics are dependent upon both the macrostructural and microstructural properties of the network. Macrostructural properties are exogenous factors or elements that are related to the environmental conditions. Microstructural properties consist of the individuals and the relations between them. Kumar and van Dissel (1996) thought that, extrapolating to the context of inter-organisational relationships, structure can be interpreted as the ways in which inter-organisational work is divided among the partner organisations by assigning specific roles to them and by the ways in which coordination is achieved among these roles.
It has been highlighted that ISD should emphasise both social and technical elements, and viewing merely technical elements is not sufficient to ensure the quality of the outcome, the IS itself (e.g. Bloomfield & Vurdubakis 1994, Suchman 1987).

**Why are ISs implemented and why we should study them?**

One reason why ISs are implemented in organisations is to improve, for example, the effectiveness and efficiency of the organisations involved (Hevner et al. 2004), business process engineering (Riggins & Mukhopadhyay 1994), and knowledge management issues in the organisation (Ciborra & Andreu 2001). It is also anticipated that ISs will have direct benefits such as reduced transaction costs, improved cash flows and reduced inventory levels, and indirect benefits such as operational efficiency and better customer service (Iacovou et al. 1995).

IS implementations have been the focus of much research over the last four decades (e.g. Bartis & Mitev 2008, Leidner & Kayworth 2006, Lyytinen 1987, Lyytinen & Robey 1999, Markus 1983, Newman & Robey 1992, Kumar & van Dissel 1996, Levine & Rossmoore 1993, Lyytinen & Newman 2008, Myers 1994). The main reasons that IS has been so heavily researched are the effects of IS on organisational change (e.g. Markus & Benjamin 1996, Lyytinen 1987, Lyytinen & Newman 2008), culture’s impact on IT adoption and diffusion (e.g. Leidner & Kayworth 2006), or the fact that IT investments are usually very expensive and involve a large number of different risks (e.g. Lyytinen & Robey 1999).

**2.1.3 ISD work – success and failure**

Given that IS projects fail at an alarming rate with many organisational consequences (Keil et al. 2000, Lyytinen & Robey 1999) and that most IS development and implementation failures are known to occur for human and organisational reasons (Griffith & Northcraft 1996, Laudon & Laudon 2006, Panteli & Sockalingam 2005, Yardley 2002, Yeo 2002), issues of collaboration have become more and more important (Kotlarsky & Oshri 2005, Levina 2005, Levina & Vaast 2008, McGrath & Papazafeiropoulou 2007). According to the report of the Standish Group International (2004), 53% of all IT projects fail at some level, being late and/or over budget. Furthermore, almost 20% fail outright.
or are cancelled prior to completion. It is even argued that under 20% of IS projects are completed on time and within budget (Fitzgerald & Russo 2005).

A large number of studies have been written on IS implementation and IS failure and success (e.g. Avgerou & McGrath 2007, Bostrom & Heinen 1977, Evaristo et al. 2004, Larsen & Myers 1999, Lyttinen & Robey 1999, Lyttinen & Newman 2008, Wastell & Newman 1996). It has been stated that ‘success and failure seem to have special significance for information technology’ (Fincham 2002: 1). Larsen and Myers (1999: 396) have pointed out that ‘success is a moving target’: it depends on the time at which the evaluation is carried out. White and Leifer (1986: 215) have highlighted that it depends on this as well on who carries out the evaluation: ‘perceptions of a system’s success or failure may vary depending upon an individual’s perspective of the system’. Fincham (2002: 1) states that success and failure ‘can be regarded as conjoined narratives that are implicated in many forms of change and innovation in organisations’. Fincham (2002: 1) argues that ‘events are formulated into evolving stories that evoke either status or stigma and play a powerful role in ordering behaviour’.

It has nonetheless been argued that a good example in which failure may have little to do with system breakdown is that involving political processes of resistance in organisations. Changing technologies very often threaten the interests and status of groups with the power to resist, and there are numerous examples in the IT literature of systems being dropped or terminated because of some powerful group. (e.g. Fincham 2002: 3.)

According to Brown (2007) there are three generic risks: 1) technological, 2) organisational, and 3) business, which all ISs incur. There can be several reasons for the failure of an IS, from the inability of the development team to technological failure. In any case, it is highlighted that IT project failures have little to do with technical issues (e.g. Fincham 2002). Lyttinen and Robey (1999) have reported, for example, that one cause of failure is when an organisation fails to learn.

Success requires a high level of project management skills, to ensure that all stages are completed to specification and time, and a strong leadership and effective relationships between IT and business leaders. The most common reasons for project failure according to Whittaker are: 1) poor project planning, 2) a weak business case, and 3) lack of top management involvement and support (Whittaker 1999: 23).

It has been argued that the early works on IS failures (in the 1960s) were concerned with technological problems, in the 1970s the focus was on user
resistance and after that failures were explained through the lack of user involvement. Later, researchers have included managerial and organisational issues but from the positivist viewpoint (Bartis & Mitev 2008).

Fincham (2002: 3) has presented three perspectives on IT success and failure. The first of these is the rational perspective, which highlights various structures surrounding systems development. In contrast to the rational perspective, the process perspective discusses the organisation as a ‘decision-making arena and systems development as a form of decision outcome’. The narrative approach takes a fully interpretive approach to success and failure. Table 1 shows the different perspectives on IT success and failure.

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Form of organisational behaviour</th>
<th>Methodological focus</th>
<th>Success and failure seen as</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rationalist</td>
<td>Organisational goals; managerial and organisational structures</td>
<td>Simple cause and effect</td>
<td>Objective and polarised states</td>
</tr>
<tr>
<td>Process</td>
<td>Organisational and socio-political processes</td>
<td>Socio-technical interaction</td>
<td>Outcomes of organisational processes</td>
</tr>
<tr>
<td>Narrative</td>
<td>Organisational and socio-political processes; symbolic action; themes, plots, stories</td>
<td>Interpretation and sense making; rhetoric and persuasion</td>
<td>Social constructs; paradigms</td>
</tr>
</tbody>
</table>

Myers (1994) has also stated that there may be very complex realities in the social life of an organisation, and there are often many different reasons for the failure of IS. However, it has been argued that the barrier to successful implementation is to be found among the power relationships in the organisation (e.g. Fincham 2002, Levine & Rossmore 1993, Markus 1983).

The organisational context of an ICT project is very important in understanding the implementation. As noted by Myers (1994), there are no clear ways of measuring success. The perceptions of the individual have an influence on the definition of ‘success’. The idea suggested by Fincham (2002: 5) that seeing success/failure as ‘narratives of meaning and action’ sounds useful.

IOS implementation has been discussed in the IS field widely. Despite the fact that IOIS has a long history (Kaufman 1966, Cash & Konsynski 1985) and although the adoption of an IOS has been the subject matter of previous studies, there is still little research on IOIS projects (Allen et al. 2000, Salmivalli 2008). So far, IOISs and in particular their implementations with several stakeholders have received only minor attention in IS research (Evaristo et al. 2004, Salmivalli
2008). As previously stated, there has also been a lack of research on public sector IOS implementation (Allen et al. 2002, Allen 2003, Salmivalli 2008). Allen (2003) carried out a longitudinal study of twelve Higher Education Institutions between 1994 and 1998 and was interested in the process of strategic change in the higher education system in the UK.

In any case, in the 21st century IO projects have become more and more common as a consequence of globalisation and standardisation in IS. The importance of social issues in ISD has long been acknowledged (e.g. Kotlarsky & Oshri 2005, Orlikowski & Baroudi 1991, Sarker et al. 2010), yet again studies of how relationships affect inter-organisational collaboration are quite unknown in IS research.

2.2 Coordination and mutual understanding between people

I begin this section with some questions: is an individual capable of independent thought? Can one agree with the social scientist and philosopher who said that the individual participates in thinking thoughts that other people have thought before him? In other words, does the individual find a preset situation and, in that situation, preformulated patterns of thought and behaviour? This suggests that anything one thinks and says has already been said, thought and written. What is originality, and does it exist? Each of us may easily agree with the idea that a human does not live in a void. Starting with its first breath a baby begins to gain an understanding of the surrounding reality, and its immediate circle is the strongest and most influential factor in forming this reality. But is the individual ever able to understand another people and culture more than superficially?

How are experiences and meanings transferred to other individuals? What is the impact of the interacting parties’ – the senders’ and receivers’ – own knowledge, beliefs, values, attitudes, experiences and communication skills? How is knowledge conveyed in wordless interaction, for example in silent encounters? To understand others’ meanings requires common means of expression, rules and ways of acting. However, it is understood that there are always some kind of limitations associated with people’s togetherness and interaction (Goffman 1974, Morgan 1986, Berger & Luckmann 1967). For example, in Goffman’s (1974) view there is always some kind of role behind functions. According to Berger and Luckmann (1967), some of the roles become institutionalised. Thus, even organisations have roles, which control behaviour alongside institutionalisation.
On the basis of Mannheim’s (1974) theorisation, social situations and their dynamics are created in the countermovement between generations: according to Mannheim a new generation always lives in a world created by previous generations. In this dynamic movement between generations, cultural knowledge is also exchanged and cultural heritage is transferred, changed and modified. According to McCarthy (1996: 108), too, knowledge is not given but created, and therefore formations of knowledge have a guiding role; knowledge explains what the world is like or at least helps to understand it as a certain type of world. One can pose the question: is ideology in some way predestinated?

In the 1950s, Goffman was interested in the rules which make social life organised and somewhat predictable. Goffman viewed life as great theatrical stage, where individuals have various roles. According to Goffman, in interaction the individual strives in all possible ways to act so as to ensure the impressions he gives when he comes into contact with other people. Interaction is unreserved togetherness which controls behaviour so that each individual’s actions are reflected by the other’s actions. According to Goffman a significant share of an organisation’s activity is also conveyed in face-to-face interaction. Face-to-face interaction has consequences at the level of life’s structural conditions and social structures (Goffman 1959).

What is significant in Goffman’s thoughts is that subjective experiences are comparable to objective phenomena. Thus, reality is defined at every moment. However, Goffman (1974) thinks that people who meet in a certain situation do not define the situation themselves. The definitions already exist before the individuals meet in the situation. Thus, adapting Goffman, our organisational behaviour already exists in the operating culture of the organisation and more broadly in our social culture. One can pose the question: is experience culturally constituted even when experience is not conceptualised?

Arrow et al. (2000) presented a theory of groups that draws on concepts from dynamic systems and complexity theories. They view groups as complex systems that emerge as members, tools, and tasks are coordinated into acting systems. Furthermore, according to Arrow et al. (2000), these systems change over time, both at micro and meso levels, in response to experience, feedback and changing constraints and opportunities. Arrow et al.’s (2000) Small Groups as Complex Systems Theory comes from a social psychological tradition. The theory contains a taxonomy of groups, a timeline view of group evolution, intra-group modeling called local dynamics, whole group modelling referred to as global dynamics, and assessment of the environment in contextual dynamics. The theory is based on a
set of seven propositions that govern the influences at the local, global and context levels.

What makes it the case that mutual understanding is sometimes difficult? It is argued that human’s behaviour is about 90% determined by her/his subconscious thinking. The main function of the subconscious mind is said to be memory – storing all the information that makes a person what they are today, and this enables one to remember one’s life experiences. It is said that memory functions like a computer, drawing conclusions from one’s conscious experiences, remembering them, and then bringing them back up to one’s awareness whenever one needs to remember a specific thought or memory. (Finnegan 2007.)

2.2.1 Project coordination

Project coordination is an important part of IS projects – in fact project coordination is one of the most important issues in IS projects (Nurmi et al. 2007). In an IOIS project, coordination is extremely critical. Coordination is critical for the success of large IS development projects (Nurmi et al. 2007). Most IS development and implementation failures are known to occur for human and organisational reasons (Griffith & Northcraft 1996, Yardley 2002, Yeo 2002). In their study, Nurmi et al. (2007) studied a consortium of Finnish universities developing a common student record system and tried to find out what happens in practice in a multiple stakeholder outsourcing project. They studied how the coordination mechanisms evolved during the system development process.

Coordination problems have been examined in different disciplines (Malone 1988). The focuses differ across disciplines but the basic research object is the same, namely ‘the process of managing dependencies among activities’ though there are many different ways to define coordination categories (Malone & Crowston 1990, Nurmi et al. 2007: 246). Nurmi et al. (2007) and Sabherwal (2003) have studied coordination issues in the IS field.

Malone (1988) defines coordination as ‘the additional information processing performed when multiple, connected actors pursue goals that a single actor pursuing the same goals would not perform’ (1988: 5). Deng et al. (2007: 311) highlight that ‘coordination is the behaviour that manages the interdependent relationships of activities with a common object; ‘the coordination mechanism is the mechanism that manages the dependent relationship effectively’. So the important components of coordination are 1) actors, 2) some common task and 3)
common goals; in other words coordination involves a set of actors, who perform some task together to achieve some common goals. (Malone 1988).

Evaristo (2003) stresses that coordination includes the definition of responsibilities, clear roles and most importantly a large amount of communication to clarify issues. Meredith and Mantel (2006) emphasise that control plays a fundamental role in the coordination of project activities.

A more elaborate definition of coordination, that focuses on the situation, is given by Malone and Crowston (1990: 361): ‘the act of managing interdependencies between activities performed to achieve a goal’. The broader definition of coordination includes setting goals, selecting actors, and performing different activities: almost everything that happens when actors are together. Later, Malone and Crowston (2001) define coordination compendiously as the management of dependencies among activities. Malone (1988) emphasises that coordination is not the same thing as production even if there are the above-mentioned three important components (set of actors¹, common task and common goal). Malone (1988) divides goal-relevant tasks into two categories: 1) coordination tasks and 2) production tasks. The first includes the information processing tasks that are performed between several actors. The latter includes the other tasks that are carried out in order to achieve the goals. Malone (1988) compares coordination and management as similar concepts and adds that coordination includes an intellectually coherent set of phenomena usually with many domains such as markets, committees, and computers in addition to hierarchical organisation.

Malone and Crowston (2001) have stated that over the last decade there has been a growing interest in questions about coordination and about the activities of complex systems and their coordination; the focus has been on coordination both in parallel and distributed computer systems including people and computers. This increased interest has also drawn upon a greater variety of different disciplines, including management science, linguistics and psychology.

Malone states that ‘coordination is in the eye of the beholder’, which means that the components of coordination are analytical concepts which we can analyse in different ways for different purposes. For example, we might sometimes regard each person in a group as a separate human, or the whole group as a single actor.

¹ Malone and Crowston’s (1990) definition of coordination deviates from Malone’s (1988) definition of coordination. Malone and Crowstone (1990: 362) later defined coordination as occurring when multiple interdependent activities are performed to achieve goals – even if one actor performs all of them.
Similarly, there might be differences not only between observer and actor whose goals the activities help to achieve, but also between actors; the actors may have different conceptions of goals or even have no defined common goals at all. (Malone 1988).

Deng et al. (2007: 311) emphasise that when we approach coordination as behaviour that ‘manages the interdependent relationships of activities with a common object’, there are two fields of knowledge: ‘knowledge of the activity interdependences and knowledge of managing the independent relationship’.

Malone and Crowston (1990: 358) define coordination theory as ‘a body of principles about how activities can be coordinated, that is, about how actors can work together harmoniously to include conflict as well as cooperation’. The idea behind coordination theory is the recognition of commonalities in problems that had previously been considered separately in different fields.

Malone (1988: 6) states that ‘some of the principles of coordination theory should be general enough to apply to a wide variety of different kinds of actors, including organisations, individual people, computer processors, and parts of individual brains’. Malone focuses his primary attention on three groups: 1) groups of people, 2) groups of computer processors, and 3) groups that include both people and computers.

Even twenty years ago it was emphasised that the success of an enterprise needs a great deal of cross-disciplinary interaction. Theories of coordination can be applied to: 1) designing human organisations, 2) designing new technologies to help people coordinate their work, and 3) designing parallel and distributed processing computer systems (Malone 1988: 3–4).

Malone (1988) has stated that in coordination theory the main problem is coordination: how goals are subdivided into tasks, how tasks are distributed to groups or to individuals. Other challenges are resources and knowledge sharing. Malone emphasises that when the focus is on multiple actors we can focus on issues such as how ‘coordination allows a group of actors to perform more intelligently than any of its individual members’ could do alone, or how they plan cooperative behaviour or coordinate decision-making, how groups of actors learn new concepts, and so on. Malone and Crowston (1990) have highlighted the fact that the framework of coordination theory is not only a single approach to seeing the relationships between different views of coordination.

Deng, Chen and Pan (2007) suggest that studies of organisational coordination theory should include studies in organisational dependence,
coordination mechanisms and the factors that affect technical, structural and organisational task types.

Malone and Crowstown (2001) stress that coordination is the management of dependencies among activities, and have identified three different types of dependencies. They argue that all relationships can be analysed through these three elements: 1) flow, 2) sharing and 3) fit. According to Malone and Crowstown, flow is the most obvious, happening anywhere and occurring whenever some activity produces some resource used by some other activity. Sharing happens when we get one resource shared by multiple people/activities. The resource could be a machine, a budget, a room or whatever needs to be used by multiple activities. Fit occurs when multiple activities together produce a single resource. An example of this is designing a car (one engineer designs the engine, another the body, etc., and there is an important dependency between the activities).

Coordination and control have been seen as different sides of the same coin. They have been examined in the ISD literature; coordination issues focus on managing interdependencies among multiple individuals, whereas control issues focus on improving performance relative to a certain overall goal when the goals of stakeholders differ from those of the larger overall entity (Nurmi et al. 2007, Sabherwal 2003).

2.2.2 Virtual teams

Virtual teams have become more and more widespread over the last fifteen years and there have been many different definitions and viewpoints on virtual teams as well (e.g. Alavi & Tiwana 2002, Baskerville & Nandhakumar 2007, Bourdeau et al. 1998, Fernández 2003, Järvenpää & Leidner 1999, Nicholson et al. 2007, Sarker et al. 2002, Sarker et al. 2001, Sarker et al. 2000, Sarker & Sahay 2004).

The concept of ‘virtual’ crosses over interfaces and boundaries, ‘project teams that rapidly form, reorganise, and dissolve when the needs of a dynamic marketplace change; and individuals with differing competencies who are located across time, space, and cultures’ (Järvenpää & Leidner 1999: 791).

Virtual teams are defined as ICT-mediated temporary work groups which can contain people from very different areas and levels of expertise. In addition, the members of virtual teams often work in different geographical locations (e.g. Alavi & Tiwana 2002, Baskerville & Nandhakumar 2007, Bourdeau et al. 1998, Järvenpää & Leidner 1999, Laudon & Laudon 2006). Laudon and Laudon (2006: 42
have stated that virtual organisations ‘can ally with suppliers, customers, and sometimes even competitors to create and distribute new products and services without being limited by traditional organisational boundaries or physical locations’.

The common features of virtual organisations have been identified as their ‘dependence on a federation of alliances and partnerships with other organisations’, their ‘relative spatial and temporal independence’ and their ‘flexibility’ (Bourdeau et al. 1998: 7, 9–10). Virtual organisation work involves ‘a powerful set of mutually reinforcing motivations, including a share in collective success’ (Markus et al. 2000: 14). The nature of virtual groups is usually seen as temporary: these members may have never worked together and may not work together as a group again (e.g. Järvenpää & Leidner 1999).

In their article, Markus et al. (2000: 14) highlight the benefits of virtual work:

- Self-governance, including
  - Membership management (the ability to ensure that there is a manageable number of high-quality contributors)
  - Rules and institutions that members can adapt to their individual needs
  - The ability to monitor and sanction members’ behaviour
  - Reputation as a motivator and control mechanism
  - Shared culture, values and norms of behaviour

- Effective work structures and processes, such as task decomposition and project management in software-development work
- Technology for communication and coordination – and norms about how to use it.

Fernández (2003) has shown the different types of virtual teams analysed in the literature. The most common definition has been virtual teams are formed to perform a particular task and have a homogenous set of success criteria as they share a common goal and rely on each other like other teams.

Fernández (2003: 82) has pointed out that although there have been various definitions of virtual teams in the literature, different studies have shared many core characteristics:

1. There is a formally assembled team or group, sharing a common goal and working in a single organisational context
2. They are geographically dispersed (across a city/a nation/continents)
3. The main keys to the communication of team members are computers and computer technologies

4. All teams together make up the core part of the total virtual team

It is also stated that it is affective bonds which differ virtual communities from virtual settlements (Blanchard & Markus 2004). Blanchard and Markus (2004: 66–67) highlight the significance of ‘sense of community’ (SOC) in virtual communities. SOC is defined as a feeling that members [of a group] have of belonging, a feeling that members matter to one another and to the group, and a shared faith that the members’ needs will be met through their commitment to be together. Blanchard and Markus also distinguish between ‘SOC as an affective response’ and ‘the set of behaviours’ that can be observed only when SOC is present.

In their article, Blanchard and Markus (2004: 67) present McMillan and Chavis’s (1986) very popular framework of SOC, that has four dimensions:

- Feelings of membership: feelings of belonging to, and identifying with, the community
- Feelings of influence: feelings of having an influence on, and being influenced by, the community
- Integration and fulfilment of needs: feelings of being supported by others in the community while also supporting them
- Shared emotional connection: feelings of relationships, shared history, and a ‘spirit’ of community.

Sarker et al. (2000) identify four different stages that virtual teams pass through during the course of a project: 1) initiation, 2) exploration, 3) integration and 4) completion. They (Sarker et al. 2000) also point out that different groups may have varying rhythms, and transitions may not necessarily take place from one stage to another. 1) Initiation includes roles, the shared goals and norms which should be followed in teamwork. In addition to these the use of communication/coordination technologies brings its own challenges because of the different abilities and experiences of different team members. 2) The exploration stage draws attention to the clear differentiation between intra- and inter-location interests, and the fact that team members appear to focus on local goals and concerns rather than discussing the broader goals of the project. 3) The integration stage requires that both local and remote members have a common understanding of their goals, their roles, and the norms guiding their
collaboration. 4) The completion stage includes emotional involvement: the satisfaction of a completed project and the positive shared social experiences of members in working together.

The challenges and best practices of the management of virtual projects have also been examined in the IS field. Becker et al. (2006) examined project management in virtual projects and provided guidelines for process-oriented e-government projects. Khazanchi and Zigurs (2007) propose an integrative way of identifying and applying best practices for the management of virtual projects. Their approach allows managers to determine the nature of their virtual projects, and discover and apply patterns for managing them.

Khazanchi and Petter (2006) have focused on information technology (IT) project management in e-service projects. According to them, the challenges associated with managing e-service projects are no different from those of any other IT project. Khazanchi and Zigurs (2007) have defined three elements that are involved in the management of virtual projects: coordination, communication and control.

2.2.3 Knowledge across boundaries

‘The essence of knowledge is, having it, to apply it; not having it, to confess your ignorance’ (Confucius)

Knowledge is recognised as a valuable resource for organisational growth (e.g. Alavi & Tiwana 2002, Dulipovici & Baskerville 2007, Gasson & Shelfer 2007, Wasko & Faraj 2000). In an IOIS project, the transfer of knowledge between organisations is critical. In the IO context, Alpar and Kalmring (2001: 732) have identified six different types of knowledge.

1. **Cooperational knowledge** is necessary to efficiently interact with other organisations (e.g., knowledge about the corporate culture of the partner organisation and how to cope with it).
2. **Technical knowledge** relates to patents, specifications, and knowledge about procedures.
3. **Process knowledge** is knowledge about business processes (e.g., knowledge about transactions using a B2B platform).
4. **Competition knowledge** concerns products, competitors, and markets of an enterprise (e.g., knowledge about own strengths and weaknesses in a competitive environment).
5. **Value chain knowledge** focuses on suppliers, customers, and distribution channels (e.g., knowledge to support a multi-channel sourcing strategy).

6. **Strategy knowledge** comprises the legal, demographic, macroeconomic, cultural, ecological, and other factors of organizational activities (e.g., the legal background of selling drugs over the internet in different countries).

(Alpar & Kalmring 2001: 732.)

Knowledge is defined in many different ways in the literature, and a universally applicable definition of knowledge most probably cannot be found (e.g. Meyer & Sugiyama 2007). In the field of sociology, there has been discussion as to whether the origin of knowledge is social or cultural (e.g. Goffman 1974, Mannheim 1974, McCarthy 1996).

One frequently cited framework for categorising knowledge is Nonaka and Takeuchi’s (1995) model, in which they divide knowledge into tacit and explicit knowledge. Tacit, subjective knowledge consists of received experiences. Explicit, objective knowledge consists of rational, deduced knowledge. Nonaka and Takeuchi’s (1995) theory emphasises the cultivation of tacit knowledge and the organisation as the creator of knowledge.

Recent debates in IS have criticised the unthinking application of tacit/explicit knowledge (Thompson & Walsham 2004). It is argued that the concept of tacit knowledge is one of the most blurred concepts in management literature (Meyer & Sugiyama 2007). Some tacit knowledge however can be embedded in organisational routines. Polanyi’s (1966) definition of tacit knowledge is knowledge that is personal, context-specific and thus not easily visible or expressible – not easy to formalise and communicate to others (Kakabadse et al. 2001). Nonaka and Takeuchi (1995) believe that new knowledge is created through the interaction between single-loop learning (where explicit knowledge is put into practice) and double-loop learning (where one’s fundamental assumptions are questioned) forming a kind of dynamic spiral. Most organisations seem to engage mainly in single-loop learning, while not engaging in double-loop learning – they do not question and rebuild existing perspectives, frameworks, or decision premises. It is difficult for organisations to implement double-loop learning by themselves (Wenger & Snyder 2001).

Gasson and Shelfer (2007) have presented how two alternative views, knowledge-as-process vs. knowledge-as-thing, may produce a way of analysing systems of IT that support human information processing. Their study reveals detailed mechanisms by which knowledge of various forms is transferred –
revealing failures in training, interpersonal communications, ICT system support, and reward structures.

To date, there have been various different ways to define knowledge (e.g. Carlile 2002, Dulipovici & Baskerville 2007, Gasson & Shelfer 2007, Kotlarsky et al. 2009). The successful sharing of knowledge across boundaries must be carried out by group members (e.g. Kotlarsky et al. 2009, Teigland & Wasko 2003). It has been stated that knowledge sharing across boundaries is a key concern within knowledge management (Carlile 2002, Ciborra & Andreu 2001).

While knowledge sharing across boundaries has been under research (Carlile 2002, Carlile 2004, Ciborra & Andreu 2001), the growing interest has been in learning in an IO setting, which seems to make issues much more complicated (Andreu & Sieber 2005, Levina & Vaast 2008, Scarbrough et al. 2004). It is highlighted that each situation presents a different combination of boundaries because of the different internal and external dynamics which have an effect on collaboration and aims (Levina & Vaast 2008).

One problem has been that views on defining knowledge in organisations are numerous and incompatible (e.g. Carlile 2002, Dulipovici & Baskerville 2007, Gasson & Shelfer 2007, Wasko & Faraj 2000). It is highlighted that the ‘knowledge as object’ perspective assumes that knowledge can be owned by the organisation. The view of knowledge that sees knowledge as residing within the minds of individuals presumes that knowledge can be codified and exchanged with the organisation just as it would be in any other exchange (Wasko & Faraj 2000). Carlile (2002) has pointed out three different views of knowledge: 1) mechanistic views have focused on knowledge as something to capture, store and transfer, 2) the cultural view emphasises the requirements of social interaction in translating knowledge before it can be shared, 3) the ‘contested’ or ‘political’ nature of knowledge have also been stressed.

It is acknowledged that ‘knowledge is not like other commodities’: people are not always interested in sharing all types of knowledge and it is organisational culture that has an important effect on whether people are willing to exchange knowledge (Wasko & Faraj 2000).

Carlile (2002) emphasises that organisations have to establish processes for managing knowledge across boundaries for an obvious reason: specialised and task-dependent forms of knowledge are required in order to deliver products and services. Carlile’s (2002, 2004) framework illustrates three progressively more complex types of boundaries: syntactic, semantic and pragmatic. Each complex boundary includes complex process to facilitate communication and innovation
across specialised forms of knowledge. The framework not only categorises types of boundaries, or gauges their complexity, but also describes the processes involved in managing knowledge across each of them: transfer, translation and transformation. Complex knowledge boundaries are very important in the early stages of product development.

From a syntactic perspective, transferring knowledge across boundaries requires a using a common syntax between the ‘senders of messages’ and ‘receivers of messages’. Carlile (2004: 560) has stated that where a common syntax is established, the movement of information across the boundary is fairly straightforward. The common syntax is, for example, a shared language. Boland and Tenkasi (1995: 362) have highlighted that at the syntactic boundary, objects ‘do not convey unambiguous meaning, but have instead a kind of symbolic adequacy that enables conversation without enforcing commonly shared meanings’. Carlile (2002) has highlighted that the challenge to a syntactical approach to managing knowledge across a boundary occurs especially when novelty increases. That is to say, while a shared syntax is needed, it is not always enough to address all conditions at the boundary.

Semantic boundaries (translating knowledge) have been identified by accepted interpretations and meanings amongst actors. The value of the semantic boundary is that individuals try to specify and learn about their differences and dependencies across a given boundary. At semantic boundaries, standardised forms and methods are essential parts of knowledge representation and learning as well. The costs of the semantic boundary are ‘the costs of translating knowledge at the boundary in order to create shared meanings’. (Carlile 2002: 451.)

The challenge of the semantic boundary is that managing knowledge across a boundary when creating new agreements is not enough to resolve the negative consequences at the boundary. The pragmatic boundary view (transforming knowledge) highlights that groups with different knowledge bases are dependent on each other, and dependence often generates negative consequences (Carlile 2002.) Carlile (2002) accentuates that the novelty that often arises in product development settings causes negative consequences between groups when they are developing new knowledge and products. This is why Carlile argues that knowledge itself must be recognised as problematic. Hence knowledge can be a barrier as well as a source of innovation. (Carlile 2002.)

The value of a pragmatic boundary is it recognises that in managing knowledge across a boundary new knowledge has to be created, and current
knowledge used at the boundary has to be negotiated and transformed. So, it is not enough that knowledge is just added or combined. It is a complex development in which current and more novel forms of knowledge are represented, learned about, and then jointly transformed. The big challenge of the pragmatic approach is to manage knowledge across a boundary which represents differences and dependencies, learning about their consequences. The transformation of knowledge is also a very complex process to develop and maintain. (Carlile 2002.)

2.3 Project governance

The concept of IT governance emerged in the late 1990s (e.g. Sambamurthy & Zmud 1999). It has become a more popular topic of analysis in IS research, and many different views of analysis have been presented (Armstrong & Sambamurthy 1999, Bakos & Treacy 1986, Boynton et al. 1994, Feeny et al. 1992, Kaarst-Brown 2005). IT governance’s objective is to define structures, processes and relational capabilities (Peterson 2004, Weill & Ross 2005). Sambamurthy and Zmud (1999) have specified IT governance as the patterns of authority including both IT infrastructure, IT use and IT project management.

The term project governance is used in the IT sector to describe the processes used to help assure a successful project. It is said that project governance is not well understood and it is argued that the concept of project governance and its application in practice have not been clearly presented in the inter-organisational context (e.g. Croteau & Bergeron 2009).

Governance embodies a distinct part of management and leadership processes. It covers management, policies, processes and decision rights given for a special area of responsibility (Kakabadse & Kakabadse 2004, Krishnan & Sivakumar 2004).

Governance has also been described as ‘directed influence of social processes’, covering all mechanisms which are connected with public policy processes (Jones et al. 1997). Weill and Ross (2005) propose six archetypes of governance: business monarchy, IT monarchy, feudal, federal, IT duopoly and anarchy. The roles and levels of the participants define each archetype clearly. It has been argued that there is a scarcity of research exploring how organisations define their IO governance of IT (Croteau & Bergeron 2009).

As previously stated, IS projects implemented in several organisations are increasingly common with the advent of globalisation and multinational
companies (e.g. Barringer & Harrison 2000, Croteau & Bergeron 2009, Kothlarsky & Oshri 2003, Levina 2005, Sarker et al. 2010). It is suggested that because of this change, IT governance will reflect corporate governance principles to a greater and greater extent (e.g. Letza et al. 2004).

Corporate governance includes the set of policies, customs, regulations and institutions – and all of these influence the way the corporation is controlled or managed – involved in organising the production and sale of goods and services (e.g. Bhasa 2004). There has been a growing interest in IO governance issues in organisational literature and both academics and practitioners have had an increasing interest in IO issues (Vlaar et al. 2007).

There are three basic principles of IO governance: market, hierarchy, and network. Market governance is phased, formed only for the purpose of transferring goods and resources. Hierarchy governance, for its part, lasts longer than market governance and it is supported by legitimate authority. Network governance is classified as a hybrid form of market and hierarchy governance (e.g. Croteau & Bergeron 2009). Croteau and Bergeron (2009) define network governance as involving ‘a selected, persistent, and structured set of autonomous firms engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges. These contracts are socially – not legally – binding’.

2.3.1 Inter-organisational relationships

Collaboration between developers and users has been a popular topic of analysis in IS research. A number of problems related to collaboration have also been outlined (McGrath & Papazafeiropoulou 2007). First of all, it has been argued that organisational politics and conflicts between users, developers and managers may cause problems. There may be conflicts prohibiting collaboration between developers and users caused by differences in performance criteria and reward structure, and by ambiguous responsibilities. Differences in organisational structures, agendas and working habits may also cause problems. (Butler & Fitzgerald 1997, McGrath & Papazafeiropoulou 2007, Kirsch & Beath 1996, Lucas 1971, Sarkkinen & Karsten 2005). In addition, there may be differences in the values, languages, skills and education levels between users and developers, causing problems for collaboration (Alvarez 2002, Cavaye 1995, Lucas 1971).

Problems might be caused by the huge quantity of different types of knowledge that is required from both users and developers (Axtell et al. 1997,
Cavaye 1995). Lack of knowledge hinders the problem-solving process at the beginning, when clarification and description of the problem is important (Mumford 2003). In addition, the developers’ limited social skills and knowledge might inhibit collaboration (Nandhakumar & Jones 1997).

An overall lack of motivation to collaborate is also reported as another problem, which applies both to users and developers. It might be difficult to motivate users to participate (Butler & Fitzgerald 1997, Cavaye 1995, Markus & Mao 2004). However, developers’ practices and norms might also limit interaction; the developers might view themselves as technical experts, and consider interacting with users not to be part of their job (Nandhakumar & Jones 1997). Furthermore, studies show that involving the users is not necessarily rewarded. User involvement may be viewed as a risk, delay and cost – by both the developers and the clients. (Catarci et al. 2002).

Clearly, a number of issues can cause conflicts in IS projects. Conflict management is an important issue to be considered (DeChurch & Marks 2002). Organisational conflict literature has identified three forms of conflict: relationship conflict, task conflict and process conflict (Panteli & Sockalingam 2005). Relationship conflict reduces open communication and knowledge sharing. However, a well-managed process conflict provides the foundation for relationships and trust between partners to develop. If process conflict is effectively managed, the potential for relationship conflict can be minimised (Panteli & Sockalingam 2005). Furthermore, task conflict improves group satisfaction when managed with agreeable behaviour (DeChurch & Marks 2002).

Furthermore, commitment to IS project work has been recognised as a success factor in IS projects. The level and changes in commitment are significant factors in IS projects. Commitment can even impede progress in certain cases. Erratic commitment can increase the loss in IS projects, for example when management does not want to get rid of a project that is failing. However, sustained commitment is a key requirement for completing IS projects successfully (Newman & Sabherwal 1996).

Overall, there are many challenges in collaboration in IS projects. Collaboration between users and developers is especially challenging, but this is further complicated by other stakeholders such as clients and managers. In addition, IS projects nowadays involve an even larger number of different kinds of stakeholders. This is discussed further in the next section.

Collaboration is a great challenge when organisations have to link with each other in order to perform effectively in present-day environments (Daniel &
White 2005). The increased number of parties involved implies the need for increased communication and coordination among these groups (Sawyer & Southwick 2002).

A characteristic feature of a distributed project is that it is carried out in a situation where actors are located at shorter or longer distances from each other (Evaristo 2003). The challenges of information technology (IT) implementation have been studied in cases where organisations are distributed. In this situation the main challenges are argued to be the initiation of the implementation process, decentralised adoption, establishing connectivity, individual acceptance and establishing collaborative work practices (Munkvold 1999).

Especially in geographically distributed IS projects there is a need to understand whether and how social aspects contribute to successful collaboration. Insufficient trust and poor social relationships may act as barriers to successful collaboration in globally distributed teams, and sufficient trust and well-established social relationships may act as enablers to collaborative work (Kothlarsky & Oshri 2003, Levina & Vaast 2008, Sarker et al. 2010). The importance of trust is emphasised in the management of distributed projects. Without trust, collaboration is less likely to exist. The amount of trust may determine which goals will be given extra weight in situations where there are both competitive and cooperative goals. (Evaristo 2003).

A conceptual view of key risk factors in distributed IT projects has been developed by Erickson and Evaristo (2006). Firstly, the Sponsorship/Ownership risk factor relates to commitment and ownership by the key set of stakeholders. Because of the distances, the project owner may not be able to communicate effectively with the responsible teams. Secondly, the Relationship Management risk factor refers to the development and management of user relationships, which can be influenced by the clarity of roles and expectations among users and other stakeholders. Trust management is part of relationship management and it is an integral part of high-performing distributed projects. User involvement is more difficult in a distributed environment and thus the risk that relationship management may be faulty is increased in distributed projects. Organisations develop their own corporate culture and approaches to development, thus increasing the possibility of misunderstandings and mistrust between the distributed sub-teams. (Erickson & Evaristo 2006.)

Thirdly, in distributed projects the risk factor Project Management and Planning is multiplied when compared to projects without distribution. Fourthly, the risk factor Scheduling refers to the timing of the tasks and resources required
for the successful completion of the project. Even though Scheduling is closely associated with the Project Management and Planning risk factor, it is kept separate due to its focus on the timing and availability of resources. However, the Scheduling risk factor is significant for any kind of distributed or non-distributed project. (Erickson & Evaristo 2006.)

Fifthly, the Development Processes risk factor is connected to a lack of established processes, or the presence of inappropriate processes. Again, the effect is magnified in distributed projects. Finally, the last risk factor is Personnel and Staffing, which refers to the presence of appropriate skills in the development and process management, combined with issues related to staffing levels, changes in personnel and the unavailability of key personnel resources. In all, lack of knowledge about these risk factors may cause project managers to undervalue or ignore their potential effects and thus lead to large losses that could have been avoided. (Erickson & Evaristo 2006.)

Collaboration in multiparty IS development projects has been studied by Levina (2005), where the target was to find out how people from diverse professions and organisational settings collaborate in IS development projects, and to describe how their diversity influences the IS that they are designing. The case in her paper consisted of two organisations. The starting point for her study was the need to develop a deeper understanding of actual collaborative practices in multiparty IS development. Levina explains how collaboration in multiparty IS development can be understood as a collective reflection-in-action cycle that changes and is changed by versatile organisational and professional stakeholders. (Levina 2005.)

Another view on collaborative development projects comes from Kumar and van Dissel (1996), who studied the possible risks of conflict in inter-organisational IS development. The level of structure in the relationship can influence the potential conflict. They go on to argue that the level and type of interdependence between actors affect the structure of the relationship between the actors. They generalise by saying that structure can be interpreted as the ways in which inter-organisational work is divided among the partner organisations by giving certain roles to them. They summarise four main factors influencing collaboration: environmental forces, motives of the cooperative parties, supportive role of IT and enabling role of IT. (Kumar & van Dissel 1996.)

In all, one can conclude that collaboration between different occupational groups and organisations is highly challenging. Collaboration between users and developers has been the topic of analysis in a multitude of studies. However, in

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addition to users and developers, there are a number of other occupational and organisational stakeholder groups involved in IOIS projects. For that reason, in these projects there is an increased potential for conflict.

Notwithstanding the wide attention towards IOR governance in the literature, research into the actual structuring, management and control of these relationships has received less attention. It has been argued that to gain a better understanding of the management and control of IORs, and the consequences, researchers should study the coordination mechanism and processes used for IOR management (Dekker 2004).

Dekker (2004) explains that outcome control and behaviour control are parts of formal control: outcome control mechanisms specify outcomes to be realised by the IOR and by its partners, and monitor the achievement of these performance targets. Behaviour control mechanisms specify how IOR partners should act, and monitor whether actual behaviours comply with this pre-specified behaviour. Social control is a part of informal control, and trust is often argued to be the principal mode of social control in IORs.

In their study, Vlaar et al. (2007) discuss the evolution of trust, distrust, and formal coordination and control in IORs. It is stated that the degrees to which managers trust and distrust their partners during the initial stages of cooperation have a strong impact on the development of these relationships in later stages of collaboration.

2.3.2 Project management

A ‘project’ has been defined as a unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements including the constraints of time, cost and resources. The influential role of project management in IS has long been acknowledged (Barki & Hartwick 2001, Birkhead et al. 2000, Foster 2001, Keil & Robey 1999, Schwalbe 2004, Smyth & Morris 2007). As noted by Smyth and Morris (2007), no unified theory of the management of projects exists.

Project management theories have particularly stressed that project work must be structured, the emphasis being on the coordination of the project work where the roles of communication and control have been emphasised (Choudhury & Sabherwal 2003).
Smyth and Morris (2007) argue that, though the context-specific nature of projects is acknowledged, research methodologies still overlook this. In their article they have the epistemological aim of evaluating how we know what we know about projects and their management by means of research.

Napier et al. (2009) have also stated that although effective project management is a critical issue for the success of IT projects, there is little empirical research on the project manager’s requirements for successful IT management. Defining, organising and controlling are acknowledged as important and vital activities in a project. The activity of defining includes the intent of management, the outline of the project scope and the description of the results. The assignment of an experienced manager, the responsibilities of the project manager and team members and the maintenance of the balance of power are vital issues to do with organisation. The project’s elements, such as time, cost and quality, also need to be controlled.

Four phases can be identified in a project: conception, development, realisation and termination. In addition to this, Lockyer and Gordon (2005) have identified eight elements of project, which are: 1) a specification for the product, 2) a project plan, 3) a time frame, 4) a budget, 5) a cost plan, 6) a statement of required quality, 7) identification of any areas of uncertainty and 8) an evaluation of possible risks including the appropriate responses. A more elaborate definition that focuses comprehensively on process is given by Fujinami and Marshall (2001). They provide three main steps (define, plan, implement) which include thirteen clear substeps. Guinan et al. (1998) have highlighted effective plans, procedures and clear goals/milestones which all were found to be critical to project success.

Andersen (2008) examines project management from an organisational perspective. A project can be seen as a temporary organisation, established by its base organisation to carry out an assignment on its behalf. Andersen highlights that we should take into account the specific demands of individual projects – there is no ‘right way’ to carry out projects.

Hartman and Ashrafi (2002) stress that most IS problems are concerned with both management of organisation and cultural issues rather than with technical issues. In this light, project management is a very important, critical issue in IS projects.
2.3.3 Project leadership

As stated earlier, most IS development and implementation failures are known to occur for human and organisational reasons (e.g. Griffith & Northcraft 1996, Wastell & Newman 1996). The most common reason for the failure of large projects has been said to be organisational and political resistance to change. Therefore, a manager’s ability to work with people and organisations is just as important as technical awareness and knowledge (Noble & Newman 1993).

Complex issues of leadership have been discussed extensively in the IS area (e.g. Blanchard & Markus 2004, Karahanna & Watson 2006, Levina & Vaast, 2008, Napier et al. 2009, Newman & Robey 1992, Nicholson et al. 2007, Sarker et al. 2009, Sarker et al. 2002) and in the leadership literature over the last few years, and ‘leadership’ has been defined in many different ways in the literature (e.g. Pescosolido 2002, Yukl 2006). While much significant research has been carried out for more than 100 years in the area of leadership (Sotiriou & Wittmer 2001), a universally applicable definition of leadership seems illusive.

Leadership has been examined through many lenses in the IS field. Common perspectives have included both the area of organisational work and personal traits of a leader and a combination of these elements (Blanchard & Markus 2004, Jiang et al. 2001, Karahanna & Watson 2006, Napier et al. 2009, Nicholson et al. 2007, Sarker et al. 2009, Sarker et al. 2002). Recent literature has highlighted the difference between executive involvement, exercise of formal authority and informal leadership. Since IT projects in organisations have become more complex, they require more independent tasks and rely more on distributed expertise. Hence traditional directive leadership based on hierarchical control and formal authority is being replaced by decentralised, collaborative, and empowering leadership styles (Faraj & Sambamurthy 2006).

Karahanna and Watson (2006: 172) have stated that: ‘Information systems leadership sets directions, creates commitment, mobilises institutional, political, psychological, and other resources, facilitates action, and adapts the IS unit to fit a changing environment such that it adds value and achieves shared objectives’.

Major difficulties for leadership include such issues as encountering uncommitted and uninvolved users/management and having no control over external resources. Such values as reciprocity, confidentiality and trustful relationships have been highlighted in the IS field (Blanchard & Markus 2004, Napier et al. 2009, Sarker et al. 2009) and furthermore, in the literature on global virtual teams, project managers have been held to have a crucial role in achieving
effective performance (Levina & Vaast 2008, Sarker et al. 2009). It is argued that leaders who know how to exercise their authority properly are respected more (Sotiriou & Wittmer 2001).

The project leader has been seen to be one of the most critical factors in project success (e.g. Jiang et al. 2001, Newman & Zhao 2008, Sarker et al. 2009). Leadership capabilities such as an ability to form common goals and communicate them, being an instrument of goal achievement, and sensitivity to the political realities in the organisation have been highlighted (Jiang et al. 1998, Napier et al. 2009).

It is also claimed that personality has a significant role in a leader’s work. Personal traits that make leaders easy to get along with include: being calm, presenting a positive attitude and generally being likeable (Napier et al. 2009); and having professional and personal integrity (Sotiriou & Wittmer 2001, Napier et al. 2009). These are all considered to have an important managerial influence on team members. Professional integrity includes behaviour and leadership in the work environment, while personal integrity includes behaviour outside the work environment. It is believed that team members see the professional integrity of project managers as including characteristics such as truthfulness, following-through and assuming responsibility (Sotiriou & Wittmer 2001). Napier et al. (2009) have argued that personal integrity has not been discussed in the literature on IT project management skills, despite how important it is to team members. Conversely, traits such as having a know-it-all, bossy, argumentative and too forceful personality are considered to be negative features of a leader.

2.4 Power issues

It is acknowledged that power is a very ambiguous and intangible concept and therefore exact definitions of it are difficult to give. Power is a multidimensional concept, and definitions, interpretations and theories about it abound (Bourdieu 1998, Foucault 1980, Giddens 1984, Hardy & Leiba-O'Sullivan 1998, Jasperson et al. 2002, Markus & Bjørn-Andersen 1987). Power has been a core concept in organisation theory and is present as a broad concept in the social sciences, yet it is still missing as a factor in many contemporary academic debates. Popular themes in the area of social sciences have been ‘power over’ and ‘power to’. The difference between these two perspectives is that in the first case, ‘power over’, power is understood more as a negative issue – for example, actor A can compel actor B to do what they would not do themselves. The second, ‘power to’ is more
positive, and involves, for example, an action that enables actors to reach some goal by defining it first. Both theories pay attention to the bonds of social organisations, for instance, but their answers are different. (e.g. Clegg et al. 2006).

Furthermore, Allen (1998) states that the concept of power should also include a ‘power with’ perspective. Allen defines ‘power with’ as collective empowerment, and adds the caveat that these three views alone (power over, power to and power with) are not enough to handle complex power relations. Furthermore, these three perspectives of power are intertwined: having ‘power over’ necessitates having ‘power to’; ‘power with’ often necessitates having ‘power to’.

Many influential social theorists – such as Foucault, Giddens, Bourdieu and Parsons – have conceptualised power. According to Foucault (e.g. 1980), power must be analysed as something which circulates, or rather as something which functions in the form of a chain. Foucault was interested in studying power in its external visage, which means that power installs itself and produces its effects. According to him, power is inescapable. In Giddens’s (1984) structuration theory, power has two different perspectives: the perspective of an action of the actor and the perspective of the structural aspect. Power is, then, the ability to make changes to behaviour, and control or dominate from an institutional perspective. Bourdieu (1998), on the other hand, is interested in power from the perspective of individual strategies. Bourdieu’s practice theory discusses sources of power (economic, cultural/knowledge, social) as a particular kind of relational resource. Agents can influence their own and other agents’ actions in a particular context using these resources. Parsons (1967) saw power as a positive and essential element of social maintenance. Parsons believed that power as a resource is inevitable for the achievement of collective goals.

These social theories have been widely utilised in IS. Foucauldian analyses of power have been quite popular during recent years (e.g. Avgerou & McGrath 2007, Doolin 1999, Sayer & Harvey 1997, Wynn et al. 2002). These studies analyse disciplinary power in different IS contexts. Many studies using structuration theory have argued that IT conditions and shapes human action, but also that human action conditions and shapes IT (see e.g. Majchrzak et al. 2000, Orlikowski & Robey 1991). Levina (2005), among others, has adopted Bourdieu’s practice theory and focused on what people do and how their actions shape, and are shaped by, diverse sources of power resources.
Silva (2007) suggests that none of the three epistemologies commonly used by IS researchers — phenomenology, critical theory and structuration theory — are sufficient to engage with the ‘dark side’ of power and politics in organisations, as opposed to researching only the ‘legitimate’ face of power.

Jasperson et al. (2002) have pointed out that researchers have had problems defining and measuring the theoretical construct of power in the IS field. They identify common themes in conceptualisations of power: 1) authority, 2) centralisation, decision rights, participation in decision-making 3) influence 4) politics and 5) power. According to Silva (2007), authority is always contested, as formal rules are open to interpretation and that is the source of politics. It is also highlighted in organisational literature that everyday practices in organisations are likely to be both contested and conflictual (e.g. Contu & Willmott 2003).

A very well known and extensive categorisation of power is provided by Hardy and Leiba-O’Sullivan (1998). Their first dimension shows that power is wielded by using various resources to affect the outcome of decision-making processes. In the second dimension, power is wielded by supervising access to those processes. In the third dimension, power is wielded through legitimation, where power is embedded in the fabric of the system. The first two dimensions lean on the assumption that power is introduced only in the face of conflict (and opposition), whereas the third dimension acknowledges that power can be used to ensure that conflict never arises. The fourth dimension (‘limits of power’) enables the investigation of aspects of power which do not normally appear in the mainstream literature of power — for instance, while some actors may receive advantages from power relations, they can not control or escape them.

To Hardy and Leiba-O’Sullivan, power is integral to empowerment. To managers and mainstream management researchers, power is legitimate and functional. Power can thus be shared. In this case, empowerment can be seen as a tool to motivate employees to achieve organisational goals. For critical theorists, on the other hand, power is domination, and empowerment provides the means to combat the sources of domination. Table 2 presents empowerment and the dimensions of power by Hardy and Leiba-O’Sullivan.
Table 2. ‘Empowerment and the Dimensions of Power’ (Hardy and Leiba-O’Sullivan 1998: 462).

<table>
<thead>
<tr>
<th>First dimension</th>
<th>Second dimension</th>
<th>Third dimension</th>
<th>Fourth dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power of A over B</td>
<td>Management of resource dependencies</td>
<td>Management of decision-making processes</td>
<td>Management of meaning</td>
</tr>
<tr>
<td>Interaction between A and B</td>
<td>Overt conflict</td>
<td>Overt or covert conflict</td>
<td>Apparent cooperation</td>
</tr>
<tr>
<td>Reason for B's failure to influence outcomes</td>
<td>B is aware of the issue and able to get it to the decision arena, but is unable to use power effectively to influence outcomes</td>
<td>B is unaware of the issue and so has no will to resist</td>
<td>Both A and B are prisoners of the prevailing discourses of power although A may derive greater advantage from them</td>
</tr>
<tr>
<td>Empowerment of B requires</td>
<td>Acquisition of resources and ability to mobilise them</td>
<td>Ability to gain access to the decision arena</td>
<td>Consciousness-raising and ‘delegitimation’ strategies to create will to resist</td>
</tr>
</tbody>
</table>

Many studies (e.g. Allen et al. 2000, Allen et al. 2002, Kirsch & Beath 1996, Sarkkinen & Karsten 2005, Symon 1998, Yeh & Tsai 2001) have shown conflicts between different user groups and between IS professionals and user groups as widespread. It has been argued that user involvement has been used only as a buzzword or a weapon for achieving management goals (e.g. Hirschheim & Newman 1991, Howcroft & Wilson 2003, Kirsch & Beath 1996, Symon 1998). Gärtner & Wagner (1996) have analysed the political frameworks of IS design and participation, and state that agenda-setting in relation to the IS design and participation is important, as is the legitimisation of certain agendas over others. Conflicts between different actors – workers, managers, consultants, unions and IS professionals – are evident in this process.

Markus (1983) has pointed out that the strength of resistance in an IS project is likely to be affected by the organisational position of the person to whom one loses power. According to Markus (1983) the explanations of resistance are
important because, however informal or implicit, they guide the behaviour and influence the actions taken by managers.

In distributed and multi-party IS projects, there is an even larger number of stakeholders involved, and empirical studies have revealed that there is a great potential for conflicts in this context (e.g. Allen et al. 2000, Heiskanen et al. 2008, Kumar & van Diesel 1996, Levina 2005), and that power relations between the multitude of stakeholders (e.g. IS professionals, users, graphic designers, strategists, different participating organisations) should all be acknowledged (e.g. Kumar & van Diesel 1996, Levina 2005).

2.5 Emotions

Emotions have been the subject of discussion for a long time. Since antiquity, emotions have been studied in many ways, for example by philosophers such as Aristotle and Plato. Aristotle’s work includes ‘moral, social, developmental and cognitive considerations within a larger naturalistic framework’. However, attention has later focused on collapsing the biological and social, rather than simply incorporating or triangulating them (Sturdy 2003: 93). Plato described emotions as a combination of satisfaction and pain, which have an effect on behaviour (Nummenmaa 1999).

In some contexts, feelings have been considered personal, private and even too personal to research (e.g. Craib 1995). Similarly, emotions have been considered to be unpredictable and uncontrollable (e.g. Gabriel 1995). In addition, many authors have pointed out that sometimes – and even quite often – we do not know directly or we are not able to name what we ourselves feel, and have asked how it can be possible to know another’s feelings (e.g. Pratt & Doucet 2000).

The fact is that much of the literature adopts particularly focused perspectives on emotions, and there are numerous approaches, associated with a range of disciplines. One might therefore focus on one or more particular dimensions of emotion: such as feeling, behavioural, physiological, linguistic, cultural, cognitive, or social structural perspectives. Furthermore, these may be explored in relation to specific emotions or particular perspectives: emotion as judgement, communication, sense and control. (e.g. Sturdy 2003: 85).

As early as the 19th century, emotions were recognised as an important factor alongside motivation and cognition (e.g. Mayer et al. 2000). The book Expression of the Emotions in Man and Animals was written in 1872 by Charles Darwin, who was interested in emotions from an evolutionary standpoint. He utilised
physiological and psychological theories, explaining the reasons behind movements and expressions, and the emotions that are behind them.

Over the last three decades, an acceleration has occurred in the development of theories of emotion (e.g. Dasborough 2006, George 2000, Lacewing 2004, Lord & Kanfer 2002, Sturdy 2003). In the 1970s, Hochschild (1979) was already investigating the management of emotions as the core dimensions of work. Ten years later, Salovey and Mayer (1990) were interested in feelings at work and started to talk about emotional intelligence (EI). Half a decade later, Goleman (1998) refined the concept of EI. EI is seen as the ability to manage one’s own emotions, and as the ability to interpret the emotions of others as well (George 2000, Mayer et al. 2000, Salovey & Pizarro 2002).

Emotions have been recognised as having an essential role in human behaviour; they are said to be part of all critical incidents in human life – they direct, guide, interrupt, etc. the actions of humans (e.g. Dasborough 2006, Izard 1993). Recognising emotions as important issues has increased research on emotions which tries to understand workplace behaviour (e.g. Dasborough 2006, Fineman & Sturdy 1999, George 2000, Lord & Kanfer 2002, Sturdy 2003).

The emotions are acknowledged as an important area of research (Spoor & Kelly 2004, Sturdy 2003). It is also pointed out that understanding the nature of conscious and unconscious emotion regulation strategies is essential for advancing knowledge of positive emotional adjustment (Dasborough 2006, Finnegan 2007, Dennis 2007). Moir (2005) has studied the way in which emotion discourse plays an essential role in the construction of agency. Moir highlights that a major cultural dualism should be taken into account: describing ‘external’ and visible actions as the result of ‘internal’ emotional states.

In any case, the discussion has mainly focused on some important and claimed characteristics of emotion and on the ways in which knowledge is achieved and impeded through exploring them. Implicit in this account is a multidimensional view of emotion, one which spans traditional conceptions of emotion and disciplinary divides. (Sturdy 2003: 93).

We can deduce that the emotions have become an invisible and acceptable research area, and they have been accepted as an explanatory factor or element of action and interaction. Given the number of books and articles, with very different perspectives, that have been written about emotions, it has to be said that it is difficult, even impossible to give an exact definition of emotion.
2.5.1 Defining emotion

Defining emotion is a complex task (Izard 1993, Sturdy 2003). It is even questioned whether emotion is actually knowable (e.g. Sturdy 2003). Emotion is the word used to describe the kind of phenomena which have also been described variously as, for example, feelings (Browne 2004), moods (Fridja 1993, Lord & Kanfer 2002), affects (Lang et al. 1998, Spoor & Kelly 2004), temperament (Buss & Plomin 1984), behaviour (Fredrickson 1998, Lord & Kanfer 2002), and other related words both in English and in other languages. Sturdy (2003: 83) states that emotions are both expressions of inner processes but also multidimensional ‘complexes’ (thinking, feeling, and moving) or ‘modes of communication’ which are both cultural and corporeal, and arise in social relationships of power and interdependence.

An examination of these different terms and perspectives shows the dense, complex and also contextual nature of these concepts. Many researchers in many disciplines have focused on these concepts in numerous ways (philosophical, linguistic, physiological, sociological or psychological) (Sturdy 2003). Therefore, a proper overview of emotions would require a book in itself.

Browne (2004) defines an emotion as: ‘an involuntary response to something that happens’. Fineman and Sturdy (1999) also state that one point of view is that emotions are visceral and physiological changes that individuals experience for example as the consequences of cognitive appraisal, or interactionally produced phenomena. The latter perspective draws particular distinctions between the subjective experience of emotions and their personal displays (see Fineman & Sturdy 1999: 4). Emotions have also been defined as ‘a particular psychological state of feeling, such as fear, anger, joy, and sorrow’ (Encyclopedia Britannica 2009). According to System Theory, love for example is not treated as an emotion – Luhmann (1998) saw it as just a means of expression of discourse. Emotion is also defined as a multidimensional change in individuals’ cognitive, social and physiological activity (Cacioppo & Gardner 1999).

The affective and emotional element is thought to be spontaneous and representing feelings (Moir 2005). Browne (2004) has stated that the terms ‘emotions’ and ‘feelings’ are often used interchangeably. Fineman (2003) distinguishes these concepts and emphasises that feeling is what is felt, and emotion is what is shown. Feeling is therefore classified as a subjective experience whereas emotion is emotional performance where social conventions play a remarkable role. Fineman (2003) emphasises that feelings are more
difficult to recognise. The feelings have also been argued to include action tendencies and action tends to trigger cognitive processes (Encyclopedia Britannica 2009).

Lord and Kanfer (2002) for their part stress that emotions should be distinguished from moods. A more elaborate definition of emotions and moods that focuses on duration is given by Frijda (1993), and Spoor and Kelly (2004). It has been highlighted that mood lasts longer than emotion and is less related to any stimulus (Fridja 1993, Spoor & Kelly 2004). It has been also emphasised that emotions have a stronger relation to specific behaviour than moods do (e.g. Lord & Kanfer 2002). George (2000) has highlighted that it is intensity which distinguishes moods from emotions, and emotions are more fleeting than moods because of their intensity.

It has also been stated that affect is a concept which includes both moods and emotions. Moods and emotions have several features in common: they are for example generally experienced as either positive or negative and associated with behavioural expressions (Spoor & Kelly 2004). Lang et al. (1998) have stated that emotions occur in encounters of individuals which have affective properties. In fact, most theories of emotions identify the linkage between emotions and behaviour (e.g. Fredrickson 1998, Lord & Kanfer 2002).

Buss and Plomin (1984) have specified emotionality as one of four dimensions of temperament. They describe emotionality as the tendency to become easily and intensely negatively aroused. Ahmed (2004) has underlined that rather than defining what emotions are, a researcher should focus on what emotions do, and the essential focus should be on how emotions are produced. Lord and Kanfer (2002: 12) state that emotional reactions ‘are often very fast, frequently producing initial effects before conscious, symbolic-level processing can occur’. Ahmed (2004) accentuates that feelings are born in the encounter with the object, meaning that we have no feelings towards the object itself. Ahmed also highlights that emotions are social and cultural practices.

2.5.2 Different perspectives on emotions

From these various definitions and concepts we can further discern that emotions have been identified from many perspectives. It is not possible to show thoroughly a history of the varying cultural conceptions of emotions in this study.

One of the most significant current discussions regarding emotions is the claim that people are more likely to recall negative incidents than positive
incidents (Dasborough 2006). On the other hand, George (2000) points out that when people are in positive moods, their perceptions and evaluations are more likely to be more positive.

Philosophers have been interested in the role of emotion in rationality, thought, and values, while neuroscientists have studied the neurophysiology and neuroanatomy of emotions and the relations between neural processes and experiences of emotions. In the fields of social psychology and cultural anthropology scientists have been interested in the similarities and differences among cultures – how emotions are expressed and conceptualised. (Encyclopedia Britannica 2009). It is argued that psychological research has typically been ‘sense-making, rhetoric’ studies where ‘the mind is theorised as a mental system that operates upon an external reality’ (Moir 2005: 7).

Moir (2005) has stated that the aim of cognitive psychology is to study how this system ‘works’. This has usually been attempted via experiments. Moir states that ‘the assumption is made that there are two realms: an external reality which acts as ‘raw material’, the ‘input’ for a psychological system which operates upon this in some way to produce an ‘output’ such as a perception or an emotion’ (2005: 7). This is why cognitive psychology has been criticised for separating and opposing rationality and emotion, because maintaining this distinction leads to a relative neglect of emotion in academic (‘rational’) discourse ‘and the transformation or mere relabeling of feelings into abstract, individualised and pathological categories which are often alien to subjective experience and social action’ (e.g. Sturdy 2003: 84).

The social constructionist perspective places emotion in a social context, and emphasises emotional display as part of an inter-personal, meaning-creating process (Harré 1986). The social-functional approach posits that emotions have a forming and maintaining effect on social relationships (Keltner & Kring 1998).

From post-structuralist and social-constructionist viewpoints everything is unknowable in an objective sense, and paradoxically such cultural discourses often present emotion as inaccessible, even within science – feelings are real, but they cannot always be observed or identified. It is argued that rational academic discourse may seem to suppress the ‘knowability’ of emotion. Furthermore, emotion is recognised as being multidimensional (Sturdy 2003).

Some views socialise emotions. It is claimed that it should be uncontentious to assert that emotion is intimately linked to social structures (or other conceptions) of power and inequality. However, perhaps because of the long association of emotion with ‘inner selves’ and/or individualistic psychology
(compared to social psychology) as well as relative sociological neglect, the connection, or at least its importance, continues to be contested. This criticism can be readily dismissed by reference to a long history of sociological and critical psychological literature pointing to connections and their consequences, even if emotion was not an explicit focus. (Sturdy 2003: 91.)

Emotions have also been studied as a discursive resource which enables social psychology to move beyond the perceptual-cognitivist approach which ‘trades on the assumption that people are concerned with seeing and interacting with one another in order to understand what they are thinking and feeling’ (Moir 2005: 2).

Moir has stated that rather than presuming the feature of individual agency the study of emotion discourse should be situated in social practices – it makes possible it to examine the flexible nature of how people’s actions are described and accounted for.

The metaphysical law of attraction is an interesting viewpoint on emotions from the popular press (e.g. Byrne 2007). Emotions have also been defined as coping mechanisms that help individuals adapt to changing circumstances. Emotions have also been classified as positive (pleasant) and negative (unpleasant) depending on what kind of interpretations individuals give them, and then interpretations are tested through their relations with others (e.g. Lazarus 1991).

Dwoskin (2005) has stated that emotions ‘are not me’ and ‘they are not facts’ – even though almost everybody lives life as though the opposite were true. As Dwoskin says, this is even built into our language. For example, when we feel fear, we often say that ‘I am afraid’ rather than ‘I feel afraid’ and in this way we are affirming to ourselves and to others that we are the fear.

Fredrickson (1998) (see also Finnegan 2007) states that positive emotions have received less attention than negative emotions. This has been explained as a consequence of the fact that they are not associated with specific problems needing solutions. Positive emotions are claimed to have a remarkable influence on the effective functioning of organisations. Thus positive emotions promote different organisational processes such as organisational commitment or collective orientations.

Browne (2004) highlights that the two basic emotions are happiness and unhappiness: the feelings of mental well-being and mental discomfort. He sees other emotions as variations of these two. Positive emotions include love, affection, self-satisfaction, pride, anticipation of pleasure – any form of the glow
we call happiness. Negative emotions include fear, hate, disappointment, sorrow, jealousy, guilt – any kind of mental discomfort.

Emotions have also been defined as ‘superordinate programs’ which coordinate an individual’s behavioural, psychological, and physiological responses, and emotions are seen as helping the individual determine which aspects of the environment and the individual’s functioning are most immediately important (Spoor & Kelly 2004). There are numerous ways to classify emotional responses into categories (e.g. Adolphs 2002).

2.5.3 Emotions and organisational behaviour

Emotions have a huge significance when considering collaboration between humans. We only have to consider our own emotional reactions to experiences in the workplace to realise that how we react emotionally to our colleagues is a significant factor in the success of a workplace. It is argued that it is not possible to separate emotion from cognition, behaviour or work (Dasborough 2000, Fineman 2000). Therefore, it is hard to understand work, if emotional issues are ignored. Emotions are seen as unavoidable and thus they are a part of organisational life as well (Dasborough 2006). Fineman (1993) argues that organisations and work are defined by emotions, and emotion is necessary for producing reliable knowledge – they are part and parcel of each other.

Emotions have been seen as fundamental to human behaviour and interaction and they have seen to be a motivator for human activity (Izard & Ackerman 2000). Emotion is recognised as a central feature of organisations (Sturdy 2003). Browne (2004) holds that we cannot command ourselves to feel something, or if we do so, the consequence is a negative effect on our body. He has also stated that we fall into the ‘Intellectual Trap’ whenever we try to censor or deny our emotions, or if we try to make ourselves feel good about someone or something that does not make us feel good. The belief is that we not only think but also feel, and our thinking and action creates conditions to which we respond emotionally. We are also in the ‘Intellectual Trap’ according to Browne (2004) when we think our emotions should conform to a preconceived standard. Browne (2004) defines ‘the Intellectual Trap’ as ‘an attempt to regiment your emotions so that they’ll react according to an intellectually determined standard’.
2.5.4 Emotions and organisational studies

It is claimed that studies of the emotions have been neglected in organisational studies, but gradually they have been addressed to a growing extent. The unknowable and private characteristics of emotion and the negligence of this in organisational research have drawn attention to moral and political concerns in research. (Sturdy 2003.)

As already stated, complex issues of emotions at work have been discussed more and more over the last ten years in organisational literature (Fisher & Ashkanasy 2000, Fitness 2000, Lord & Kanfer 2002, Mangham 1998). Emotions are said to be an essential part of leadership processes (Dasborough 2006, Fitness 2000, George 2000, Lewis 2000) and group processes (Ashkanasy 2004, George 1990, Spoor & Kelly 2004). This area has spawned new areas of research, such as emotional labour in the work place and its costs and benefits (Grandey & Brauberger 2002). It is stressed that leaders’ emotions have a remarkable effect on subordinates. It is even argued that leaders are the sources of the positive and negative emotions of employees at work, and that effective leaders are able to shape the affective events that determine employees’ attitudes and behaviours in the workplace (Dasborough 2006).

Although it is acknowledged that emotions are an essential part of group processes, there is a scarcity of studies of how organisational socialisation processes are related to feelings and display outcomes (e.g. Scott & Myers 2005). Some studies have investigated the particular process by which newcomers learn to experience and display emotions in ways that are coherent with organisational goals (e.g. Hochschild 1983, Katz 1990). It has also been emphasised that emotionality is the outcome of people’s engagement within social practices rather than investigating their reactions to matters that are claimed to represent some inner state (Moir 2005).

However, it is pointed out that cohesiveness is the most investigated group-level affective construct (Kelly & Barsade 2001, Spoor & Kelly 2004). It is argued that emotions have an effect on group commitment because emotions occur and are communicated rapidly, and these issues often happen subconsciously and have an impact on social processes, such as trust in others and group commitment (Lord & Kanfer 2002). It is emphasised that emotional competence has an effect specifically on group performance (Ashkanasy 2004).

Scott and Myers (2005) have emphasised that although some studies have pointed out that newcomers learn emotion rules during entry, empirical analyses
typically do not study how emotion management practices are learned. Moir (2005) has examined the ways in which emotionality can be regarded a social process. Moir (p. 4) states that ‘in this way a major cultural dualism is maintained: taking people’s ‘outward’ accounts and actions and considering these as representations of what they are like ‘inside’ as thinking and feeling agents’.

On the other hand, Pescosolido (2002) has stated that many organisations have operated under the belief that emotions/emotional expressions and rationality are mutually exclusive, or that emotions are the antithesis of rationality. Some studies have shown that organisations have tried to control their members to promote rationality over emotions (e.g. Argyris 1971, Asforth & Humphrey 1993, Mangham 1998). Although the study of emotion has been more active, with varying intensity, focus and methodology, Moir (2005: 3) has stated that emotion is still often represented in terms of a metaphor of heat: ‘cool’ rational thought versus ‘hot’ emotions’, and Sturdy has claimed that there are a large number of methodological and ethical problems in studies of emotions.

Scott and Myers (2005) emphasise that it is regrettable that in the literature there is still lack of research exploring the state of emotions work in human services. They suggest that scholars should study the positive and negative contributions of socialisation processes, especially as they relate to emotion management. Scott and Myers (2005) have studied the process by which members learn to manage emotion in accordance with organisational norms and job conditions by investigating the socialisation of emotion in a large fire department.

Although the study of emotions in organisational settings has attained considerable prominence, Ashkanasy (2004) has highlighted the continuing lack of studies examining the relationships between emotion and performance. Pescosolido (2002) for his part has highlighted the failure of studies of emotion to articulate the role of emotion in group leadership. He emphasises that studies have focused on leaders’ individual attributes and behaviour rather than on the role the leader fills in the group.

The role of emotions in group leadership is particularly important. It has been pointed out that a given group may require different behaviours from its leadership over time, and that this is also challenging because two different groups, even in very similar situations, might require different treatment from their leadership. (Dasborough 2006, George 2000, Pescosolido 2002).

The importance of emotions in organisational behaviour, especially at the individual level, has been acknowledged, and researchers have been interested in understanding the processes and outcomes of collective emotions as well (Kelly
some researchers have been interested in the 
effects of group members developing shared moods and emotions (e.g. Barsade & 
George 2000). Some researchers have been interested in the 
effects of group members developing shared moods and emotions (e.g. Barsade &

Barsade (2002) has also pointed out that some theorists say that feelings are 
the way in which group entities are identified, and it is the development of group 
emotion that defines a group, and distinguishes it from a mere collection of 
individuals. Spoor and Kelly (2004) have stated that guilt and gratitude promote 
group member cooperation and both positive and negative moods may also affect 
hierarchies within a group. Spoor and Kelly have highlighted that shared affect 
may facilitate the group in achieving shared desired outcomes as well.

Emotional contagion refers to the processes whereby the moods and emotions 
of one individual are transferred to nearby individuals (Spoor & Kelly 2004). 
Ahmed for her part emphasises that ‘it is through emotions, or how we respond to 
objects and others, that surfaces or boundaries are made: the ‘I’ and the ‘we’ are 
shaped by, and even take the shape of, contact with others’ (Ahmed 2004: 10). 
Despite differences in theoretical approaches and aims it can be concluded that a 
detailed analysis of emotions at individual and group level is needed.

It is stressed that being aware of the feelings people have at all emotional 
levels within your project is a key project management competence. Fisher (2008) 
invites us to imagine what it would be like to work with project teams where 
everyone communicates with understanding and respect, where people help each 
other willingly to achieve their goals and where people enjoy working because 
they are able to express their feelings openly and honestly. Project managers in 
the project-oriented society could be the catalyst for making this happen within 
their organisations. (Fisher 2008.)

2.5.5 Emotions and methodological issues

Experience is a theme which is usually thought to be too holistic or too wide for 
investigation. For example, Dewey (1951), an American philosopher, 
psychologist, and educational reformer, drew a parallel between the concepts of 
experience and education. Dewey held these concepts to be inseparable. Dewey 
(1951) thought that when studying experiences we study life. However, Plato, for 
example, described emotions as a combination of satisfaction and pain, which has 
an effect on behaviour (e.g. Nummenmaa 1999.) The theory put forward by 
McMillan and Chavis (1986) focuses on the experience of community. Their
approach is psychological and the interest is in the individual’s perception, understanding, attitudes and feelings about community.

We all have belief systems whether we know it or not, and these direct our lives. Any individual belief system has developed and polarised over the years based upon the successes the individual has experienced in her or his life. Conceptual content and habits in the form of languages, beliefs, norms and worldview constitute human experience (McCarthy 1996). Everybody experiences other people through their own presumptions, knowledge and experiences. We classify people through our own perceptions and we may even expect them to behave in accordance with them.

However, from a humanistic perpective, we might interview people about their attitudes, but emotions are subjective in nature. And emotion does not speak for itself – it involves a large number of prior assumptions (e.g. everyone has their own experiences and we are all shaped by them ‘for good or bad’, and our past affects how we feel a great deal). In addition to this, presenting accounts of others’ emotions tends to privilege a particular rational discourse and denies the emotional character of research itself.

The potential methodological and ethical problems of emotion studies have not been recognised, due probably to the comparative novelty of emotion studies. There are also not only theoretical challenges but opportunities as well. (e.g. Sturdy 2003.)

Although the importance of emotion in contributing to organisational studies is becoming more and more recognised, little attention has been given to methodological issues. Each approach has both moral and political consequences including for example attempts to resist analytical closure or achieve openness and ambiguity. Alongside general methodological and critical issues, one concern is with theoretical and other research possibilities in the specific context of organisational studies. For example, including emotion as multidimensional embodied in institutional and labour process theories might serve to enrich insights and agendas as well as challenge determinism. It is also stated that both the commercialisation and authenticity of emotion present wider theoretical concerns which have been the focus in recent sociological theory and studies of emotion. (Sturdy 2003.) Table 3 presents different approaches to emotion research.
Table 3. 'Selected Approaches to Emotion Research: A Summary' (Sturdy 2003: 99).

<table>
<thead>
<tr>
<th>Approach</th>
<th>Possible insight</th>
<th>Privileges</th>
<th>Silences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>Short-term emotion dynamics</td>
<td>Emotion (compare feeling)</td>
<td>History</td>
</tr>
<tr>
<td>Interview</td>
<td>Construction of authenticity</td>
<td>Individualism</td>
<td>Real-time emotion</td>
</tr>
<tr>
<td>Autobiography/Participation Discourse</td>
<td>Rational-emotional interplay</td>
<td>Subjectivity</td>
<td>Objectivity</td>
</tr>
<tr>
<td>Social Structures</td>
<td>Power and emotional tension</td>
<td>History and cultures</td>
<td>Interaction and transience</td>
</tr>
<tr>
<td>Non-traditional Data</td>
<td>Non-rational knowing</td>
<td>Humanism/romanticism</td>
<td>Objectivity/closure</td>
</tr>
</tbody>
</table>

2.5.6 Emotions in IS literature

The emotional experiences of workers in the workplace have assumed greater primacy in organisational behaviour research (e.g. Ashkanasy 2004, Lord et al. 2002). The emotions are said to play a large role, for example in decision-making (Goleman 1998, Mayer et al. 2002).

In the IS discipline, it is in any case acknowledged that the traditional research on emotions has concentrated on purely cognitive aspects of human action and intentional behaviour (McGrath 2006). Researchers in human computer interaction (HCI) have become more and more interested in exploring the affective aspects of computing (e.g. Argyris 1971, Arhippainen 2009, Forlizzi & Battarbee 2004, Isomursu et al. 2007, McGrath 2006, Picard 1997). HCI studies have utilised a large number of theories from psychology (e.g. Isomursu et al. 2007, McGrath 2006, Picard 1997). In HCI research, Arhippainen (2009) and Isomursu et al. (2007), for example, have investigated emotions as a part of user experience in mobile use. Isomursu et al. (2007) explore the role of affect as an essential element in human-technology interaction. It is also claimed that 'emotions are at the heart of user experience' and influence how people plan to interact with products (Isomursu et al. 2007: 404).

McGrath (2006) has argued that people are seen as instrumental factors, obeying specific logics designed to promote organisational effectiveness in the research on work in organisations involved with technology. She emphasises that even while research has contributed to changes in the nature of work and to technologies developed for its accomplishment, there is still a lack of understanding of the emotions involved in work situations. In addition to this,
Isomursu et al. (2007) point out that it is hard to verbalise emotions which are elicited by products.

McGrath (2006), who herself explored the nature and role of emotions in IS innovation, states that the IS innovation literature attributes three main aspects to the emotional domain:

1. The dominant position seems to be that the literature says nothing of emotions, suggesting that IS research and professional practice are purely rational processes. This position has been claimed to be prevalent in much of the literature that deals with techniques and frameworks for systems development, strategic planning, project management and outsourcing.

2. The second aspect is acknowledging that affections are involved in the IS process but engaging in no substantive effort to give them analytical attention. The research on conflict in organisations, resistance to change and technology acceptance adopts this position. Research attention is focused on actors’ cognitive responses to ICTs, with the result that their emotions seem non-substantive – descriptors of the concept, subsumed in some more important concern, but not legitimate in their own right.

3. The third attitude adopted is to engage with emotions through a specific conceptual effort. Studies of this kind may vary in the significance and the role they attribute to emotions.

McGrath (2006) argues that by narrowing human agency to its cognitive dimensions, it is impossible to consider the totality of human capacities that are either positively or negatively engaged with IS innovation processes. In our article (Hekkala et al. 2009a) we explored how emotions influence project work. It was also pointed out in that article (Hekkala et al. 2009a) that cognitive (knowledge) and social (emotional) aspects are not mutually exclusive, and should be studied together. McGrath (2006) has also argued that we should understand emotions as ‘a constituent aspect of individuals’ moral conduct’ (McGrath 2006: 299).

McGrath (2006) suggests the next implications for IS research: the nature and role of emotions should gain analytical attention rather than assuming that emotionally charged behaviours are indicative or just cognitive concerns ‘dispositions and affections may suggest legitimate directions for an organisation rather than being disruptive behaviours that should be suppressed’ (McGrath 2006: 299–300).
2.6 Chapter conclusion

So far, I have presented the main issues of my understanding that I consider relevant for this research. My literature review contained five streams of literature: 1) general IS issues, 2) coordination issues and mutual understanding between people, 3) project governance issues, 4) power issues, and 5) emotions. Although they frame the research, they did not restrict me from including any relevant elements discovered during the data collection phase.
3  Research design and methodology

3.1  Research process

A researcher should be aware of his or her own background philosophy when carrying out their research. The issue of differing paradigms based on ontological and epistemological assumptions was brought to the fore by Burrel and Morgan in 1979, among others. Mingers (2001) has stated that a paradigm specifies the general set of philosophical assumptions, such as one’s ontology (what is assumed to exist), epistemology (the nature of valid knowledge), ethics or axiology (what is valued or considered right), and methodology (Mingers 2001: 242).

One’s background philosophy is based on assumptions of ontology, epistemology and methodology, it is argued (e.g. Guba & Lincoln 2000). According to Mjøset (2008), philosophical discussions include fundamental questions, whether they are called questions of metaphysics, ontology, epistemology or just ‘meta-theory’.

In the literature about methods a difference is usually made between the concepts of method and methodology (e.g. Carter & Little 2007, Mingers 2001, Scott 1996). In this differentiation, the ‘method’ refers to the practical realisation of the research, such as gathering or analysing data. The ‘methodology’, on the other hand, is a more broadly understood concept, and contains concrete ways to carry out research (methods) along with the ontological and epistemological engagement of the researcher. The methodological point of view challenges researchers to analyse the basic assumptions of the object of their study and essence of knowledge and hypotheses of science as part of the research progress. (e.g. Scott 1996).

It is also important to note that in the IS field it has been stated that ‘methodological assumptions indicate which research methods and techniques are considered appropriate for the gathering of valid empirical evidence. Which methods are considered appropriate clearly depend[s] on how the veracity of a theory is established’. (Orlikowski & Baroudi 1991: 8.) Gasson (1995: 2) has stated that ‘A methodology is more than just a method – the ‘how’ of information systems development, or a process-model. A methodology is a holistic approach: it embodies an analytical framework which is conveyed through intersubjective representational practices and operationalised through a ‘toolbox’ of analytical methods, tools and techniques’.
Mingers (2001: 241) has emphasised the way that words such as ‘paradigm’, ‘methodology’, ‘method’, and ‘technique’ are open to many various interpretations and that there is often confusion between the concepts ‘method’ and ‘methodology’.

These concepts are usually used inaccurately and interchangeable. Mingers (2001: 242) presents three connotations of the words:

- The most general is ‘method-ology,’ meaning the study of methods.
- The most specific meaning is when talking about ‘the methodology’ of a particular research study: in this case the term refers to the actual research method(s) used in a certain piece of research and in this sense, every study has its own individual methodology.
- The third usage is a generalisation of the second. Particular combinations of methods occur many times in practice, or are deliberately designed a priori and come to be called ‘a methodology’.

Mingers (2001: 242) has stated that it is difficult to distinguish between method and methodology. Mingers is concerned with combining not only research methods but also methodologies. Mjøset (2008: 40) stresses that methodology cannot be regarded ‘as a question of one set of impeccable normative principles’. Carter and Little (2007) emphasise the view that methodology connects research to theory, and discipline and different methodologies can encourage or discourage the development of substantive theories in the conduct of empirical work.

Taking into account this difference of opinion about method and methodology, confusion is caused when ‘method’ is used also to refer to the approach, which also includes assumptions about the research basis.

Methodological issues always reflect ontological and epistemological choices which have been made consciously or unconsciously, and selectivity is inevitable (Mingers 2001, Sturdy 2003). The methodology is thus more abstract and wider than the method.

Glaser (1978, 1992, 1998, 2003) also seems to leave space for different interpretations, and anyone who is interested in utilising the Glaserian grounded theory method has to think about her or his relationship with these interpretations. This can happen in two ways. First, the researcher can accept some previous interpretation which gives the researcher reason to believe that the interpretation is tenable. Or the researcher can forge his own interpretation, which means that he has to carefully read the original works of Glaser and has to make his own critical
interpretations of them. In this study I chose to read Glaser’s original works and tried to form my own interpretation.

In this work, I refer to grounded theory as a method or methodology for three reasons. First, many IS researchers introduce grounded theory as a method (e.g. Fernández 2004, Jones & Hughes 2004, Urquhart 2002, Urquhart et al. 2010) or methodology (e.g. Goede & Villiers 2003, Goulding 1999, Orlikowski 1993, Urquhart 2000). Some authors do not, however, follow any particular logic when referring to grounded theory either as a method or a methodology.

The second reason for discussing grounded theory as a method or methodology arises from Glaser’s (1994) criticism of Strauss and Corbin (1990), in which he points out that the latter authors’ approach cannot be regarded as a methodology. For Glaser it is only a method that produces a detailed but forced and predetermined conceptual description of the object of the study. This question of deductivity and inductivity has become a focal issue in the discussion among the developers of the grounded theory approach (see also e.g. Urquhart 2002).

The third reason comes from the fact that notwithstanding Glaser’s (1994) criticism towards Strauss and Corbin, Glaser (1978, 1992, 2003, 2004) is not consistent in his use of the concepts ‘method’ and ‘methodology’ (Glaser 2003: 94). He has a growing concern about the fact that it is easy to use and contaminate grounded theory methodology from a biased basis.

If we consider grounded theory on the one hand as a methodological reference and on the other hand as a method in narrow way, the offering for empirical research is different.

3.1.1 Ontological and epistemological assumptions

While ontology refers to the basic assumptions about the phenomena being investigated (e.g. Burrell & Morgan 1979, Orlikowski & Baroudi 1991), epistemology for its part refers to assumptions made about the nature of the knowledge concerning the phenomena being investigated (Burrell & Morgan 1979, Orlikowski & Baroudi 1991).

Orlikowski and Baroudi (1991:7) state that ontological questions are questions of ‘whether the empirical world is assumed to be objective and hence independent of humans, or subjective and hence having existence only through the action of humans in creating and recreating it’. Epistemology is defined by Schwandt (2001: 71) as ‘the study of the nature of knowledge and justification’. From the philosophical point of view ontology tries to answer the question of
what reality fundamentally is. The basic question of ontology can be conveyed as ‘What exists?’ The answer is very simple: Everything. So, modestly ontology has worked its magic when it is possible to map one form of existence from a real life situation onto a research object.

As a researcher, I believe that attitudes and views are changing slowly. One’s attitudes and views are changed by one’s personal experiences of life and changes in an individual do not necessarily cause changes in organisational culture. The researcher also has a phenomenological stance – the whole of the individual’s past and her or his experiences have a strong effect on what she or he is, what she or he thinks, how she or he acts, how she or he reacts in new situations, and how she or he sees the future. However, I do believe that there is some core thing behind humanity, which means that people are similar in essence, regardless of external factors.

3.1.2 Interpretive approach

‘The only reason we want to understand our problems is because we are planning to have them again.’ (Dwoskin 2005)

An interpretive approach provides a deep insight into ‘the complex world of lived experience from the point of view of those who live it’ (Schwandt 1994: 118). Klein and Myers (1999: 73) refer to Parmenides’ saying ‘You cannot swim in the same river twice’ in showing the view of interpretive researchers: organisations are not static and the relationships between people, organisation and technology are constantly changing, and as a consequence interpretive researchers are trying to understand a moving target.

Over the past two decades there has been increasing interest in utilising an interpretive approach in IS research (e.g. Ciborra 2004, Klein & Myers 1999, Myers 1997, Orlikowski & Baroudi 1991, Walsham 1995, Walsham 2001). Through interpretive research IS researchers are able to understand human thought and action in social and organisational contexts. Interpretive researchers have greater potential to produce deep insights into IS phenomena, including IS development and management issues. (Klein & Myers 1999: 67, Myers 1997, Orlikowski & Baroudi 1991).

Interpretive research focuses on the complexity of human sense-making, and on the belief that our knowledge of reality is gained through social constructions such as language, consciousness, shared meanings, and other artefacts.
Interpretivism highlights that researchers are a part of ‘production’ (Klein & Myers 1999, Orlikowski & Baroudi 1999).

Orlikowski and Baroudi (1991: 5) have stated that ‘Interpretive studies assume that people create and associate their own subjective and intersubjective meanings as they interact with the world around them. Interpretive researchers thus attempt to understand phenomena through accessing the meanings participants assign to them. Interpretive studies reject the possibility of an objective or factual account of events and situations, seeking instead a relativistic, albeit shared, understanding of phenomena’.

Ontologically, the interpretive perspective foregrounds the importance of subjective meaning as symbolic action when humans construct or reconstruct their reality. (e.g. Guba & Lincoln 1994, Newell et al. 2003, Orlikowski & Baroudi 1991).

Ontologically, interpretive IS research highlights that the social world is not a given. Humans produce the social world through their action and interaction (Klein & Myers 1999, Orlikowski & Baroudi 1991). The language used by humans describes social practices, and in understanding that social reality we have to understand ‘how practices and meanings are formed and informed by the language and tacit norms shared by humans working towards some shared goal’ (Orlikowski & Baroudi 1991: 14). Thus, choosing an interpretivist approach, the underlying epistemological belief is that knowledge can be obtained by getting inside the world of those generating it (e.g. Orlikowski & Baroudi 1991).

It is stressed (e.g. Klein & Myers 1999) that the interpretive research is not same thing as qualitative research, although these approaches have often been used synonymously. It depends upon the underlying philosophical assumptions of the researcher whether the qualitative research is interpretive or not. (Klein & Myers 1999.) Qualitative research has an emphasis on processes and meanings that are neither rigorously examined nor measured. Qualitative research as a concept is very broad and it is difficult to give an exact definition of it. In any case, qualitative researchers stress the socially constructed nature of reality, the close relationship between the researcher and what is studied. The aim of qualitative researchers is to get closer to the actors’ perspective through a detailed research process. There are many different paradigmatic views on how to carry out qualitative research, and the main point which differentiates these paradigms from each other is how the truth is understood. (Denzin & Lincoln 1994.) Grbich (1999) and Denzin and Lincoln (1994) identify positivist, postpositivist, critical and constructivist approaches. Despite the sustained critique, the dominant
paradigm in IS research continues to be positivistic in nature (Chen & Hirschheim 2004).

### 3.1.3 Case study design

According to Klein and Myers (1999: 69), in interpretive case studies researchers presume that ‘our knowledge of reality is gained only through social constructions’ (Klein & Myers 1999: 69). Yin (2003: 13) stresses that the case study is ‘an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident’. A case study can involve single or multiple cases and many levels of analysis. The main characteristics of a case study are that the aim of the research is to explore certain phenomena and to understand them in a particular context, and that the researcher uses multiple methods for collecting data. (Yin 1984.) However, Yin is writing from a positivist perspective – what he means by ‘phenomena’ is not what an interpretive researcher means.

Robey et al. (2000: 133) maintain that ‘case studies provide the greatest detail on the role of experience’ and that case studies emphasise the rich context in which the phenomena occur (Eisenhardt & Graebner 2007). Eisenhardt (1989: 548) also recommends the use of the case study approach if ‘little is known about a phenomenon, current perspectives seem inadequate because they have little empirical substantiation, or they conflict with each other or common sense’ (Eisenhardt 1989: 548). As stated, there is a lack of studies on emotions in the IS field, and a case study approach gives a unique opportunity to approach this area of research. It is also acknowledged that the case study setting is very valuable in understanding human computer interaction in the IS field (Orlikowski & Baroudi 1991). The case study approach is also discussed as a vehicle for theory building (Eisenhardt 1989), which suggests that the case study approach complements the grounded theory method.

Four types of analytical generalisation from interpretive case studies are suggested by Walsham (1995):

- Development of concepts: a concept can be part of several concepts, propositions and world views which form theories
- Generation of theory: a framework could suggest areas for theoretical development
- Drawing of specific implications: the implication can provide a good description of the case study which was investigated
- Contributions of rich insight: including insights/results that are not easily categorised, for instance as concepts or theories

The major advantage of case study methodology for this research is that it makes it possible to capture significant characteristics of IOIS phenomena, providing a deep and broad view of the particular phenomena (e.g. Eisenhardt & Graebner 2007).

Within this longitudinal case study and interpretive research design, the core focus in this study is on project members as creating meaning regarding the project work. Meaning is seen as being created through language. It is my belief that these constructs are easily accessed through narrative stories.

### 3.2 Narrative approach

Some researchers have placed an emphasis on ‘capturing emotion in process’, through, for example, shadowing and ‘narratives based on live dialogue, stories, observations, diary accounts’ (see Sturdy 2003: 88).

Over the past few decades there has been widespread interest in the use of narratives in IS research, and this is accepted as one valuable way of gathering data (Alvarez & Urla 2002, Bartis & Mitev 2008, Brown & Jones 1998, Fincham 2002, Hirschheim & Newman 1991, Napier et al. 2009, Tan & Hunter 2002, Webb & Mallon 2007). While there has been a growing interest in utilising a narrative approach in the IS field, organisational researchers have for a long time been highlighting the value of narratives (e.g. Gabriel 1991, Martin & Meyerson 1988, McConkie & Boss 1986, Taylor & Lerner 1996).

The narrow definition of narratives is that they are stories of specific events. The thought is that narratives are witnessed events with a linear order (Barry & Elmes 1997, Labov 1982). According to Ricoeur (1991), narratives include three basic relations. The first is the relation between an individual and a world, the second is the relation between an individual and another individual, and the third is the relation between an individual and him- or herself. These three basic relations are analysed as follows: the first is a matter of world view (how we believe that we can gain information and knowledge, and how we interpret that information and knowledge), the second includes information on how we create a...
mutual understanding, and the last is to do with a human being’s self-
understanding.

Chatman (1978: 19) has identified a narrative structure through the following components: 1) story – the content or chain of events, 2) existents – the characters, and elements of the setting, 3) discourse – the expression, the meanings of the content. Story depicts ‘what happens’ and ‘what happens to whom’, and discourse involves ‘how’ and ‘how the story is told’. According to Czarniawska (1998), narratives are a sense-making device. Czarniawska has also stated that narratives constitute ‘the core of organisational knowledge’.

The focus of the narrative approach is understanding how people deal with experience and construct stories (e.g. Riessman 1993). That is to say, interviews are critical for the creation of narratives because that is how people construct their experience into meaningful wholes. Czarniawska (1998) points out that meaning is constructed through a clear process of interaction. Czarniawska holds that narratives can take various forms of stories and themes. Stories are thought to interpret particular settings and events in an organisation whereas themes are thought to be more like interpretive links between stories and episodes. Sarbin (1995) says that narratives reveal that human activity and experience is filled with meaning, and stories are the way in which meaning is communicated.

Thompson (1997) has also stated that the interpretation of narratives is iterative. He argues that in the first phase the understanding of the narrative is important and in the second phase the researcher identifies emergent themes. Barry and Elmes (1997) have pointed out the two-fold nature of narratives: are they a structural phenomenon, or a communicative means? The first of these asks whether we see a narrative story as a sequence of events, and the second asks whether the story has cultural meanings. In this study narrative stories include both of these perspectives.

A narrative approach leads us to rich, in-depth understandings (e.g. Brown & Jones 1998, Tan & Hunter 2002), in particular understanding how human actions and interpretations are related to the social, cultural, and institutional setting, and how they occur through the various IS implementation phases (Bartis & Mitev 2008).

In the IS field, Fincham (2002: 2) has stated that the narrative approach permits the study of ‘symbolic and rhetorical aspects of systems development’. He argues that utilising narratives we can, for example, consider success and failure as an interactive discourse. He emphasises that ‘narratives of success and failure are reflexive mechanisms that shape technical change, and involve a type
of social labelling that influences whether courses of action are accepted or rejected’ (Fincham 2002: 6). So Fincham thinks that we should see narratives as problem solvers rather than as stories of successes and failures.

A narrative approach was chosen because it has been said that stories have a meaningful power to convey different meanings not only to individuals but also to collectives. They have also been said to contain the means for the negotiation of shared meanings in an organisation (see e.g. Barry & Elmes 1997, Czarniawska 1998, Fincham 2002, Ricoeur 1992). As stated in Fincham’s article (2002: 114), ‘behaviour and actions are influenced by sense-making and sense-making can be affected by narratives’.

**The possibilities and challenges when investigating emotions**

In contrast to positivist approaches to emotion which seek out underlying variables and causal factors, interpretivist accounts are more descriptive and processual, to be judged partly on whether they ‘bring emotional experiences alive’ (e.g. Denzin 1990: 86). Following Denzin (1990), and given that this thesis is concerned with exploring emotions in IOIS projects, an interpretive philosophy seems appropriate (Klein & Myers 1999).

Interpretive philosophy is concerned with exploring emotion as lived experience and seeking varying accounts of this. For example, and in contrast to most academic texts on organisational life, worker and executive autobiographies, narratives and memories typically reveal a different, often richer and more explicitly emotional picture (Sturdy 2003: 88).

Some writers have extended discussions to the way in which emotion is written about as research, the relationship between the researcher and the researched, and the associated power effects. Therefore, we can consider research as not just a rational activity, but also as a highly political, moral and emotional one in its processes and outcomes (Sturdy 2003: 93).

It is acknowledged in this study that studying emotions is a very challenging and ambitious task. Emotions can be explored in different ways. There are a large number of both possibilities and challenges. For example:

1. The definition and classifications of emotions. Some researchers for example define love as an emotion, while others claim that love is not an emotion (Luhmann 1986). In his book *Love as Passion (Liebe als Passion)*, Luhmann adopts system theory to help interpret how love has been represented and
what kind of historical changes can be found in this interpretation. Luhmann sees love merely as a form of expression which is grounded on cohesive discourse – these forms of expression help to communicate efficiently in situations which are unusual.

2. It is easy to agree that some emotions and feelings are very difficult and sometimes even impossible to control (for example, blushing) (e.g. Pugh 2001, Sturdy 2003), and emotional gestures may come to shape, rather than reflect, feelings.

3. Some cultural analysis socialises emotion. In this interpretation, emotions and feelings are social. Sturdy even states that ‘they are scripted and others’ immediate interpretation(s) may influence what a person feels, especially if it is initially inchoate.’ (Sturdy 2003: 86). It is important to incorporate structure into the analysis, partly because it goes some way to de-individualising or collectivising emotion as well as linking related patterns of power. (This might be explored in terms of broad class, status and gender patterns). It would be uncontentious to assert that emotion is intimately linked to social structures (or other conceptions) of power and inequality. (Sturdy 2003: 91).

4. Emotions cannot be understood solely on the intellectual level (Sturdy 2003).

5. Analysing emotion in narratives (emotion talk/emotional discourse) may be problematic.

3.3 Multiple sources of data

‘What data the researcher is getting is the problem, not what is accurate reality’ (Glaser 2003: 93).

Data collection and narratives

The data for this research was elicited by means of in-depth interviews, observations of project meetings, diaries, project memoranda and emails sent by project members to each other during these years. Other secondary data (data from previous projects) was also analysed. The main data was collected in the form of narratives. Because grounded theory studies study different processes (Glaser 1967), the narrative approach supports us in gaining, analysing and understanding the interpretive processes involved in the interview context.
Fincham (2002) states that the narrative approach is very useful in understanding innovation in IT projects; Fincham argues that the narrative perspective sees systems failure or success in more objective terms. Through narratives there is an emphasis on process. The process perspective is concerned with similar forms of organisational action, and is inherently critical of the rationalist perspective.

This study then is meant to take care of these particular aspects of data collection: my epistemological assumption in this study has been that findings are literally created as the investigation proceeds and I have also chosen the interpretive perspective, where the researcher is a vehicle by which reality can be revealed (Guba & Lincoln 1994).

In this dissertation, emotions are examined from an ‘emotional talk’ perspective. At first, I intended to take an emotional discourse perspective but critiques of discursive analysis in the study of emotion encouraged me to choose a different way to analyse them. It is argued that just because understanding is necessarily linguistic, this does not mean that language alone constitutes reality (Sturdy 2003: 89).

Emotions have received little attention methodically, and the lack of research of emotions is worrying and problematic. And as stated earlier, methodological issues always reflect choices, which have been made consciously or unconsciously, and the choices always reflect some epistemological assumptions. Selectivity is inevitable. (Sturdy 2003.) Later in this study, the selectivity – why I chose some methods instead of others – is made clear.

Data collected in the project ranged from in-depth interviews (250 pages of transcripts), to observations of project meetings (20), diaries (80 pages of notes), 48 memoranda from project and steering group meetings, and emails (over 700) sent by project members to each other during these years. Secondary data (the data from a previous project) was also analysed. Interview data was recorded and was transcribed in full.

It is recommended that research material should be collected in several phases of research (Glaser 1992, Glaser 1998, Glaser 2001). This approach was followed in this longitudinal study of an Information Systems (IS) project. The IS project was carried out between 2004 and 2006. Glaser (1992, 1998) also recommends the collection of rich, versatile data in the form of different interviews, observations, and diaries, and the data of this study followed this directive. The validity of the research was improved by using several mutually-supportive sources.
The collection of data in GT studies is a very important and critical phase, because the process of analysis begins in the data collection phase. The starting point is that everything is data. (Glaser & Strauss 1967, Glaser 1992, Glaser 1998, Glaser 2001, Glaser 2003.) These instructions were taken into account as well. The data sources collected were extensive and the types are summarised below (Table 4).

Table 4. Data sources collected.

<table>
<thead>
<tr>
<th>Interview transcripts</th>
<th>Project meeting observations</th>
<th>Researcher diaries</th>
<th>Project memoranda</th>
<th>Project emails</th>
</tr>
</thead>
<tbody>
<tr>
<td>250 pages</td>
<td>20</td>
<td>80</td>
<td>48</td>
<td>Over 700</td>
</tr>
</tbody>
</table>

The timeline of data collection (Table 5) shows interview periods, the timing of meetings and other project observations, and the period of emails sampled.

Table 5. Timeline of data collection.

<table>
<thead>
<tr>
<th>Year</th>
<th>Interview periods, the timing of meetings, and other project observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Interviews: 30th Aug 2004 (Sophie); 13th Sep 2004 (Thomas); 8th Oct 2004 (Simon) Transcriptions: September-November 2004 9 project meetings memos Observations: March 2004: Several representatives of the user organisation (Alpha, Beta, Gamma) met each other, Observations of project meetings: 6th February 2004, 19th March 2004, 26th April, 25th May, 11th June, 30th August, 6th October, 1st November, 7th December E-mails: 370</td>
</tr>
<tr>
<td>2005</td>
<td>Interviews: 10th Jan 2005 (Lucy); 14th Feb 2005 (Ruth); 21st Mar 2005 (Lisa); 21st Mar 2005 (Kathy) 20th Apr 2005 (Sarah &amp; Sheila); 27th Apr 2005 (Matthew) Transcriptions: January – June 2005 11 project meetings memos Observations of project meetings: 10th January, 8th February, 1st March, 21st March, 4th May E-mails: 229</td>
</tr>
<tr>
<td>2006</td>
<td>Interviews: 29th Sept 2006 (Jack &amp; Daniel); 5th Sept 2006 (John) Transcriptions: September-October 2006 9 project meetings memos Observations of project meetings: 1st June, 18th August, 4th October, 2nd November, 28th November E-mails: 139</td>
</tr>
</tbody>
</table>
Glaser (1998, 2001) presents five types of data: baseline data, proper line data, interpretive data, vague data and conceptual data. He describes data as ‘what the researcher is receiving’ (2002: 1). According to Glaser (1998), in proper line data an interviewee tells the researcher what she/he supposes that researcher wants to hear about a phenomenon. In my case this became evident when, for example one interviewee said ‘Do you want me to tell you something about collaboration…?’.

In interpretive data an interviewee describes the phenomenon of the research subject to the researcher in a ‘professional way’. Vague data consists of interviewees ‘waffling’, where the interviewee ‘doesn’t say anything but just gives vague impressions. She/he reveals as little as possible about the subject area. And in conceptual data interviewees are speaking using abstract concepts.

According to Glaser (1998), it is essential that the researcher becomes aware of the many levels of research material. The benefits and disadvantages of data types can be exploited in research only when the researcher becomes aware of and understands different data types. In Glaser’s 2003 book, four types of data are presented: he no longer includes conceptual data. Glaser (1992, 1998, 2001) emphasises that when the same concepts are found to occur over and over again the saturation of core process can be considered as reliable.

### 3.3.1 In-depth interviews

This case study research studied 8 organisational project teams and 2 inter-organisational project teams, in a large, three-year IOIS development and implementation project. This research tracked the whole IS project and no framing questions were used in research interviews; the focus was entirely on the experiences of the project members.

Over the three year timeframe of the project, 36 different people were involved. Some people were involved only once or twice in project meetings. There were 20 active project members, 14 of whom were willing to be interviewed. Among the interviewees were managers from the steering group, representatives of suppliers, members of the research organisation associated with the project, and users active in the project. The interviews lasted from 45 minutes to two and a half hours. I did not select informants: I asked everyone to be interviewed but not everyone was willing. However, all project material and email communication was used as material for this dissertation to ensure I reached a state of theoretical saturation. As stated earlier the validity of the research was improved by using mutually supportive sources. The interviews were special due
to their lacking leading questions. This open nature enabled the interviewees to explain their deep feelings that would probably not have been captured otherwise. The interviewees told their own story about the project and its progress. It has been stated that researchers using grounded theory are less focused on the subjective experiences of the individual and are more attentive to how subjective experiences can be abstracted into theoretical statements about causal relations between actors (Suddaby 2006). However, it is recommended by Glaser (1992) that the researcher takes a free approach, for example allowing interviewees to talk freely about the subject matter. Suddaby (2006: 635) accentuates that the primary interest is not in the stories themselves. ‘Rather, they are a means of elicit information on the social situation under examination.’

The guiding principle for the interviews was Glaser’s (2004: 96) instruction ‘Always keep in mind that GT is an inductive approach that calls for emphasis of the experience of the participants’. Robey et al. (2000: 134) state that ‘A fundamental problem with experience is that recent experience must always vie with older experience’.

The open approach also enables the researcher to become confident that the processes and phenomena arise from the data (Glaser 1992, Glaser 1998, Glaser 2001). It is also recommended by Orlikowski and Baroudi (1991: 14) that when carrying out interpretive research, the researcher ‘avoids imposing externally defined categories on a phenomenon’. It is also said that through narrative stories we are able to get close to people’s experiences (Clandinin & Connelly 1994).

The qualitative interview is one of the most important and common data gathering tools in qualitative research in the IS research field. It is argued that there have also been some problems in the IS field: the qualitative interview is often taken for granted and ‘seen as a relatively straightforward means of gathering data’ (Myers & Newman 2007: 3). The qualitative interview is an excellent way to gather data but researchers have often failed to explain difficulties and problems in the final research (Myers & Newman 2007).

Unstructured interviews are defined by Fontana and Frey (1994) as an attempt to understand the complex behaviour of members of society without imposing any a priori categorisation that may limit the field of inquiry. Myers and Newman (2007) describe the unstructured interview as an incomplete script and say that the researcher needs to use improvisation.

Sturdy (2003: 89) emphasises that ‘indeed, it is only through language, as a carrier of meaning, that we can know or, at least, think about anything, particularly emotion’, and as Gerth and Mills (1953: 274) put it, ‘language helps
turn impulses into defined purposes, inchoate sensations into perceptions, vague feelings into known emotions’ (See Sturdy 2003: 89).

### 3.3.2 Observations, field notes, project memoranda, emails

Observation as a technique can lead to deeper understandings than interviews alone, because it provides knowledge of the context in which events occur. It may enable the researcher to see things that participants themselves are not aware of, or that they are unwilling to discuss (Patton 1990).

The observational material was collected from project meetings where the researcher recorded her observations. A total of 29 project group meetings took place during the three-year period of the study and the researcher was present at 20 of them.

Observation is not a new approach to the investigation of emotions: there is a very long and continuing tradition of exploring emotion and feelings through the observation of verbal and non-verbal expressions (e.g. Darwin 1955, see also Sturdy 2003).

Moreover, the dynamic and interactive nature of feelings and emotions can be revealed through observation of social (inter)action over time such as in ethnography. However, observation alone may reveal little about the actor’s perceptions, physical condition (for example tiredness) and immediate and biographical/cultural history, each of which may provide insight into the emotional context and process. (Sturdy 2003: 87.)

Indeed, some define feelings in terms of perceptions in relation to context. These issues, combined with cultural sensitiveness over feelings and their expression in certain contexts, often prompt the researcher to probe more deeply ‘under the surface’ in an attempt to know others’ ‘real’ (or ‘hidden’) feelings and/or the underlying (for example, subconscious) causes of these. Some approaches mistrust actors’ accounts in seeking to uncover the ‘truth’ in terms of authentic feelings and/or the subconscious. Both are, of course, central issues in research on emotion and subjectivity (Sturdy 2003: 87), and there is not enough scope here to explore them fully.

The nature of the field notes was that of a personal research diary (Schultze 2000) as opposed to a project protocol. Nonetheless, the diary met the criteria described by Schultze (2000): authenticity (the role and identity of the researcher is explained in the text), plausibility (the text is structured, following the timeline according to the empirical case and project meetings), and criticality (the diary
helps to understand the attitude of the researcher and questions the objectivity of the data).

3.4 Grounded theory as method for ‘theory building’

The grounded theory methodology was developed in the late 1960s for studies that sought to open up new perspectives on the phenomena under investigation. The approach was designed for research domains with little theory or for the study of action that takes place in a new situation with a high probability of unanticipated factors (Glaser & Strauss 1967). Grounded theory methodology was conceived to be a way of thinking and conceptualising the data. The methodology was described as a data-based formulation of theory where the main arguments of the study arise from the data. In other words, the starting point was to let the data tell the story, on the basis of which a theory was to be formulated.

At a later stage, the research paths of the developers of the grounded theory methodology diverged, partly in a radical way, into Glaserian (inductive) theory formation (Glaser 1978, Glaser 1992, Glaser 1994) and Straussian (inductive-deductive) theory formation (Strauss 1987, Strauss & Corbin 1990, Strauss & Corbin 1994). Yet, to understand and to be able to apply the grounded theory method/methodology in an appropriate way, we must be aware of its ontological and epistemological basis and the subsequent assumptions developed from it (e.g. Urquhart 2002, Urquhart 2007, Urquhart & Fernández 2006, Urquhart et al. 2010). That is to say, the choice of the school of thought affects the progress of the research.

Glaser and Strauss’s original (1967) comparative method is a four-stage procedure in which theory building is initiated by coding. At the first stage, the items of data to be coded are incidents. Incidents are classified into as many categories as they seem to require. Coding is guided by the basic principle of the comparative method: when an incident is coded by assigning it a descriptive category it is compared to other similarly coded incidents. This results in the emergence of the distinctive theoretical properties of the categories. Systematic recording of the observations constitutes an essential part of the method. In this way the categories undergo constant review and modification during the coding process. (Glaser & Strauss 1967.)

The second stage involves an effort to integrate the categories. The level of analysis changes from the comparison of incidents to the comparison of the categories. This is followed, at the third stage, by a specification of the theory. A
comparison now takes place between the categories and the emergent theory. It is now the task of the researcher to identify the compatibilities of the data and describe the data using a minimum number of categories. Reduction in the number of categories has a specifying effect on the emergent theory, which is capable of explaining an increasing amount of the data. A state of theoretical saturation is achieved when new incidents in the data can be accommodated into the existing categories of the model and do not bring in any new information. At the fourth stage, a theory is formulated on the basis of the conceptual categories identified in the course of data analysis. (Glaser & Strauss 1967.)

3.4.1 Grounded theory method – the Glaserian vs. Straussian version of grounded theory

The major differences between Glaser and Strauss

The common objective of the two schools is to generate a theory. The grounded theory methodology can be adopted when the aim of the study is to create new theoretical structures, identify new concepts, specify previous concepts of theories, or to define the core concepts relating to a research problem. (Glaser 1978, Glaser 1994, Strauss & Corbin 1998). Despite the fact that the common objective of Glaser and Strauss and Corbin is to generate a theory, this is at the same time inevitably controversial. The core question about differences is related to discussion about the generating theory (emerging or forcing).

Starting point: method or methodology

The grounded theory methodology was developed in the late 1960s to serve as a data-based tool of theory generation. The focal research challenge of the grounded theory methodology was defined as the data-based generation of theory which explains the target phenomenon and its changes in an optimal way. After the research paths of the developers of grounded theory methodology diverged, Glaser (1994) levelled the strong criticism at Strauss and Corbin’s approach that it cannot be regarded a methodology. Glaser’s discussion of method or methodology relates strongly to the question of emerging vs. forcing.

Later, Glaser (2003) also emphasises that the GTM was not thought up based on research maxims taken from positivism or symbolic interactionism. According
to Glaser (2003: 81), the one very general problem in the GTM is choosing a methodology. He is worried about the fact that it is so easy to do GTM research for the wrong reasons. In Glaser’s opinion there is no ‘how’ to choose a methodology.

Research questions

The epistemological differences between the Glaserian and Straussian lines of thought become evident in considerations relating to the formulation of research questions. According to the Straussian school, research questions can be set beforehand, either as externally given, inspired by the literature, or emerging from personal experience. According to Strauss and Corbin (1990), the researchers make a contribution by bringing along their experience and erudition, because, as a result of this, existing theories inform the process of data analysis in a significant way.

Glaser (1978) takes a critical attitude towards the use of categories that have been derived from pre-existing theories and interprets it as forced theory formulation and an abandonment of the principle of emergence. In Glaser’s (1992) opinion, a predetermined research problem unnecessarily burdens the research process because the researcher is bound to ensure that the data contains an adequate number of instances of the problem. Glaser (1992) thinks that a focus on predetermined problems prevents researchers from identifying real problems. Thus questions relating to the preconceptions of the researchers are not presented because problems are not determined prior to the process of data analysis. Moreover, according to Glaser (1992), questions should never be directly asked of the interviewees because that would lay constraints on emergence. Glaser recommends using very open questions.

The collection, coding and analysis of data

The study procedure and the method of data collection also vary in the two schools. According to Glaser’s (1978, 1992) line of thought, it is not possible for the researcher to decide the study procedure beforehand, nor to decide the type and amount of data to be collected. The process of data collection is guided by theoretical sampling. Theoretical sampling informs the process of data collection and tells the researcher where to go next. Theoretical sampling is actually the process of data collection that is needed for theory production. Theoretical
sampling ends when each category has been saturated, developed and integrated into the emergent theory. (Glaser 1992.)

One of the focuses of the Straussian perspective is to collect data about what people do or do not do when acting or interacting, how circumstances change, what consequences action may have, and what strategies are used (see Strauss & Corbin 1990). According to the Straussian approach (Strauss & Corbin 1990, Strauss & Corbin 1994), theory is perceived to develop through systematic data collection and continuous theoretical analysis. Thus the aim of the Straussian analysis is a verification of the hypotheses formulated on the basis of data analysis.

For Strauss and Corbin (1990, 1994), theory generation involves the development of conceptual categories through systematic coding procedures (open, axial and selective). During the coding, the constraints of the coding paradigm and the conditional matrix must be considered at all the levels of theory generation. Thus Strauss and Corbin (1994) equate theories with the research process. When the circumstances change at any level of the conditional matrix, the effects are seen, according to Strauss and Corbin, at the level of the validity of the theory.

The Glaserian approach (1992) uses systematically different methods to produce inductive theory from a substance field. Glaser (1992) sees grounded theory research as the study of abstract problems and the related processes. Observation and the ideas arising from the data guide conceptualisation and theory generation around the core concept. In the Glaserian way of thinking, the analyser does not have to find preconceived circumstances, consequences, strategies or relationships.

The Glaserian process of data analysis differs from the Straussian one in terms of the steps included. The process of constant comparison as described by Glaser combines open coding, selective coding, theoretical memos, sorting, and sorting by existing theories. Memos are the theorising write-up of ideas about the codes and relationships as they strike the analyst while coding (Glaser 1992). These memos help with the discussion of the categories in the thesis or paper. In the Glaserian approach, data analysis and synthesis take place simultaneously rather than sequentially because the methodology aims to find the core process. (Glaser & Strauss 1967, Glaser 1978, Glaser 1992, Glaser 1998, Glaser 2001, Glaser 2003.) Urquhart et al. (2010) also describes the process of constantly comparing instances of data. Analysis and concept building happens through overlapping data collection and analysis, using constant comparison.
**The process of generating theory: induction, deduction, verification, and sources of data**

The epistemological foundations of the Glaserian grounded theory are manifested in inductive, data-based generation of theory as required by the original grounded theory methodology. Glaser has adhered more closely to the original requirements of the methodology than Strauss (1987) and Strauss and Corbin (1994), who accept deductivity side by side with inductivity. The deductive approach enables the pre-research choice of theories and hypotheses.

GT methodology has traditionally been seen as inductive theory formation (Glaser & Strauss 1967). The question of inductivity and deductivity has become central in the discussion among the developers of the grounded theory approach. The stress laid on induction is of interest in grounded theory studies because in their book published in 1990, Strauss and Corbin themselves do not actively advocate a separation from the original methodology and Glaser’s views. When comparing their new book with previous literature on the topic (e.g. Glaser 1978, Strauss 1987), Strauss and Corbin (1990) point out that there are only a few theoretical or methodological deviations. Strauss and Corbin (1990) even recommend their book to those interested in inductively produced theory and state that the theory created using the grounded theory method is inductively inferred from the investigated phenomenon.

According to Strauss and Corbin (1994), too strict an adherence to induction may result in sterile and dull research. Moreover, Strauss and Corbin (1994) point out that Glaser and Strauss (1967) underestimated the potential influence of existing theories and the undeniable fact that trained researchers are theoretically sensitised. Glaser (1998), for his part, advises researchers interested in the grounded theory methodology to avoid Strauss and Corbin’s (1990) book *Basics of Qualitative Research* because it produces, according to Glaser, forced and predetermined conceptual descriptions which in spite of their sophistication do not arise from the data.

The fact that Glaser and Strauss have not concentrated on thinking about the questions of induction, deduction (and abduction) profoundly is especially interesting. However, this is not an excuse to ignore the epistemological and ontological issues surrounding the grounded theory method. It has been stated that it is important for any researcher using grounded theory to be conscious not only of what grounded theory is not but also what grounded theory is (Suddaby 2006).
On the other hand, it is not easy to identify differences between the questions of inductive and deductive processes, because the deductive process includes inductive phases and the inductive process includes phases of deductive logic (Glaser & Strauss 1967, Glaser 1992).

### 3.4.2 Grounded theory studies in IS

Grounded theory has been a frequently used research method in various disciplines, especially in sociology, psychology and health sciences, ever since its development. To date, there have been various different ways to clear up the quiddities of the grounded theory method in many disciplines, and many incongruities still persist in many fields (e.g. Urquhart 2007).


It has been frequently used in qualitative IS research and it is unquestionably one of the methods/methodologies which have been interpreted in various, nuanced, and even conflicting ways with many myths (e.g. Mitrovic & Bytheway 2006, Suddaby 2001, Urquhart & Fernández 2006, Urquhart et al. 2010). Urquhart (2002) points out that the grounded theory method has a long future in IS, because of its usefulness. So, the philosophy, practice, and the various uses of the grounded theory methodology in IS are well worth debating.

As already stated, since 1990 grounded theory has evolved into two distinct versions (Urquhart 2001, Urquhart 2007, Urquhart & Fernández 2006, Urquhart et al. 2010). This occurred on the publication of Strauss and Corbin’s (1990) book, which is a distinct departure from the classic ‘discovering of theory from data’ in Glaser and Strauss’s seminal (1967) book introducing grounded theory. The 1990 book helped popularise grounded theory and is widely used; however, it has also been described as rather formulaic and overburdened with rules (Kendall 1999). It is acknowledged that most people in the IS research field think that Strauss and Corbin (1990) is the definitive book on grounded theory (Urquhart 2001). Given this view, most grounded theory studies in the field of IS science are based on the approach of the Straussian school (see e.g. Calloway & Knapp 1995,

One problem in the IS field has been that many IS researchers have applied the grounded theory method without knowing that there are two strands of GTM. In the IS context there are still few inquiries investigating this issue in depth (Urquhart 2007, Urquhart & Fernández 2006, Urquhart et al. 2010). As stated, an awareness of the differences between the schools of thought may help IS researchers choose a methodological approach most appropriate for their study (Urquhart et al. 2010).

Even though the objective of this thesis is not to discuss the philosophical foundations of the forefathers of grounded theory or the subsequent assumptions of grounded theory profoundly, some words of explanation of these foundations are appropriate, since there has long been an interest in having a conversation about how we adapt grounded theory in the IS field or how we are able to evaluate grounded theory studies if we are not aware of the philosophical assumptions of the studies (e.g. Bryant 2002a/b, Urquhart 2001, Urquhart 2002, Urquhart 2007, Urquhart & Fernández 2006, Urquhart et al. 2010).

An examination of philosophical foundations of grounded theory shows the complex nature of the philosophical issues. The discussions of the forefathers of the grounded theory method are very practical in nature (Glaser & Strauss 1967, Glaser 1978, Glaser 1992, Glaser 1998, Glaser 2001, Glaser 2003, Strauss & Corbin 1990). In addition to this, the subsequent assumptions made about philosophical issues increase this complexity. The philosophical foundations of the forefathers of grounded theory have been vehemently debated in the IS field and elsewhere. (See e.g. Bryant 2002a/b, Urquhart 2002).

There has been debate about whether the grounded theory method 'carries its philosophical baggage in the shape of interpretivism or positivism inherent in the method' (Urquhart & Fernández 2006: see also Bryant 2002a/b, Urquhart 2002). As noted by Urquhart (2002), there have been various different ways of classifying grounded theory, for example as critical realism (Annells 1996), as philosophical hermeneutics (Thompson 1990) and as constructivism (Madill et al. 2000). Bryant (2002) believes that the grounded theory method is at heart phenomenalist.

So, the researcher who starts to carry out grounded theory research inevitably encounters some challenges. One challenge is that the view of the paradigm (the
questions of philosophy of science and the ways of carrying out GTM research) is not coherent.

There are some very valuable articles and sections of books and articles in the IS fields which open up the complexity of the method and give some valuable guidance as to how to apply the grounded theory method in an appropriate way (e.g. Urquhart & Fernández 2006, Urquhart 2007, Urquhart et al. 2010).

There have in any case been different emphases as to how we should see the grounded theory method, and many kinds of interpretations have been applied to it. Bryant (2003: 1) criticises Glaser’s texts as incoherent and inconsistent and ‘like a poor piece of tabloid journalism’. Varying assumptions and perspectives underlie the introduction of the grounded theory method/methodology in IS studies.

For example, according to Pries-Heje (1992), grounded theory provides a systematic technique for the development of substantive theory that meets the criteria of ‘good’ science, while Orlikowski (1993) considers grounded theory worth adopting because its inductive, contextual and procedural characteristics are useful in investigating change. Urquhart (1999), for her part, points out that grounded theory offers well-signposted procedures which aim to produce a theory that is precise, rigorous and capable of replication. Rowland’s (2005) target, on the other hand, is to provide guidance for carrying out research using an interpretive framework to build a theory of IS practice.

Moreover, Galal and McDonnel (1997) point out that grounded theory supports rigorous analysis of qualitative data and that it is well-suited to use in the evolution of a first requirements model. For Jones and Hughes (2004), grounded theory is a method that provides practical guidelines and procedures for the collection and analysis of qualitative data. As the above discussion indicates, the grounded theory studies of the IS field show different starting points and approaches to the application of the method/methodology. Urquhart et al. (2010: 358) state that in IS, ‘grounded theory has proved to be extremely useful in developing context-based, process-oriented descriptions and explanations of IS phenomena’.

Urquhart holds that ‘GTM is, first and foremost, a method, and indeed all the writings of the founders are bound up with this concern, rather than philosophical issues’ and that ‘One could argue that, as long as IS researchers are clear about their own philosophy, GTM can then be subsequently located in any paradigm as a way of analysing data’ (Urquhart 2002: 47).
In the IS field, the grounded theory method is classified primarily as a qualitative research method for gathering and analysing data (e.g. Myers 1997, Urquhart 2002, Urquhart 2007, Urquhart & Fernández 2006, Urquhart et al. 2010). It is important in any case to recognise that grounded theory is not the same as qualitative research. Glaser (2003) is concerned that researchers should not mix grounded theory with qualitative data analysis because this blocks the real grounded theory (Glaser 2003). It is pointed out in the IS field that ‘the major difference between grounded theory and other qualitative research methods is its specific approach to theory development – grounded theory suggests that there should be a continuous interplay between data collection and analysis’ (Urquhart et al. 2010: 377). Urquhart et al. (2010: 361) crystallise their view that ‘as a research method, grounded theory is independent of the underlying epistemology’. Given this, Urquhart et al. (2010) believe that all empirical research is always also ontologically committed.

It has also been argued that although studies of the grounded theory in IS have attained prominence, these studies have been of a relatively low level of theory development. Researchers have been criticised for using grounded theory only as a coding method, and the term grounded theory itself as more ‘a blanket term for a way of coding data’ (Urquhart et al. 2010: 358). A concern has also been raised that grounded theory ‘is often used as rhetorical sleight of hand by authors who are unfamiliar with qualitative research’ (Suddaby 2006: 633).

Urquhart et al. (2010: 358) point out that the strength of GT is its ability to ‘point to dozens of instances in the data that relate to it’. They also state that the nature of data in grounded theory can be seen as twofold: the data can be seen as a strength of grounded theory but also as an Achilles heel of the method. They think that one reason for this might be ‘the bottom up derivation of the generated theory which makes it difficult to think abstractly’ (p. 372). That is to say, the use of grounded theory has been seen as limited in the IS field. It is also suggested that grounded theory is a method which could help to generate new theories in IS.

Urquhart et al. (2010) present guidelines for conducting and evaluating grounded theory studies in IS. These guidelines were presented in order to help both to raise the quality of studies and to contribute to theory development in the IS field. These guidelines contain many jewels of illumination: for example, to date no research in IS using GT has attempted to articulate a formal theory (Urquhart 2007), and Glaserian grounded theory studies are still rare (e.g. Diaz 2007, Hekkala et al. 2009a/b). Glaser’s evolving position has not been analysed in detail in the IS field either. Given this, we can discern that we have not yet seen
the total contribution of grounded theory to the IS field (see also Urquhart et al. 2010).

3.5 Glaserian version of grounded theory

In this study, the ‘Glaserian’ grounded theory technique was used as the method of analysis. The Glaserian version has the twin advantages to this study of being closer to the original, classic version of grounded theory, and of being much more flexible. Although Glaser (1978) presents many coding methods, he encourages the researcher to use a coding method which helps categorisation and flexibility. Flexibility means that things that fall between the coding memos can be recorded. Most researchers agree that there is no single right framework for the grounded theory method (Denzin 2007). There is also more to the grounded theory method than ‘Glaserian versus Straussian’. Glaser (1978) presents 18 coding families and it is not without reason emphasised that we should view GT as a ‘family of methods’ (e.g. Bryant & Charmaz 2007: 12). I followed the Glaserian (and classic grounded theory) coding stages: open coding, selective coding and theoretical coding. During selective coding and through an iterative process, I discovered my emergent categories. I then considered the relationships between categories during the theoretical coding phase, and analytic memos (Glaser 1992) assisted with this process. The constant comparison phase required going back to the data over and over again, where every slice of data was compared with all existing concepts to see if it enriches an existing category. With a 3 year study, selecting data for constant comparison was challenging. Since I was studying the actual lived experiences of project members, I did not try to exclude participants but thought everyone in the project could provide insights on the issue I was studying.

The aim of the Glaserian GTM is to generate either substantive or formal theory about the research area. The main differences between substantive and formal theory are that formal theory operates on a higher level of abstraction and is more generalised than substantive theory. The focal and key factor of both substantial and formal theory is that the theory should be intelligible. The theory generated should be suitable and functional in practice. The different categories including the core process should also support the solutions arrived at by the research process. (Glaser & Strauss 1967, Glaser 1978, Glaser 1992, Glaser 1998, Glaser 2001, Glaser 2003.)
3.5.1 Glaser’s ‘evolving’ position

It is important to introduce a brief discussion of what Glaserian grounded theory really is – to discuss whether it is in fact the ‘pure’ 1967 version, or, indeed, whether Glaser has continued to evolve it. There are variations in the way in which Glaser presents grounded theory in his books (e.g. 1978, 1992, 1998). Thus, it is very much a living and evolving method (see Table 6).

Table 6. Glaser’s ‘evolving’ position.

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967</td>
<td>Grounded theory methodology by Glaser and Strauss. Glaser and Strauss originally describe two levels of coding, first coding into as many categories as possible, then the researcher carries out integration of categories.</td>
</tr>
<tr>
<td>1978</td>
<td>Glaser extends GT beyond the original texts. He explains many alternatives for theory building, including for example causal relationships, strategies and tactics, etc. Coding paradigms/families give many alternatives for theory building. Concepts such as theoretical sampling, theoretical coding and the use of theoretical memos are explained in more detail.</td>
</tr>
<tr>
<td>1992</td>
<td>Open coding, selective coding, theoretical coding. In his 1978 work, Glaser pointed out that concept-indicator model shows the essential link between data and concept, which provides theory results generated from data. However, in his 1992 work, Glaser does not emphasise the concept indicator model and coding families in the same way. In 1992 the concept indicator model and coding families are introduced as ‘instruments’. Glaser takes a different attitude to verification in his books (1978, 1992). In the earlier book (1978), he discusses the single codes as verified and saturated in open coding, and he states that the researcher should never become selective too early. In his 1992, book, he does not talk about verification in the same way. Glaser (1992) leans on the original thoughts of the theory (1967) – The hypotheses created are not facts which can be verified</td>
</tr>
<tr>
<td>1994</td>
<td>Since 1978 and 1992, Glaser may even be said to have further elucidated the meaning of induction in GT.</td>
</tr>
<tr>
<td>1998</td>
<td>Glaser specifies the conceptual and content-based differences between substantive and theoretical coding. Substantive codes are categories and characters of theory, which describes the substantive area under investigation. When the researcher has carried out the substantive coding, he sorts out his theoretical data and uses theoretical codes, which helps to generate the theory. Glaser presents five types of data received by the researcher.</td>
</tr>
</tbody>
</table>
Four types of data received by the researcher are presented (conceptual data is missing).

‘There is no such thing for GT as biased data or subjective or objective data or misinterpreted data’ (Glaser 2003).

There is a growing concern about the fact that it is easy to use and contaminate GT methodology from the wrong biases and GT methodology is mixed with QDA (Qualitative Data Analysis), which blocks ‘real’ GT.

Glaser states more emphatically that GT was not created based on research maxims from positivism or symbolic interaction. He emphasises that ‘it was written from methodological notes’.

However, Glaser is not consistent in his use of the concepts ‘method’ and ‘methodology’. In some connections he emphatically emphasises that his view is a methodology, but at many points he refers to ‘the GT method’ (for example 2003: 94).

3.5.2 Coding procedure of Glaserian GT – open coding, selective coding, theoretical coding, categories and themes

The aim of GT is to discover the core process, which is a challenging aim. Glaser (1978, 1992, 1998, 2001) accentuates that the discovery of the core process requires the researcher’s tolerance of being unsure. The conceptualising of the data, the generating of theory requires the researcher to have theoretical sensitivity. It is essential for the researcher to have theoretical sensitivity in order to identify the essential parts of data.

Glaser (1992) recommends that the researcher takes a very open approach in order to ensure that concepts genuinely arise from the data, as opposed to employing preconceived questions, categories and hypotheses. In this study, the data collected from the open interviews was to be coded using Glaserian approach. I allowed the data to suggest categories to me, rather than using preconceived categories. Comparative analysis was carried out, mapping similar responses/issues to produce a generic view.

It is also recommended by grounded theorists that researchers collect the data over several phases of research: when the same concepts occur over and over again, the saturation of concepts can be considered reliable. Urquhart et al. (2010) have also emphasised that analysis and conceptualisation are developed through the core process of joint data collection and constant comparison, where slices of data is compared with all existing concepts and constructs, to see if it enriches an existing category.

I followed the Glaserian (and classic grounded theory) coding stages: open coding, selective coding and theoretical coding. The original version of the
grounded theory method allows the theory to emerge inductively. A preliminary literature review was carried out, but a multiplicity of literature searching and reading was done after the data had been collected and analysed. The emergent theory determined the relevant literature (e.g. Urquhart et al. 2010). The discovery of theory from the data collected is the philosophy that Glaser and Strauss (1967) presented in their original book.

According to Glaser (1978), open coding is the most important building block of GTM. At the open coding stage, the interview data, field notes and emails were analysed line by line, and the project memoranda were analysed paragraph by paragraph. Urquhart (2001, 2007) has pointed out that line by line coding is recommended by both Strauss and Glaser and is demonstrably fruitful. However, as the project memoranda were secondary data, it was appropriate to code at a paragraph or page level (Urquhart 2007).

During selective coding and through an iterative process, I discovered emergent categories. Selective coding means that the researcher limits his or her coding only to those categories which are connected in a significant way to the core category (Glaser 1978). I then considered the relationships between categories during theoretical coding, and analytic memos (Glaser 1992) assisted with this project. Examples of analytic memos are very rare in IS but not in the social sciences (e.g. Urquhart et al. 2010). Memos are important when generating theoretical codes. Through memos one attempts to generate the abstract level of theory. Glaser also advises the researcher to speak about conceptual codes, not people. Glaser stresses that we are talking of ‘cultivating behaviour’, not ‘cultivators’. (Glaser 1978.)

Theoretical codes highlight how the substantive codes are connected to each other. Theoretical codes tell us, with substantive words, how two categories are in relationship with each other. Glaser states that the substantive codes should not have too much importance placed upon them. The theoretical model in itself is not a theory.

Glaser (1978) has emphasised that the bedrock of theory generation is the writing of analytic memos. The researcher writes memos while coding. Memos are ideas which arise during substantial coding. A memo may be a sentence, a paragraph, or several pages. Glaser (1978) emphasises the fact that the researcher

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2 Glaser (1998) specifies the difference between substantive and theoretical coding (conceptual and content differences).
has the freedom to write different kinds of memos, with no regard to layout as long as the idea is unfolding and the generation of the theory is progressing.

After writing codes and memos, the memos are classified and named or headlined. Glaser gives concrete advice on the sampling. The researcher should pick one memo at a time from the extensive memo bank. The researcher places the memo in relation to other memos.

Categorisation tests how well the collection of data, selection of problem, coding, saturation and memos have succeeded. (Glaser 1998). The theoretical integration in GT methodology means the reading of literature and comparing the generated theory and integration to the previous research area. The constant creation, critical discussion and evaluation among other theory functionalities are all carried out in parallel (Glaser 1967).

Glaser presents many criteria for the core category and the next criteria are presented (1978: 95–96): 1) it must be central, 2) it must occur frequently in the data, 3) by being related to many other categories, it takes more time to saturate the core category, 4) it relates meaningfully and easily to other categories, and 5) it is in a substantive study.

This overview has indicated the main strengths of the Glaserian grounded theory method. This study makes use of the main strengths of the Glaserian GT method. A detailed and systematic analysis of data allows the discovery of new concepts.
4 Research Findings

‘Experience simply happens and we make up a story about it after the fact.’
(Lester Levenson)

4.1 Chapter outline

In this chapter, I outline the discovery process going from data collected through open and selective codes and I present the foundations of the core categories (Glaser 1992, Glaser 1998). The development of the theme and foundations of the emergent and substantive theory will be explained in Chapter 5. The figure below (Figure 1) shows the analytic path I followed.

![Diagram](Image)

**Fig. 1. Analytic path.**

In interpreting interviewees’ and other participants’ opinions, I do my best to ensure that my own prejudices do not form the concepts. I have to admit that neither the open codes, nor the selective codes, nor the categories are discrete constructions or separate ideas; they all are strongly connected and mutually related to one another.

In presenting the findings, I will use a narrative style, which does not necessarily reflect the sequence of events. In the inductive process, I quote the
interviewees and other participants repeatedly. There is a twofold intention in
doing so: 1) to produce a vivid explanation and 2) to maintain and present the
chain of evidence. Analytical memos (Glaser 1992) also assisted with this project.
They were used in clarifying the coding process. Glaser also highlights that we
are talking about ‘cultivating behaviour’, not ‘cultivators’ (Glaser 1978).

This chapter is organised as follows. In Section 4.2 I give some of the
background of the complex IOIS project, to help with the interpretation of the
findings. I briefly give some information about the participants as well. In Section
4.3 I give the construction of three categories, which were constructed from
selective codes. My aim is also to show all the data which is relevant for this
study, so the reader can follow and understand that process.

4.2 The research focus

Here I give some of the complex background of the IOIS project, to help with the
interpretation of the findings. All the names (personal and company) are disguised
in this study. I have endeavoured to present this complex project as accurately as
possible. Unfortunately, as a large inter-organisational project in the Nordic
countries, the project is vulnerable to identification if I provide too much detail
because there are not many projects of this kind, and I am bound by ethical
considerations as to how much information I can provide.

Initially, three user organisations (Alpha, Beta and Gamma) were involved in
the ViWo project. However, at an early stage, a fourth user organisation (Delta),
which had a different legacy IS installed, was engaged. The project aimed to carry
out a pilot test of the IS in these organisations before establishing the system at
the national level. The plan was implemented and the system was tested in the
three organisations mentioned above.

Kappa (a national level consortium for the user organisations) had served as a
network organisation facilitating the cooperation of the other three organisations.
Kappa cooperated closely with the three user organisations (Alpha, Beta and
Gamma) in which the IS was installed as a part of this project. Thus the operation
of Kappa (the consortium of user organisations) was not parallel to that of the
other organisations engaged in the project; instead it enabled a form of joint
operation. The basic function of Kappa was to promote and develop locally,
regionally, and nationally the utilisation of information and communication
technology and to enhance inter-organisational cooperation in multiple research-
related issues and administrative practices. Furthermore, Kappa aimed to
accomplish flexible mobility of people and information between the member organisations.

The representatives (end user, expert or manager) of each of the four user organisations (Alpha, Beta, Gamma and Delta) participated in the project group, along with a representative of Kappa. Besides the four user organisations, yet another organisation (Epsilon, the research organisation) was involved in the project group, represented by five researchers. One of these was the leader responsible for the project and another acted as the project manager. Three other researchers formed the quality assurance group of the project.

In addition to the managers representing the user organisation, the project steering group included representatives of the Ministry, Kappa (the consortium of user organisations), and two researchers (Epsilon, the research organisation) who were also the individuals in charge of the project.

Furthermore, the project personnel included representatives of the supplier companies (Zeta and Eta). The project was implemented by these suppliers. The first supplier, Zeta, a company producing browser-related software solutions, acted as the main supplier in the project. The company focused on the planning and implementation of replicable business solutions. It described its solutions as comprehensive, technically sophisticated and capable of enhancing the customers’ competitiveness and operative efficiency. The other supplier, Eta, was a part of the national research network that developed research and information technology-based services for the needs of research and education, and the supporting information technology administration. For an IS development project, the venture contained a considerable amount of collaboration, including a number of different organisations, with different kinds of roles in the project.

The representatives of each of the four user organisations (Alpha, Beta, Gamma and Delta) participated in the project group, along with a representative of Kappa. Furthermore, the project personnel included representatives of the supplier companies (Zeta and Eta). In all, one can conclude that for an IS development project, the venture contained a considerable number of participants.

The background of the core case (ViWo) was ambiguous and unclear to many participants. ViWo was preceded by another project, PreViWo. PreViWo included a pilot phase that was implemented in three steps (specification, interface pilot and planning) in the years 2002 to 2003.

Kappa carried out the background work and was engaged in the implementation of this IS (PreViWo). However, it had a different role in this project (ViWo) from its role in PreViWo.
On 10th February 2003, an application was sent to the Ministry to get funding for an undertaking to implement and pilot ViWo. There were three user organisations applying for the funding, but the stakeholders representing PreViWo (Kappa and Lambda) were not among them. The suppliers were changed from the earlier PreViWo project, because Zeta and Eta won the bidding competition for the ViWo project. Table 7 below sums up the actors who had some kind of a role before the main project to implement ViWo was started.

4.2.1 History of the project

ViWo was preceded by a pilot project called PreViWo, carried out from 2000 to 2003 by Lambda, a user organisation consortium that included Alpha as an organisational host for its personnel. The players in the project are given below in Table 7.

Table 7. Organisations involved in PreViWo.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Role of Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha</td>
<td>User organisation that was a member of Kappa and Lambda</td>
</tr>
<tr>
<td>Ministry</td>
<td>The Ministry responsible for funding the pilot project</td>
</tr>
<tr>
<td>Kappa</td>
<td>Consortium of user organisations in charge of the project (a virtual organisation)</td>
</tr>
<tr>
<td>Lambda</td>
<td>Consortium of user organisations (an organ of cooperation) that used and developed a related IOIS</td>
</tr>
<tr>
<td>Theta, Iota</td>
<td>Suppliers of the software</td>
</tr>
<tr>
<td>Eta</td>
<td>Expert consultants</td>
</tr>
</tbody>
</table>

Lambda and Kappa operated in closely related areas, and the cooperation seemed profitable to both parties. Moreover, Lambda was in a difficult financial situation that was thought to be relieved through this cooperation. The pilot project was influential in framing the organisation of the focal project I studied (ViWo), and the history of the pilot project influenced the perceptions of the participants. PreViWo was implemented in three steps (specification, interface pilot and planning) in the years 2002 to 2003. The aim of the PreViWo project was defined as:

‘To specify and implement a pilot IS to support the focal process, its actors and tasks performed by them.’ (Project memorandum, 8th March 2002).
PreViWo was initiated by Lambda, a consortium that in 2001 consisted of eight state organisations. This consortium was formed in 1995 to develop a common core IS. Lambda proposed to the Ministry that it would make the cooperation suitable for Kappa by giving funds to Lambda to develop and add to the core system web-based functionality that would serve the needs of Kappa. Kappa, founded in 2000, was a consortium of state organisations (totalling twenty-one) under the same Ministry as Lambda. All Lambda consortium members were also members of Kappa. Kappa’s task was to promote modern web-based activities for its members.

4.2.2 Main players – ViWo project

In the ViWo project, Kappa was no longer in charge of the project: a project management organisation, Epsilon, was brought in. This organisation also managed some research objectives around the project. The key user organisations now consisted of Alpha, the original lead user organisation, plus user organisations Beta, Gamma and Delta who were members of Kappa. Kappa now consisted of 21 organisations, and it would be these organisations that would eventually use ViWo. Table 8 summarises the organisations involved in ViWo.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Role of Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry</td>
<td>The Ministry responsible for funding the pilot project.</td>
</tr>
<tr>
<td>Kappa</td>
<td>Consortium of 21 user organisations (Virtual organisation). The basic function of Kappa was to promote and develop locally, regionally, and nationally the utilisation of IT and to enhance inter-organisational collaboration in multiple related issues and administrative practices.</td>
</tr>
<tr>
<td>Alpha, Beta, Gamma, Delta</td>
<td>User organisations in the project (Members of Kappa and Lambda). Alpha was also the fund holder for the project.</td>
</tr>
<tr>
<td>Epsilon</td>
<td>Organisation responsible for project management and research objectives.</td>
</tr>
<tr>
<td>Zeta</td>
<td>Software company that supplied the software solutions for the project.</td>
</tr>
<tr>
<td>Eta</td>
<td>Part of the national research network that developed research and IT-based services for the needs of research and education, and the supporting IT administration. Acted as an expert advisor. Withdrew from the project before it ended.</td>
</tr>
</tbody>
</table>

The experiences in PreViWo did influence the project organisation of ViWo. There had been numerous disputes between the member organisations of Lambda,
and troubled development processes in PreViwo. A deliberate choice was made to first have a project management organisation (Epsilon) and later to change the software supplier to Zeta. Eta eventually withdrew from the project:

‘We withdrew … we realised that we could not continue in this way. This was probably because we received a role that was more demanding than the one we pursued in the initial discussions and negotiations…’ (Jack, Supplier, Eta)

There were a large number of people involved, and some had experiences of the previous project. The main reasons for the change in organisations were: 1) the smaller number of user organisations, 2) the academic research interest and 3) the belief that reorganising would help the manageability of the project. The roles of project members are given below in Table 9.

**Table 9. Project group organisations and their members related to ViWo.**

<table>
<thead>
<tr>
<th>Organisations</th>
<th>Members and their roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry, Financier</td>
<td>Marie: Steering group member from the Ministry</td>
</tr>
<tr>
<td>Kappa, Consortium of user organisations</td>
<td>Sarah: Also previous member of PreViwo</td>
</tr>
<tr>
<td></td>
<td>Sheila: Steering group member, previous project manager of PreViwo</td>
</tr>
<tr>
<td></td>
<td>Gabriel: Attended project group meetings occasionally</td>
</tr>
<tr>
<td></td>
<td>Hale, Paul: Steering group members</td>
</tr>
<tr>
<td>Alpha project team</td>
<td>Lucy: Organiser (Project leader). Also previous member of PreViwo.</td>
</tr>
<tr>
<td>User organisation, and fund holder</td>
<td>Member of steering group</td>
</tr>
<tr>
<td></td>
<td>Lisa: User representative (of 11 organisational units), also previous member of PreViwo</td>
</tr>
<tr>
<td></td>
<td>Arthur: Expert, Lambda Consortium, previous member of PreViwo</td>
</tr>
<tr>
<td></td>
<td>Esther, Lauren, Todd: Lambda Consortium representatives, attended project group meetings occasionally</td>
</tr>
<tr>
<td></td>
<td>Sam: User representative, attended project group meetings occasionally</td>
</tr>
<tr>
<td>Beta project team</td>
<td>Kathy: Lambda Consortium representative, attended project group meetings occasionally, Steering group member, also previous member of PreViwo</td>
</tr>
<tr>
<td>User organisation</td>
<td>Heather, Tom: User representatives</td>
</tr>
<tr>
<td></td>
<td>Katie: User representative, present in some steering group meetings</td>
</tr>
<tr>
<td>Gamma project team</td>
<td>Ellen: User representative, present in some steering group meetings</td>
</tr>
<tr>
<td>User organisation</td>
<td>Pamela: Steering group member, previous member of PreViwo</td>
</tr>
<tr>
<td></td>
<td>Alice: Steering group member, previous member of PreViwo</td>
</tr>
</tbody>
</table>
Organisations

User organisation
(with a different kind of IS from those in other user organisations)

User organisation

Epsilon
Organisation responsible for project management and research,
parallel organisation for user organisations

Zeta
Supplier, Software producer
Experts (Withdrew from the project before it ended)

<table>
<thead>
<tr>
<th>Organisations</th>
<th>Members and their roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta project team</td>
<td>Tim: Expert, steering group member</td>
</tr>
<tr>
<td>User organisation</td>
<td>Sophie, Ann: User representatives</td>
</tr>
<tr>
<td>(with a different kind of IS from those in other user organisations)</td>
<td>Susan: Steering group member</td>
</tr>
<tr>
<td>Epsilon</td>
<td>Matthew: Organiser (Project leader), (also previous member of PreViwo steering group and Lambda Consortium director)</td>
</tr>
<tr>
<td></td>
<td>Ruth: Project manager, steering group member</td>
</tr>
<tr>
<td></td>
<td>Rachel: assistant project manager, member of Quality Group</td>
</tr>
<tr>
<td></td>
<td>Thomas, Simon: Members of Quality Group</td>
</tr>
<tr>
<td>Zeta</td>
<td>Walter</td>
</tr>
<tr>
<td>Tom</td>
<td>Attended project group meetings occasionally</td>
</tr>
<tr>
<td>John</td>
<td>Previous member of PreViwo</td>
</tr>
<tr>
<td>Peter</td>
<td>Attended project group meetings occasionally. Previous members of PreViwo</td>
</tr>
<tr>
<td>Jack</td>
<td></td>
</tr>
<tr>
<td>Daniel</td>
<td>Attended project group meetings occasionally</td>
</tr>
<tr>
<td>Ellie</td>
<td>Member of project group and also present in some steering group meetings</td>
</tr>
<tr>
<td>Mark</td>
<td></td>
</tr>
</tbody>
</table>

One difficult question was that of who would be the ViWo project manager. ViWo was perceived to be a demanding project, and an experienced manager would be needed. Matthew, organiser (the project leader) of Epsilon, the project management organisation, had longstanding experience in Lambda and in PreViWo, and was trusted by Lucy and her colleagues. Sheila was the project manager from Kappa in PreViWo – but in ViWo, this role was assumed by Ruth from Epsilon. Sheila became a steering group member in ViWo.

Matthew suggested to Lucy and her colleagues from Beta and Gamma that Epsilon could take responsibility for leading the project, with Ruth as the project manager. This suggestion was approved, and so the project manager changed: in PreViWo it was Sheila from Kappa but in ViWo it was Ruth from Epsilon. Ruth had extensive experience in practical software development.

It was envisaged that, in addition to Matthew and Ruth, Epsilon could provide a three-person quality assurance group for ViWo development. When it came to the choice of software vendors, Matthew’s argument was that Zeta should be chosen because it is capable of delivering the system that the client needs, even when the client is not able to express what it needs (i.e. it was thought that Zeta
would deliver a useful system even in the situation of unclear client requirements).

Before explaining the research findings, it is essential to list the interviews done and the level of the people interviewed (Table 10).

Table 10. Interviewees and their roles.

<table>
<thead>
<tr>
<th>Organisations</th>
<th>Interviewees and their roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Organisation</td>
<td>Matthew, Organiser; Ruth, Project manager; Thomas, Member of Quality Group</td>
</tr>
<tr>
<td>Epsilon</td>
<td>Group; Simon, Member of Quality Group</td>
</tr>
<tr>
<td>User organisations</td>
<td>Lucy, Organiser, Alpha; Sophie, User, Delta; Lisa, User, Alpha; Kathy, User, Beta</td>
</tr>
<tr>
<td>Eta/Zeta</td>
<td>Peter, John, Jack, Daniel (Suppliers)</td>
</tr>
<tr>
<td>Kappa</td>
<td>Sarah (Member of the project group), Sheila (Member of the steering group)</td>
</tr>
</tbody>
</table>

4.3 The Constructions of categories (Research findings: The Discovery Path for ViWo)

In this section I will introduce the findings of this IOIS project, ViWo. First, I introduce categories facilitating reading and understanding the complex nature of the research area. As described in Chapter Three, there are many varying levels of concepts in theory generated using the Glaserian grounded theory method (Glaser 1978, Glaser 1992). Compared to selective codes (the conceptual elements which emerge from selective coding), categories are conceptual elements at a high level of abstraction. As a result of the inductive thinking process, three major categories emerged. In this case, there are substantially more than the one or two core categories suggested by Glaser and Strauss as the basis of a theory. Urquhart et al. (2010) have highlighted that in practice, researchers end up with more than one or two categories. They have speculated that one reason could be also word- or sentence-level coding, or that the phenomenon being studied is not necessarily a process and may have various elements. On the other hand, one significant reason is that the bottom up derivation of the generated theory makes it difficult to think abstractly. (Urquhart et al. 2010.) The process of construction of the three main categories (Governance, Power, Emotions) is shown in Table 11.
Table 11. Construction of Categories.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SELECTIVE CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVERNANCE</td>
<td>Organising the project personnel, Leadership styles,</td>
</tr>
<tr>
<td></td>
<td>Knowledge work</td>
</tr>
<tr>
<td>POWER</td>
<td>Sources of power, Power as resistance,</td>
</tr>
<tr>
<td></td>
<td>Reasons for the power struggle, Power as exercised</td>
</tr>
<tr>
<td>EMOTIONS</td>
<td>Certainty, Significance,</td>
</tr>
<tr>
<td></td>
<td>Connection, Contribution</td>
</tr>
</tbody>
</table>

In the following sub-sections, I present the analysis process (bottom up process) and how the categories were discovered through selective codes and essential open codes.

4.3.1 Governance

In Section 4.2.1 I presented the organisations that participated in PreViWo and in this chapter I will restate these, to provide a reminder of these organisations.

- Alpha (User organisation that was a member of Kappa and Lambda)
- Ministry (the Ministry responsible for funding the pilot project)
- Kappa (a Consortium of user organisations in charge of the project, a virtual organisation)
- Lambda (a Consortium of user organisations, an organ of cooperation that used a similar IOIS)
- Theta, Iota (Suppliers of the software)
- Eta (Expert consultants)

I identified three selective codes which contributed to the Governance category: organising the project personnel, leadership styles and knowledge work. Table 12 shows the construction of the Governance category and its analytical memo summary, open codes and selective codes.
Table 12. Construction of the Governance Category.

<table>
<thead>
<tr>
<th>ANALYTICAL MEMO SUMMARY</th>
<th>OPEN CODES</th>
<th>SELECTIVE CODES</th>
<th>CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many historical reasons affected the project work in many ways.</td>
<td>Historical influences</td>
<td>Organising the project</td>
<td></td>
</tr>
<tr>
<td>Finding one’s own meaning for the project was challenging.</td>
<td>The</td>
<td>personnel</td>
<td></td>
</tr>
<tr>
<td>A very complex project: the independence of tasks and reliance</td>
<td>complications of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>on distributed expertise were a challenging combination.</td>
<td>reorganising</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There seemed to be contradictory views on leadership styles,</td>
<td>Authoritarian</td>
<td>Leadership styles</td>
<td></td>
</tr>
<tr>
<td>depending on the task and the stage of the project.</td>
<td>leadership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It was also evident that leadership styles include conflicting</td>
<td>Democratic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>views, which shows how a group may also need different</td>
<td>leadership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>behaviours from its leadership over time.</td>
<td>Passive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is also fairly evident that leadership is about behaviour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>first and skills second. For example, one criticism was that</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the project manager presented issues to a steering group only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>from her own point of view.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The uncertain feelings about leadership underline how difficult</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>leadership can be, as different members respond to different</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>styles of leadership.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is evident that quite a lot of individual thinking/</td>
<td>Organisational</td>
<td>Organisational</td>
<td></td>
</tr>
<tr>
<td>reflection takes place, and there is a willingness, at least,</td>
<td>memory</td>
<td>learning and</td>
<td></td>
</tr>
<tr>
<td>to develop understanding at a group level through</td>
<td>Conflicting</td>
<td>knowledge</td>
<td></td>
</tr>
<tr>
<td>communication. Learning in an inter-</td>
<td>visions</td>
<td>knowledge</td>
<td></td>
</tr>
<tr>
<td>organisational setting seems to be a very demanding issue – it</td>
<td>Knowledge</td>
<td>work</td>
<td></td>
</tr>
<tr>
<td>seems that organising and learning are strongly related to</td>
<td>sharing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>each other, rather than organisation simply being learning.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Another very relevant issue at the project level seems to be</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the question of whether learning happens at the micro or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>macro level.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interesting aspects seem to be issues such as whether</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>individual learning is a prerequisite of organisational</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning and what organisational learning in fact is if there</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>is a need for submission to authority. It seems that</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>organisational learning is also a political process.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Organising the project personnel

‘Organising for success’ (Matthew, Organiser, Epsilon).

Historical influences: The pilot project (PreViWo) was influential in framing the organisation of the larger project I studied (ViWo), and the history of the pilot project influenced the perceptions of the participants. Lambda and Kappa operated in closely related areas, and the cooperation seemed profitable to both parties. Moreover, Lambda was in a difficult financial situation that was thought to be relieved through this cooperation. PreViwo was implemented in three steps (specification, interface pilot and planning) in the years 2002 to 2003. The aim of the PreViWo project was defined as:

‘To specify and implement a pilot IS to support a process, its actors and the tasks they perform’ (Project card, 8th March 2002).

PreViWo was initiated by Lambda, a consortium that in 2001 consisted of eight state organisations. This consortium was formed in 1995 to develop a common core IS. Lambda proposed to the Ministry that it would make the cooperation suitable for Kappa by giving funds to Lambda to develop and add to the core system web-based functionality that would serve the needs of Kappa. Kappa, founded in 2000, was a consortium of state organisations (totalling twenty-one) under the same Ministry as Lambda. All Lambda consortium members were also members of Kappa. The task of Kappa was to promote modern web-based activities for its members.

As Kappa and Lambda were separate organisations working for a similar target, they also had their own strategies and ways of proceeding. This complicated situation was expressed in the following comment:

‘I see here a possibility to collaborate, to distribute work, or to overlap’ (Email from Kappa, 14th January 2002).

Lambda’s proposal was approved by the Ministry, which provided partial funding for the development of the core IS towards the needs of Kappa. The cooperation between Lambda and Kappa was organised, and the common project of these two large consortia began in spring 2002. The unit responsible for organising this project was Alpha, which was also in charge of running the core IS development project for Lambda. The project manager in 2002 was recruited from Kappa, and two software houses (Theta and Iota) were engaged for the work, that would produce a system called PreViWo to enhance virtual work. Alpha (Lucy) and
Epsilon (Matthew, an organiser of ViWo) remained as some kind of guarantors for this new project.

During autumn 2002 it became apparent that the management of this process of two consortia and two software houses was very complicated. There were tensions between the goals of the two consortia, and the project manager apparently did not have sufficient experience of running a project of this size and complexity.

Besides a perceived lack of confidence in the representatives of Lambda, another factor in the reorganisation of the forthcoming ViWo development was the doubt among the leading officers of the three same area organisations (Alpha, Beta and Gamma, all belonging to the Lambda consortium) concerning the capability of Kappa. Moreover, there were critical voices towards the way the Kappa representative was managing the PreViWo project.

This all led to discussions between the area leaders of Alpha, Beta and Gamma, and Epsilon (Matthew, an organiser) concerning how to secure the smooth progress of the project that would produce ViWo. It seemed to be a sensible strategy to restrict the set of active organisations to a minimum. This meant that ViWo would first be developed for Alpha, Beta and Gamma. After these three organisations had started using it, and possible defects removed with the benefit of real use experiences, other organisations would adopt it. This was discussed informally with the Ministry:

‘The implementation of an IS in collaboration with Kappa might be a concrete possibility. The specifications will be ready in May and bidding for offers will begin in the summer or at the beginning of the autumn at the latest. […] However, this effort requires financing of its own.’ (Email to the Ministry, 22nd January 2003).

On 10th February 2003, an application was sent to the Ministry in order to get funding for an undertaking to implement and pilot ViWo. There were three organisations applying for the funding but the stakeholders representing PreViWo (Kappa, Lambda) were not among them. However, PreViWo was mentioned as a starting point for the new development project. The soon-to-be leader of the ViWo project informed other organisations about the application:

‘This proposal is going among our other efforts. That means that it is in the category of “joint projects and networks”.’ (Email from Alpha, 5th February 2003).
This arrangement made Kappa’s people worried and doubtful, as they did not know why matters were going this way. The representative of Kappa responded to the above email:

‘We have incidentally heard that you are planning this kind of a project. However, we have not been informed of the details. I suppose that we are right in thinking that this is about “bidding”? We see that your planned effort does not contradict Kappa’s plans. Please keep in mind that Kappa’s plans have included the intention to continue our earlier project. […] We talked about this in the steering group in December [2002], albeit briefly.’ (Email sent 11th February 2003).

Kappa also arranged workshops in March 2003, in which the interface pilot and planning were introduced to the future users. Among other issues, ownership was also discussed in the workshops. According to the normal state procedure, Alpha was informed by the Ministry in April 2003 that it would get the formal responsibility as well as the funds to lead the development of ViWo. Funding would begin in 2004. One essential change following that information was to replace the Kappa representative with the representative of Epsilon (Ruth).

The Ministry which provided the funding also demanded that the fourth user organisation (Delta) should be included. The reason for this was that Delta had a different legacy IS installed.

‘Thus they [Delta] were invited to participate in the project as the Ministry was putting pressure on us, and they [Delta] were eager to join because they have always been very progressive in IS projects…’ (Lucy, Organiser, Alpha).

The complications of ‘reorganising’: In this study, it is interesting to note the extent to which the actions of reorganising from PreViWo to ViWo had repercussions on the opinions expressed by the interviewees. The more detailed analysis will become evident through different categories. However, it is essential to point out that many project members were longing for their earlier partner companies, and some felt that they were reinventing the wheel, when they were essentially rectifying the defective specifications. These repercussions were due to the use of power: the organisers were able to change the key actors. The aim was to ensure that the ViWo project produced what it should produce.

The reorganisation revealed that there were evidently unclear roles and expectations among the stakeholders in the project. For example, the project management people thought that the supplier Eta’s involvement was inevitable
because of the previous project, whereas the supplier themselves (Eta) felt that they were engaged in the project because of small-scale ‘blackmailing’. There were contradictory views among others about the organisation pattern:

‘The organisation pattern of this project is very strange [laughter]. I have never seen such a loose project as this’ (Jack, Supplier, Eta).

and regarding personnel, changes in project parties and their personnel caused problems and affected the presence of appropriate skills:

‘I was concerned that some members of the project might have interpreted the launch of the project as an indication of a lack of confidence in them…’ (Lucy, Organiser, Alpha).

The results of the reorganisation showed that when conflicting understandings interact in collaboration, the interplay of individuals and groups within a particular context shape the whole IS project. Different parts of the analysis will reveal how Governance influenced the whole process of the ViWo project.

Collaboration between two suppliers proved to be very challenging: issues related to avoidance of responsibility, scheduling and trust were identified. Furthermore, the supplier felt that some decisions had already been made by the network organisation (Kappa), which had been involved in the previous project and had at that time made many decisions influencing this project. Clearly power and politics can also be related to this observation. In addition, there were conflicts between different organisations and the network organisation, aiming at facilitating inter-organisational collaboration, and the organisations clearly ran into many difficulties in doing so.

According to John (Supplier, Eta), the change in the project organisation affected the manageability of the project. The point of the criticism was that the applicant for the financing (Alpha) did not eventually assume responsibility for the financing but ‘outsourced it’ (John, Supplier, Eta) to the person in charge of the project (Epsilon, Research Organisation). This had a disintegrating effect on project organisation and management. In the opinion of this interviewee, the responsibilities were distributed to too many people.

Also related to project management, the project manager was blamed for focusing on managing the project instead of focusing on the development work. What made the managerial level of Governance extremely challenging was the fact in particular that the authority of Kappa, the user consortium, and its relationship to the lead organisations was poorly defined. What makes it even
more complicated is that the background of the project was extremely ambiguous and unclear to many participants. The figure below (Figure 2) shows some quotations which formed open codes for selective code organising the project personnel.

**Fig. 2. Organising the project personnel.**

**Leadership styles**

This selective code describes how leadership was actualised and experienced in the ViWo project. Leadership had strong engagements with the surrounding environment (Contextuality): the steering group, the Ministry who awarded the funding and numerous organisations and their different representatives such as users and experts. According to Jack (Supplier Eta) the biggest problem in the project was how to manage the project, not that this was some kind of programming or IS project.
The open code Authoritarian leadership describes how leadership was actualised at the strategic level. Two organisers – Matthew (Epsilon) and Lucy (Alpha) – applied to a Government Ministry for a grant and were awarded it. After this, potential executors and project members were considered and organised. Matthew pointed out that PreViwo was instructive to him and other organisers – i.e. they had learnt from experience that it is not wise to have too many member organisations in a project. This also meant that those within the project should be capable of cooperation.

Authoritarian leadership also became evident in the project work. Some members claimed that the leader often did not look for alternative solutions to problems, but made decisions based on position or time – in other words chose the fastest way to get something done but not necessarily the best one:

‘Project members were at the mercy of the project manager and were not able to interfere or say why we didn’t pay attention to… or ask if we could do this a different way…’ (Sophie, User, Delta).

The project manager (Ruth, Epsilon) for her part pointed out that the management of project group was hard:

‘It has been hard to get the project group to work in a constructive spirit and I thought they might not necessarily learn how to at all. I felt it was not so important to work in a project-oriented way, but more important was to come up with a system which works…’ (Ruth, Project manager, Epsilon).

It was interesting how Democratic leadership became evident in the experiences of the project members. The views on democratic leadership were contradictory, according to the project members. It was emphasised that leading was hard because of the fact that the responsibility was shared. John (Eta) stated that

‘[the] project manager can’t take all the responsibility for the project – that’s impossible… or maybe it also depends on the guy…’ (John, Supplier, Eta).

John also speculated that

‘Although [the] project manager feels that this is her project, there is a big problem because it’s possible that she won’t get support from her own manager who is sitting in a steering group – support which she’ll need if she is in a bad situation…’ (John, Supplier, Eta).
Thomas (Epsilon) highlighted that the conditions should be taken into account, and that one should understand the fact that the leadership is highly multidimensional and conflictual as well. Thomas suspected that

‘The steering group’s understandings resulted from how the project manager presents the matter to them…’ (Thomas, Member of quality group, Epsilon).

So, it was evident that it was important that there could also be a common perception of how matters are and how they are progressing. Many of the project members’ comments highlighted the significance of the interaction process in achieving a common viewpoint. There were also many situations which emphasised the importance, for example, of the project manager’s having the ability to be polite and cooperative, to manage the budget better, and to manage tasks, timetables, responsibilities and roles, etc.

Passive leadership: Jack criticised the project manager for trusting Eta’s expertise too much. According to Jack,

‘We can just see Eta as merely a tool for the project, but there has to be someone who has a leadership role, so that it is not possible to shift responsibility to the supplier.’ (Jack, Supplier, Eta).

Some project members also stated that the project manager tried to go too fast and tried to show, for example, that in this way the project progressed well but that it became evident that it was not possible in this way to measure how well the project was actually going. Jack (Eta) commented critically:

‘The project manager was more worried about these schedules and that certain matters were taken care of rather than clarifying social issues… or that we understood why certain issues didn’t work… and there were a lot of things that weren’t handled professionally…’ (Jack, Supplier, Eta).

The figure below (Figure 3) summarises some quotations which formed open codes for the selective code leadership styles.
Fig. 3. Leadership styles.

Organisational learning and knowledge work

Organisational learning and knowledge work was one selective code which emerged through the grounded theory analysis, and this section discusses this selective code in detail. I identified organisational memory, conflicting visions and knowledge sharing as important open codes of this selective code. This selective code (organisational learning and knowledge work) describes how knowledge work in the ViWo project was primarily affected by work carried out in PreViWo. It became evident that people in the ViWo IOIS project had very different starting points, because some people had been involved in the previous PreViWo project, while others had not.
It became clear that there were issues around knowledge transfer from the previous project, resulting in a loss of organisational memory. Though PreViWo had had many problems, it was nevertheless seen as a starting point. There were also different viewpoints about the suitability of that starting point. The diversity of the conceptions about project material was evident in the ViWo project. Matthew (Organiser, Epsilon) doubted the suitability of the material for the starting point of the new project in 2004:

‘Perhaps we can say that there was some kind of blundering in the project. But it is difficult to know if this opinion is fully justified… Afterwards it turned out that the quality of the specifications was not such that further work could have been based on them…’ (Matthew, Organiser, Epsilon).

From the same interview it also became evident that the representative of Eta, who was involved as an expert in PreViWo, did not support the use of material in the further project. Ruth (Project manager, Epsilon) felt that the background materials were partly a stumbling block and hindrance to the current project and pondered that:

‘Of course, I can’t say that your project was a dud… If someone who is more valued than me says that it is very well done, I have to believe and accept it.’ (Ruth, Project manager, Epsilon).

Ruth doubted the suitability of the project material but when the steering group made their decision that the project would continue with that data, she thought there was no other choice. Jack (Eta) felt that the specifications from the previous project caused more harm than good. By contrast, within Kappa (the Consortium of user organisations), the project organisation was criticised for its lack of continuity. Sheila (Kappa) said:

‘… previously created knowledge was discarded and we lost the gate-keeper role that we thought we knew well…’ (Sheila, Steering group member, Kappa).

Sheila felt that they had to reinvent the wheel in the ViWo project. The comment related to the efforts made to familiarise the new project members with the task.

Conflicting visions: There were also many conflicting visions of the project. Ruth said:
‘I have tried to have the attitude that this project will come to an end… but the operation will continue, and I can’t manage it after that…’ (Ruth, Project manager, Epsilon).

Sophie (User, Delta) felt that the project management had become more important than the content of the project. She thought the relevance of the project had become twisted. Jack (Supplier, Eta) felt that the project was more of a ‘technology project’ for the project manager and the other supplier, Zeta.

Ruth (Project manager, Epsilon) felt that the biggest challenge was clarifying what the previous vision had been, both for the previous project and even further back into the past. It was often necessary to revisit decisions due to questions or critiques from Kappa members, some of whom had been involved in PreViWo. These members felt that decisions made in the previous project should not be questioned or changed. Both the suppliers and project management felt that the representatives of Kappa effectively had an informal veto which inhibited decision-making, due to their previous involvement.

**Knowledge sharing:** Ruth (Project manager, Epsilon) took the view that knowledge sharing between organisations occurred in a collegial and efficient manner, despite the hierarchical nature of those organisations. Her view was that people filled each other in on the project:

‘I got a feeling of tranquillity that I didn’t need to know everything…’ (Ruth, Project manager, Epsilon).

On the other hand, Daniel (Eta) felt that his role as an expert was not easy:

‘I felt that I was supposed to be a telepathic database link, and have the talent of a clairvoyant if I was to know all the information they wanted us to know…’ (Daniel, Supplier, Eta).

Lisa (User representative, Alpha), a previous member of PreViWo, for her part trusted in the supplier’s expertise:

‘We certainly have the instructions for how to use it, and we can always ask Walter [Supplier, Zeta] for help and and get an immediate answer.’ (Lisa, User, Alpha).

Lucy (Organiser, Alpha) felt that she was making a lot of decisions relying on others’ expertise, because she herself did not have IS skills. For example, when Ruth (Project manager, Epsilon) pointed something out in a plausible way, Lucy would give the necessary final authority. Sheila (Steering group member, Kappa),
for her part, felt that the main problem was the integration of ViWo and PreViWo. This was hindered by the fact that Eta did not convey information about the previous project (PreViWo).

The figure below (Figure 4) summarises some quotations which formed open codes for the selective code Organisational learning and knowledge work.

Fig. 4. Organisational learning and knowledge work.

**Summary of the Governance category**

These findings provide an interesting illumination on governance issues in an IOIS project. Specifically, this study argues that governance has a critical impact on the management of an IOIS project, with particular implications as to how knowledge is then transferred in that governance structure. In this particular set of projects, we can also see how the governance of the final project was a complex evolution from experience of an earlier project.

It is evident that the governance of the project was particularly challenging because of the number of organisations and structures involved. This is a potential problem for all IOIS projects, as of course governance does need to be defined between organisations in such projects. In this particular instance, the project structure, as set out, was a very complex one with undefined governance and responsibilities. Governance of such a complex project is very interesting in and of itself.
I illustrated different selective codes of governance that occurred: 1) organising the project personnel, 2) leadership styles, and 3) organisational learning and knowledge work. Organising the project personnel revolved around historical influences and the complications of reorganising. The selective code ‘organising the project personnel’ raises questions about ‘obscure’ organisation and its influence on project management and on the collaboration of the project members, and points out that the question of organisation is a significant issue in IOIS project management. Many political and historical factors seemed to affect this process: for example, the background work was carried out by an organisation which was not among the organisations that applied for funding for ViWo.

Related to problems of project management, as mentioned, Khazanchi and Zigurs (2007) have defined three elements that are involved in the management of virtual projects: coordination, communication and control. This research focused especially on the coordination aspect of project management, and more particularly on the people part of this subject matter: on the perceptions of how people are combined to carry out specified activities in order to accomplish stated goals. This happened at the beginning of the ViWo project and was heavily influenced by the previous project.

The selective code ‘leadership styles’ – authoritarian leadership, democratic leadership and passive leadership – show how leadership was experienced in different ways in the project. This shows how a group may also require different behaviours from its leadership over time (Pescosolido 2002). Legitimate power, expert power and political power were also significant and of course related to leadership styles. I also claim that leadership is context-bound, so it is very hard to measure it through certain traits. It has also been proven time and again that project leaders need to manage the implementation process (Newman & Zhao 2008) and project leaders must be clear about the vision and goals of the project and be able to communicate these to others (Napier et al. 2009, Vlaar et al. 2007).

These findings have illustrated the complexities of knowledge work and organisational learning in an IOIS project. The selective code ‘organisational learning and knowledge work’ shows that the individual’s single actions can be seen as the basis of broader formations, and vice versa. It is easy to see how a view of knowledge as a social institution requires examination of socialness or emotions. From this viewpoint, even knowledge can be seen as having two dimensions which in a certain sense are contradictory: knowledge as a descriptive fact or knowledge as including essential meanings.
It is clear from these findings that the knowledge transfer issues that project members were grappling with were primarily about tacit knowledge – how things had been previously done in PreViWo. It is my belief that the cultivation of tacit knowledge in this kind of situation is difficult, and it is a big challenge to the organisation to be the creator of the knowledge. These findings raise the question of whether it is at all possible to model knowledge in this kind of situation, where many workers from different organisations have to socialise in the project organisation. Irick (2007) has said that the interplay of tacit and explicit knowledge is a critical factor in organisational learning.

It is also fair to say that the project organisation did not promote organisational learning, despite the fact that the project organisation itself was a product of previous learning on a failed project. Lave and Wenger (1991) assert that it is difficult for organisations to carry out double loop learning by themselves; the irony here seems to be that double loop learning did occur between organisations in PreViWo, in that the project organisation of ViWo was designed to combat known problems. However, it is also possible that this double loop learning did not fit the new situation as hoped.

This study also affords a rare insight into the detailed workings of an IOIS project, and the everyday reaction of project members to difficulties of governance and understanding responsibilities. Analysis shows that structures of governance worked against project members communicating, despite a great deal of knowledge being gained over the execution of the projects. It was evident that governance had a lot of repercussions among the project members and we can notice that emotions were many and varied at the project level and in organisations.

**Conclusion of the Governance category**

This research raises many important issues related to research on governance in the IS area. This research contributes by providing an understanding of governance in IOIS projects. Results show that such governance structures are extremely complex and can in fact hinder knowledge transfer and organisational learning in a project. It was also evident that decisions on governance were taken mainly on convenience grounds as opposed to some careful consideration as to how the structure would affect communication. Questions could also be asked about the role of the project management organisation, Epsilon. I would urge further research into what might be an optimal governance structure for large
IOIS projects such as these; as far as I know, this research is unique in identifying the knowledge transfer consequences of such structures. It has been demonstrated earlier how IT-based knowledge transfer and learning failed, as a consequence of how work and training were organised (Gasson & Sheller 2007).

4.3.2 Power

Power was one core category which emerged through the grounded theory analysis, and this section discusses the category in detail. I identified sources of power, power as resistance, reasons for the power struggle and power as exercised as important selective codes of the category. Table 13 presents the open codes and selective codes that make up the category.
Table 13. Construction of the Power Category.

<table>
<thead>
<tr>
<th>Analytical Memo Summary</th>
<th>Open Codes</th>
<th>Selective Codes</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power is perceived somehow as a very complex issue because it implies levels, one person over another. Formal authority over others is not unambiguous: it may also cause confusion because of disconcerting choices which have to be made or if legitimate power is used as a control or weapon against someone’s rights. The faces of power are even more complicated when it is perceived that power which is inherent in positions is used the ‘wrong way’. Relationships also play a crucial role in achieving something: relationships are beneficial, for example, in decision-making. Where there are several organisations involved, the relationships, responsibilities and roles should be straightened out for each participant. It is obvious that if roles are not clear it causes ‘anarchic’ ways of acting.</td>
<td>Control of decision-making</td>
<td>Power as making</td>
<td>Power</td>
</tr>
<tr>
<td></td>
<td>The feeling that individuals belong to the group and have a common language is essential – otherwise they can easily cause resistance in many forms. In addition to overt resistance there is also silent resistance and submission to situations. The sense of security in that kind of work is also really important. It is important that things are planned in the long term. Unclear plans cause insecurity, which causes resistance, among other problems. Many political and historical reasons seem to affect processes in many ways. Historical relationships easily lead to the formation of different alliances. Roles and responsibilities are really important and are linked to the aims, among others. Different roles and responsibilities are important because they can easily cause jealousy etc. Clear roles and duties also reduce the challenge of other work and buck-passing. Clear plans and timetables are indispensible in reducing power struggles.</td>
<td>Apparent acceptance</td>
<td>Power as resistance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control of decision-making</td>
<td>Previous project</td>
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<td></td>
<td></td>
<td>Tension between old and new</td>
<td>Jargon</td>
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<td></td>
<td></td>
<td>Apparent acceptance</td>
<td>Time pressure</td>
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<tr>
<td></td>
<td></td>
<td>Insecurity</td>
<td>Unclear responsibilities</td>
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<tr>
<td>Power is used in decision-making in many ways; power is also used to get decisions made. Intuition and feelings have a significant effect on how power is used. Power is also used to inhibit something happening by shaping others’ desires and values, influencing others’ attitudes and beliefs, appealing against decisions already made, and not caving in to others’ demands. Power forms both as a result of organising and also as a result of social relationships.</td>
<td>Final authority</td>
<td>Power as exercised</td>
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<td></td>
<td></td>
<td></td>
<td>Power of veto</td>
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<td></td>
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<td></td>
<td>Forged power</td>
</tr>
</tbody>
</table>
Sources of power

This selective code illustrates the different sources of power in the project. 

Legitimate power: As explained earlier, as the organisation of ViWo progressed, the previous project (PreViWo) managers were not invited to take charge of this project. One of the organisers (Matthew, Epsilon, Research Organisation) pointed out that the quality of the specifications and the poor success of PreViWo were the reasons for the adoption of a different pattern of organisation in the new project. First, the project manager of Kappa (the Consortium of user organisations) was changed because of project management issues. Second, the suppliers were replaced because of the poor quality of the specifications:

‘And this was one reason why I thought that it might be useful to change actors and this was what led to the invitations for bids…’ (Matthew, Organiser, Epsilon).

The project staff for ViWo was comprised partly of members of the previous project (PreViWo) but also incorporated some new actors. Among the new members were the project manager (Ruth, Epsilon), the representatives of the other supplier (Zeta) and academic researchers (Epsilon). Not all members realised when joining the project how difficult it was going to be because of the different positions they occupied in the project. The project members had different starting points, positions and expectations with regard to the background work that was carried out before the project was established.

For instance, Ruth (Project Manager, Epsilon) prevented some project members from attending the project meetings by using her legitimate power. She was manipulating the situation by not inviting all the former members (Kappa, the Consortium of user organisations) to the project meetings. Some members speculated that she did it so that she was able to avoid competition between her and the previous project manager of PreViWo:

‘I ask this because I don’t intend to invite the whole steering group. At the moment there are already 19 people invited. Do you think that your presence is also necessary?’ (Ruth, Project manager, Epsilon).

She also sent an email to Simon (Epsilon) to state that his presence in project meetings was not necessary. Simon was amazed and asked if some other project management presence was necessary, if his presence was not. It was speculated that for some reason they did not get on well with each other.
Expert power was also in evidence and conflicted at times with the project manager’s legitimate power. For instance, there was a ‘tug-of-war’ between the suppliers and the project manager around various issues. The discussions were ‘a little bit hostile’ (Thomas, Member of quality group, Epsilon). Supplier Eta felt that disagreements were frequent and faults were dealt with by ‘tattling’ to the project manager. So supplier Eta sought background support for their work from other project members on the basis of their expert power. At that time, Eta had a good reputation and there was discussion among the project management people that it was not easy to disagree with Eta because of the skill and know-how owned by the company. Later, however, confidence in Eta started to wane.

Thomas (Epsilon) pondered how the steering group should regard the matter, since nothing was happening. Thomas thought that the roles of ‘generals’ and ‘officers’ were not defined and consequently attempts were made ‘to transfer leadership of the war onto the wrong shoulders.’ Thomas thought that because legitimate power was not defined in the project it meant that people ‘took’ power and the abilities to manage it were not present. Firstly, the use of a war metaphor was interesting – to me, this suggests that to Epsilon the project had the characteristics of a protracted conflict. The question of who Thomas thinks the opposing parties are in this war is not obvious. His concern was that, in this project, the leadership was in the wrong hands, causing ‘anarchistic’ behaviour in power issues.

In addition to legitimate and expert power there was political power used in the project, as shown in how the project was represented as a success to those outside the project. At the end stage of the project, Kappa announced that a journal article had been published about the ViWo project. The announcement incorporated a message requesting receivers to notify their international partners of the publication of the article. At that stage, this raised criticism among the project members, because they thought that Kappa had wrongly taken credit for work that it had neither planned nor implemented alone. The issue came up among the employees of the other supplier as well as among the project management. Thus, the representative of the other supplier, Walter, posed the question:

‘…what was it that Eta had planned and Kappa implemented? And note that Zeta’s name has not been mentioned at all in that connection…’ (Walter, Supplier, Zeta, Email sent 30th June 2005).
The figure below (Figure 5) summarises some quotations which formed open codes for the selective code sources of power.

**Fig. 5. Sources of power.**

**Power as resistance**

In the experiences of project members, the notion of ‘power as resistance’ also emerged. There were situations where project members combatted or at least wanted to combat domination by other project members.

Some members wanted for example to take control of decision-making in the project:

‘Who decides, and on what? It would be good to know so that matters do not need to be hashed over unnecessarily at meetings…’ (Walter, Supplier, Zeta).

Control of decision-making was a central problem in the project, which caused resistance. The decision-making process was seen as a ‘bickering discussion’ (Thomas, Member of quality group, Epsilon) and as a ‘competition’ (Ruth, Project manager, Epsilon). There were tensions between new and old project
members. Both project management and supplier Eta felt that it was often necessary to return to decisions due to questions or criticisms presented by Kappa (the Consortium of user organisations). Ruth (Project manager, Epsilon) complained that it was difficult, although decisions were made at project group meetings. Both Suppliers and Project management felt that the representatives of Kappa (the Consortium of user organisations) inhibited decision-making. Sheila (Kappa), for her part, saw that one really significant problem was that suppliers were given the power to decide on matters in the project group.

Tensions between old and new were evident because of the previous project. Ruth, the project manager, felt that she was an ‘outsider’, while Sarah and Sheila (Members of Kappa) felt that maintaining an artificial separation between these two IS projects caused problems for organisational memory:

‘We assumed then that since Eta was chosen as the second supplier, it would ensure continuity… but the old information had not been passed on, that gate-keeper’s role did not continue…’ (Sheila, Steering group member, Kappa).

Sheila was, for example, surprised that Zeta had begun to design a user interface even though one was already available: the one produced in PreViWo.

There were also situations in which some people were aware of controversial issues but were unable to use power effectively to influence outcomes or unable to get the issues to the decision-making arena. In many cases project members just agreed to accept proposals (apparent acceptance), despite disagreeing with the decision.

Unclear plans caused insecurity among the project members. It was difficult to plan project schedules and estimate future workloads. So the members of Kappa demanded that some kind of long-term plans should be made:

‘In other words, matters have come up kind of unexpectedly – or is that typical in IT projects and IS projects? I have been wondering, even from the point of view of my own work, whether it’s typical… [in relation to] project planning and project management and these types of things…’ (Sheila, Steering group member, Kappa).

The figure below (Figure 6) summarises some quotations which formed open codes for the selective code power as resistance.

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Reasons for the power struggle

When interviewing project members about their experiences, the topic ‘reasons for the power struggle’ also emerged. There were various open codes which made up the selective code of reasons for the power struggle: previous project, jargon, time pressure, and unclear responsibilities.

The previous project affected the power struggle in many ways, for example leading questions could be asked by those who had knowledge of the previous project, of those who did not. Ruth, the project manager, felt for example that it was difficult to see whose rules should be followed:

‘Naturally the previous project has caused pressures, especially because there are still people there from before. I have sometimes sensed an air of competition concerning who is in charge and whose rules should be followed…’ (Ruth, Project manager, Epsilon).

The managers of the previous project (PreViWo) were not invited to take charge of the ViWo project, and the suppliers were replaced. Matthew (Epsilon) pointed
out that discontent with PreViWo (due to schedule and specifications problems) had resulted in an effort to change the actors in the new project.

It also became evident that the representative of the supplier (Eta) who had been involved as an expert in PreViWo did not support the use of the material in the further project:

‘John described the specifications, in his colourful style, as suitable for throwing into a waste paper basket…’ (Matthew, Organiser, Epsilon).

The use of jargon was a problem in the project. John (Eta) thought that users should take more part in decision-making, but the problem was, according to users, that it was difficult to understand technical matters. Lisa (User representative, Alpha) felt that it was difficult to form opinions because she did not understand what was being discussed.

‘If someone mentions the word interface once more, I’ll jump out the window…! Let’s talk about substance without the technology…’ (Lisa, User, Alpha).

Eventually, the users demanded that the project manager and supplier use language which they could understand.

Time pressure was also something which contributed to the power struggle. Project members had very different perceptions about the time pressure in the project. One project member pondered on how it was possible that some people felt that there was no time to have lunch or even to go to the bathroom. But she encountered a different attitude from other project members:

‘It’s amazing that we have to wait at a meeting for an hour while someone [a user representative] feeds her dog’ (Sophie, User, Delta).

Unclear responsibilities also become apparent in an email message sent to the researcher by Eta’s representative:

‘It’s an interesting definition of policy, that because it is related to a [technical matter], it belongs to Eta! In my opinion the application form belongs to Zeta, but Eta has to take part in ensuring the implementation of the form by specifying the necessary interfaces…’ (Peter, Supplier, Eta, Email sent 31st August 2004).

The figure below (Figure 7) summarises some quotations which formed open codes for the selective code reasons for the power struggle.
Fig. 7. Reasons for the power struggle.

**Power as exercised**

How power was actually exercised in the project was very interesting. I found it useful to distinguish between sources of power in the project, and how that power actually played out in the project. I found three open codes for the selective code power as exercised. Figure 8 below shows the dimensions of power as exercised: final authority, power of veto, and forged power.
Fig. 8. Power as exercised.

**Final authority**: The other organiser, project leader, Lucy (Alpha), said that she made a lot of decisions trusting others’ views, using intuition and feelings, because she saw herself as a layman in these matters:

‘I had to make brave decisions, because I am a layman [laughter], so I made them more by instinct…’ (Lucy, Organiser, Alpha).

She said that, for example, when the project manager pointed something out in a plausible way, she gave the necessary final authority. The final authority did not always rest with the same person. A good example was the situation where the project manager and Sheila (Kappa’s representative) battled about the appearance of the display, with the project manager finally climbing down. Some decisions were achieved by asking project manager to use her final authority.

‘We always tattled about any faults to the project manager [laughter], because we didn’t want to start talking directly about everything…’ (John, Supplier, Eta).
Power of veto: Kappa had the ability to veto decisions, albeit informally. It was often necessary to revisit decisions due to questions or criticisms from user organisations.

‘Too often, problems that emerged from practical work or were brought up in discussions were ignored by pointing out that the process had already been defined. But those specifications of the process were not adequate…’ (Jack, Supplier, Eta).

Ruth (Project manager, Epsilon) complained that it was difficult, although decisions were made at project meetings. Both suppliers and project management felt that the representatives of Kappa (the Consortium of user organisations) inhibited decision-making.

Forged power: This was a positive experience as a result of organising and of social relationships, perhaps best expressed when people came together and felt empowered to do things. Things were done at short notice at the request of the project manager because she wielded this type of power. The members of Kappa felt that this was how the project manager got people to do the things she wanted them to do.

Summary of the Power Category

I have shown in the section above the complex power issues that arose in a Nordic IOIS project. I illustrated different selective codes of power that occurred: sources of power, power as resistance, reasons for the power struggle, and power as exercised. While sources of power were easy to identify, it was also easy to see how resistance occurred. Reasons for the power struggle seemed to revolve around both the history of the project and unclear responsibilities.

Power as exercised in the project came down to who could actually have the final authority in the project organisation structure, but this final authority was often contested and switched between people. It has been highlighted that learning processes are integral to the exercise of power and control, rather than external or unrelated to the operation of power relations (Lave & Wenger 1991). Some project members felt threatened by others. In such conditions, it was very hard to work together or find the thread of the project and this negatively affected organisational learning. In many cases people in the project were not happy when certain changes happened, and found it hard to adapt. Resistance was indeed more
likely if the individual was a peer of the individual trying to impose the decision (Markus 1983).

If I relate the aspects of selective codes to the ‘Empowerment and the Dimensions of Power’ framework presented by Hardy and Leiba-O’Sullivan (1998), there are indeed some interesting correspondences. The first dimension, ‘Resources’, with its attendant issues of conflict and failure to use power effectively to influence outcomes, corresponds well with the formulation of the selective code sources of power. Within sources of power I had the open codes of legitimate power, expert power, and political power. For instance, I had instances of the project manager using her power to prevent people attending a meeting so that various people were not able to influence outcomes, even if they were able to get the issues on to the agenda. Expert power as used by Eta was used to gain the upper hand in conflicts.

The second dimension, ‘Access’, has some resonances with the selective code of power as exercised in this case. The organiser/project leader, Lucy, actually vested the final decision (open code final authority) in various people according to the plausibility of the arguments made, thus people were able to gain access to the decision arena. At the same time, power of veto was used to block some people’s access to the decision arena.

The third dimension, ‘Legitimation’, has some echoes in the selective code reasons for the power struggle. For example, the history of the previous project meant that various meanings existed that were harder for newer project members to understand and contest, for instance, when particular questions were asked by long-serving project members who knew the history (open code previous project). There was apparent cooperation that was not in fact cooperation when Kappa simply ignored issues from suppliers by saying that the process had already been defined.

The fourth dimension, ‘Limits of Power’, does seem to resonate with the selective code power as resistance. There were local struggles, where various parties wanted control of decision-making. Parties in the project were indeed prisoners of prevailing discourses as expressed by the open code tensions between old and new, where an artificial separation between the two projects caused problems for organisational memory. The table below (Table 14) presents some possible IOIS implications of the table ‘Empowerment and the Dimensions of Power’ provided by Hardy and Leiba-O’Sullivan (1998).
<table>
<thead>
<tr>
<th>Power of A over B</th>
<th>Interaction between A and B</th>
<th>Reason for B’s failure to influence outcomes</th>
<th>Empowerment of B requires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of resource dependencies</td>
<td>Overt conflict.</td>
<td>B is aware of the issue and able to get it to the decision arena, but is unable to use power effectively to influence outcomes.</td>
<td>Acquisition of resources and ability to mobilise them.</td>
</tr>
<tr>
<td>Management of decision-making processes</td>
<td>Overt or covert conflict.</td>
<td>B is aware of the issue but unable to get it to the decision arena.</td>
<td>Ability to gain access to the decision arena.</td>
</tr>
<tr>
<td>Management of meaning.</td>
<td>Apparent cooperation.</td>
<td>B is unaware of the issue and so has no will to resist.</td>
<td>Consciousness-raising and ‘delegitimation’ strategies to create will to resist.</td>
</tr>
<tr>
<td>None, power is embedded in the system.</td>
<td>Local struggles.</td>
<td>Both A and B are prisoners of the prevailing discourses of power although A may derive greater advantage from them.</td>
<td>Empowerment in the sense of freedom from power effects is not possible although local struggles may produce more positive experiences.</td>
</tr>
<tr>
<td>Resource dependencies exist between different organisations. Different access for different organisations. Communication between organisations. Some organisations have a bigger say than others.</td>
<td>Conflict can occur between parties and be covert or overt. Struggles could occur between organisations.</td>
<td>Organisations can bring up issues, some can get it discussed; others cannot. When discussing issues the organisation may not be able to influence the outcome. Organisations may be stuck in particular narratives about the project that favour one organisation.</td>
<td>Empowerment of organisations in the structure needs resources, ability to participate in decisions, a challenge to the management of meaning, and an acceptance of limits of power.</td>
</tr>
</tbody>
</table>
As stated earlier, the governance of the project was particularly challenging because of the number of organisations and structures involved, and this is why it ended up as a core theme connected to power. The relationship between governance and power themes can be seen most clearly in the challenges to control of decision-making illustrated in this case. Governance is a potential problem for all IOIS projects, as of course governance does need to be defined between organisations in such projects. In this particular instance the project structure, as set out, was a very complex one, with undefined governance and responsibilities. In particular, the authority of Kappa, the user consortium, and its relationship to the lead organisations was poorly defined. What makes it even more complicated is that the background of the project was highly ambiguous and unclear to many participants. The complex project structure led to all sorts of unforeseen problems. It is acknowledged, for example, that one of the core competences of IS managers is the management of relationships with vendors (e.g. Allen et al. 2000, Heiskanen et al. 2008). Silva (2007) argues that authority is always contested, as formal rules are open to interpretation, and this is the source of politics.

In this study, we can see that power relations were continuously reproduced between social actors, and tended to be issue-dependent. Power shifts occurred over time and depended on the task in hand. As discussed, ethical dimensions also exist, such as Kappa taking credit for work it had not planned or implemented alone.

It became evident that feelings and emotions created and shaped the politics of the encounters, hence my third core theme of Emotions. Project members more or less consciously ‘enacted’ organisational practices through the group’s mutual activity. Emotions, unlike processes, were neither neutral nor free from power effects, and emotional consequences.

In this case, all participants (users, suppliers, project management personnel and representatives of Kappa) had power in certain situations, but were also resisting the power of somebody else in other situations. In many cases it seemed that this situation was reciprocal, each actor in turn having power and resisting domination. For example, the users used their power to change topics of discussion, suppliers required users to make decisions, and Kappa criticised the project manager for giving suppliers too much power in decisions. There were also some situations where some people were aware of controversial issues, but were unable to use power effectively to influence outcomes or to get the issues to the decision-making arena. The users were not necessarily the resource-weak
group in the project. Users could ‘talk back’, and in some instances even prevent decision-making and the progress of the project. Both project management and suppliers were affected by this, but neither could use their power effectively to change the situation. In all, the ‘limits of power’ from the critical viewpoint were palpable in this case.

Hardy and Leiba-O’Sullivan (1998) talk about this aspect of power, which does not normally appear in the mainstream literature of power: the ‘limits of power’. The limits of power are evident in this case. Jasperson et al. (2002) and Markus and Bjørn-Andersen (1987) also emphasise the power that is inherent in an official position. This study reveals that in some situations it is easy to use power over others in some position, but on the other hand it also shows that it is possible to counter that power.

I can conclude that in IOIS projects, when there are any number of organisations and structures involved, it is more likely that there will be ‘competition’ and ‘tug-of-war’ situations, and that legitimate power is used as ‘justice’.

This study also illustrated how a lack of clear roles influenced the exercise of political power. According to Silva (2007), the study of power poses challenges because of the twofold nature of power: 1) power that arises from positions of authority or 2) power’s informal dimension, i.e. politics. Most of the challenges in this study came from the informal dimension, which then came up against a veto in the formal authority structures.

Conclusion of the Power Category

This study raises many important issues related to research on power in the IS field. I agree with Silva (2007) that we need more research on power that emphasises the interpretations of meanings, intentions and actions which are suitable for making sense of such a complex phenomenon.

In contrast to traditional problems and power struggles between developers and users or managers, this research shows that in a multiparty IS project it is extremely difficult to say who ‘has’ power and who is in need of ‘empowerment’. This research shows that in an IOIS project it is difficult to say who ‘has’ power and who ‘lacks’ power. In all, power is clearly a complicated matter and there is no clear cut way of defining ‘whose power over whom’ is to be analysed, in an IS setting or elsewhere.
I would also contend that, with the advent of globalisation, there is an increasing number of IOIS projects in existence, and that there is a need to research power issues in such projects. The potential for conflicts in such projects is greater than in organisational projects, because of the need to set up agreements and governance structures between the parties involved in such projects. That is why I would urge IS researchers to explore how particular governance structures might either constrain or enable conflicts in such projects.

4.3.3 Emotions

‘Emotions’ was one category which emerged through the grounded theory analysis, and this section discusses the category in more detail. Emotions seemed to play a large role in the project. Many project members said that they had no idea when joining the project how difficult their work was going to be because of the different positions they occupied within the project organisation.

I identified certainty, significance, connection and contribution as important selective codes that make up the Emotions category. These selective codes manifested themselves in interesting and even contradictory ways in the project. The reader will notice that there are some ‘polarities’ or ‘dualities’ in the open codes. This is why there seem to be paradoxes as well. Table 15 presents the analytic memo summary, open codes and selective codes which contributed to the Emotions category.
It seems obvious that, from start to finish, group members sought certainty in many different ways. What certainty is to different people or how it manifests itself is interesting – it could be in terms of achieving a goal, or maintaining one’s own position. It also seems obvious that resistance is not only the consequence of uncertainty but also a sign of a lack of rapport.

There are many views as to why some people feel part of a group. It seems to be important that people can feel significant to the project. How people achieve this feeling may vary. People try to find positive intent for their work and views. It is interesting to note that this issue can easily cause ‘negative’ interpretations or ‘negative’ behaviour towards others, such as blaming others for one’s own feelings.

It seems that group members try to avoid issues which separate people from each other, and many of them try to find reasons for the failure of collaboration. Feeling a connection with other people and the group makes collaboration easier. It seems to be of primary importance that members are able to establish a good rapport with co-workers.

It seems to be evident that how people feel about their work and their work roles has a huge influence on their whole attitude towards work. It is also evident that people are quite keen to cultivate working conditions so that they meet their own needs, and so that they can show their own contribution or importance to the work. It is obvious that cognitive (knowledge) and social (emotional) aspects are not mutually exclusive.
Certainty

In the experiences of project members, the selective code *certainty* emerged. I found three open codes (changing actors, control and fear) which contributed to the certainty selective code.

Organisers sought certainty when organising the staff for the project: there were many reasons why organisers wanted to *change actors* for the ViWo project and adopt a different pattern of organisation. The quality of the specifications and the poor success of PreViWo were the reasons for the adoption of a different pattern of organisation in the new project. The project manager from Kappa was changed because of project management issues. The suppliers were replaced one year later because of the poor quality of the specifications. Matthew (Organiser, Epsilon) pointed for example that:

‘We chose Zeta because it will deliver the system that the client needs, even though the client is not able to express what it needs…’ (Matthew, Organiser, Epsilon).

Lucy (Organiser, Alpha) had trust in Matthew although she was worried about reorganising. The background of the project (PreViWo) brought a feeling of insecurity to the ViWo project work in many ways. Lisa (User representative, Alpha) felt that PreViWo imposed pressures on the current project in the sense that an element of competition became involved in the project work. Lucy (Organiser, Alpha) was concerned that some members of Kappa might have interpreted the launch of the ViWo project as an indication of a lack of confidence in them. At the time, Lucy sought certainty that the people who were leading the previous project (PreViWo) did not understand the reorganisation as a lack of trust:

‘I still remember that I called Sheila on the day before Christmas Eve. Sheila was at home and I told her that we intended to apply for a grant from the Ministry and asked about her opinion about it to make sure that this was not understood as an infringement…’ (Lucy, Organiser, Alpha).

Control: Uncertain feelings about achieving some goals caused quite a lot of controlling behaviour in the project. For example, Ruth (Project manager, Epsilon) complained that decisions were not seen as final, even though the decisions had been made at previous project meetings. The suppliers (Eta and Zeta) also thought that Kappa inhibited decision-making, while Kappa’s
representatives (Sheila and Sarah) felt that too much power was given to suppliers
to decide on matters:

‘I feel this type of situation gives the suppliers a lot of opportunities very
influentially participate in decision-making, and as I said earlier, I think that’s
quite a problem in a matter of this magnitude…’ (Sheila, Steering group
member, Kappa).

As stated earlier, suppliers, on the other hand, complained that Kappa and project
management members ignored a large number of problems, saying that the
process had already been defined (in PreViWo).

The project manager also tried to control issues around her. As discussed
earlier (e.g. in sources of power), Ruth (Project manager, Epsilon) prevented
some project members (one member of Kappa and one member of Epsilon) from
attending the project meeting by using her legitimate power. She was
manipulating the situation by not inviting all the former members to the project
meetings. Some members guessed that she did this because in this way she was
able to avoid competition between her and the previous project manager of
PreViWo.

As earlier discussed (e.g. in power as resistance) there is one good example of
the situation where Walter (Zeta) wanted to take control of decision-making to
ensure the project was able to go on and reach its goals.

Because of the different kinds of background experiences there were power
struggles to resolve who the ‘real’ leader was. Some members felt that IS project
leadership proved to be extremely challenging because of that power struggle.
The next quotation, which the writer ended with a ‘smiley’, also describes the
situation where some people wanted to control others:

‘That seemed to be a sensitive thing… as the pressure increases, the surface
of the balloon becomes thinner, too… But, getting back to business, I saw
Ruth yesterday and during a corridor chat Ruth mentioned it. Ruth’s
interpretation was that suppliers had been chosen, so there was no risk. In
[the] quality group [it] had clearly been discussed that the ineffectiveness of a
supplier was a big risk… but don’t worry, be happy…’ (Thomas, Member of
quality group, Epsilon, Email sent 3rd November 2004).

Jack (Eta) stated that he felt it was not surprising that there was resistance in the
project:
'Everything is so painful, that first these people [users] relinquish paper processes, and when the processes are gone through and all the communication problems that brings, then usually the outcome is bad, so these experiences of people in the change process… will be quite awful.' (Jack, Supplier, Eta).

**Fear:** Fear manifested itself in different ways in the project: there was fear of change, seeing other members as a threat, insecurity, and distrust. The following section shows how fear contributed to the selective code ‘certainty’.

Fear (fear of change) manifested itself in the project with regard to leadership. Lucy (Alpha) had a fear about how the project manager from the organisation Epsilon would cope with the new task:

‘The biggest doubt was caused by the fact that the new project manager was geographically far away’ (Lucy, Organiser, Alpha).

The organiser pointed out however that after having met the intended project manager her doubts subsided. In terms of seeing other members as a threat, Thomas (Epsilon) said:

‘One big problem is that work is felt to be so personal that changes are hard to accept…’ (Thomas, Member of quality group, Epsilon).

Some project members felt that Kappa members were a threat to the project. As previously mentioned, it was felt that they effectively held an informal veto due their involvement in PreViWo. For instance, Ruth the Project manager (Epsilon) prevented some Kappa project members from attending project meetings because they were seen as a threat to progress. Another manifestation of how threatened people felt was how people communicated with Ruth, the Project manager, secretly. This ‘tattling’ was described by Eta’s representative John (see the Power category, selective code ‘final authority’).

Relationships with suppliers were also riddled with insecurity. Kappa’s member Sheila was worried about both the suppliers’ work:

‘These suppliers are rascals enough to gladly do and produce more than was ordered if we are not careful…’ (Sheila, Steering group member, Kappa).

Ruth (the Project manager) was fearful of the other supplier, Zeta at the beginning of the project. Her first impression of one of the suppliers on the basis of a phone call was that:
‘It felt like he wanted to try to strangle me down the phone line…’ (Ruth, Project manager, Epsilon).

Figure 9 below shows the dimensions of certainty: changing actors, control, and fear.

![Diagram of certainty dimensions]

**Significance**

In the experiences of project members, the selective code *significance* also emerged. This selective code includes, for example, a large number of issues concerning mutual social relationships and the conceptions that project members had about each other.

The ViWo project was launched by two organisers: Lucy (Alpha, User organisation) and Matthew (Epsilon, Research Organisation). The words of Lucy (Alpha),
‘Help! Are we stepping on somebody’s toes?’ (Lucy, Organiser, Alpha)

reveal that the organisation of the project evoked strong reactions concerning various arrangements and choice of personnel. As discussed earlier, the organiser was concerned that some members of the project might have interpreted the launch of the project as an indication of a lack of confidence in them.

The open code *views about people’s presence* contributed to significance. It describes how project members experienced their own and other people’s presence in the project: how significant it was. The views were highly contradictory. On many occasions, project members gave their feelings about organisation, personnel and their presence in the project.

Matthew (Organiser, Epsilon) pointed out that the new organisation was chosen because of unsatisfactory experiences in the previous project (PreViWo).

There were also discussions about the possible roles in the project and John (Eta) felt that it was hard to find a good contract.

Thomas (Member of quality group, Epsilon) saw the intention to form a well-functioning multi-professional group as a reason for employing members of PreViWo. Yet he was not convinced of the significance of his own role in the project. The project organisation, too, was discussed among the project group. The project manager considered it unnecessary to employ two people from the background project (PreViWo). (She also prevented some project members from attending project meetings by using her legitimate power).

As stated earlier, the representative of the supplier (John, Supplier, Eta) claimed that they were engaged in the project because of small-scale ‘blackmailing’. However, Jack, the other representative of the supplier Eta, thought that the project group was formed in this way to obtain an interesting research case.

The members of Kappa (the Consortium of user organisations) wished that the participants from the background project (PreViWo) could have continued in their posts:

‘There should have been more of those people who had previous experience; it was unfortunate that the personnel changed…’ (Sarah, Member of steering group, Kappa).

Thomas pondered the absence of user representatives for one organisation (Gamma) from the project. He wondered why there was no representative from the organisation in question, at least at that time. He thought that the reason was
one person’s (Matthew, Organiser, Epsilon) participation in several previous projects and possible complications in human relations.

The open code importance describes how it became evident through grounded theory analysis that the project members wanted to feel that they were somehow unique and that they had a special meaning for the project. Again, the paradox seemed to be that there were contradictory ways in which this feeling occurred or was achieved. There are examples in which some project members tried to make themselves unique by, for example, manufacturing the belief that they did something which they did not in fact do: Kappa made itself seem significant by announcing and wrongly taking credit for work that it had neither planned nor implemented alone.

Zeta’s representative criticised Eta for wanting to emphasise their expertise. After one particular project meeting, Zeta’s representative had indignantly called the project manager to talk about this issue (Field notes, project meeting, 6th May 2004). Neither was it clear to Zeta’s representative what Eta actually did or planned to do in the project.

Thomas also felt that collaboration with Kappa occasionally involved ‘bickering’ discussions. According to Simon (Member of quality group, Epsilon), the language that was used was harsh and inappropriate, especially that used by the users. He referred to situations in the project where the language used by project members towards each another was not respectful.

Some other people questioned others’ importance and how it affected collaboration: according to Lisa, the considerable turnover of Eta’s representatives in the project significantly hindered the progress of the project. Eta’s role in the project had not been clear to her. She described these people as ‘mystical people’, ‘Santa Clauses’ or ‘UFOs’ in remarks such as

‘It was as if Santa Claus or a UFO had entered the room…’ (Lisa, User, Alpha).

Lisa also felt that, because of the dysfunctional nature of the collaboration, and the guardedness between the suppliers, she did not even feel like commenting on all matters at the meetings.

As the project progressed, the project management people’s trust in Eta’s expertise began to wane. According to one member of project management, Thomas, at the time, they would not get what they expected from Eta:
‘But these are such serious matters that there must be no mistakes, so if I think of Eta’s role, which we spoke about earlier, I wonder what exactly Eta’s expertise is…’ (Thomas, Member of quality group, Epsilon).

It was felt that the effort Eta put into the project was minimal, but they wanted to remain in the project. Thomas pondered how the steering group should regard the matter, since nothing necessarily was actually happening.

Different organisations viewed their importance to the project and the collaboration in divergent ways, but there were also variations within the organisations. One representative of the supplier Eta emphasised their importance in stating that they were a tool that enabled collaboration in the project.

It is important to note that some project members compared their feelings to the project manager’s feelings:

‘I have a positive attitude, but I am sensing that our project manager does not…’ (Lisa, User, Alpha).

*Blame:* It was felt that there was a culture of

‘promote the guilty and punish the innocent’.

Some members felt that Kappa took all the credit but deflected all guilt. Thomas (Epsilon) felt that the project organisation got in the way of achieving goals and that the project manager blamed project members if something didn’t work:

‘Just to make sure, everyone was blamed for the lack of progress in matters…’. (Thomas, Member of quality group, Epsilon).

*Hostility:* There was some hostility and aggression evident in relationships in the project. Project Manager Ruth (Epsilon) felt that Kappa’s members were aggressive when the project started but that this began to wane as the project progressed:

‘…Kappa is no longer so aggressive – well, this aggression was this kind of, something that was hard even to name…’ (Ruth, Project manager, Epsilon).

Eta’s representative Daniel considered Zeta to be a professional software producer, but he felt that Zeta’s ‘bluntness’ hindered collaboration. Hostility was evident also in project communications:

‘Hell no, sometimes this principle of transparency of information takes on laughable dimensions…’ (Lisa, User, Alpha, Email sent 9th February 2005).
and at project meetings:

‘That particular implementation may be up shit creek…’ (Walter, Supplier Zeta, Project meeting 1st March 2005).

Some project members complained of a ‘clique culture’, where some groups worked competitively against other groups.

Figure 10 below shows the dimensions of significance: views about people’s presence, importance, blame, and hostility.

![Diagram showing the dimensions of significance: views about people’s presence, importance, blame, and hostility.](image)

**Fig. 10. Significance.**

**Connection**

In the experiences of project members there were feelings of separation, a lack of cooperation, a lack of motivation for the collaboration for many reasons: the project was not their main work, there were no formulated common aims, roles
were unclear, the feeling that power was an obstacle to the collaboration, and the feeling that the reality of the situation was camouflaged – the feelings were explained in different ways. The selective code of connection also emerged.

**Separation:** When the project work started, one user (Sophie, Delta) raised the question of whether the organisers in charge of the project were aware of the existence of another similar project. Another user from a different organisation viewed this as a possibility to start with a clean slate.

Several representatives of the user organisations (Alpha, Beta and Gamma) met at the first stage of the project (in March 2004) and the researcher’s diary notes indicate that they did not want to continue using the previous specifications. One user (Gamma) summarised a discussion by stating that they must get ‘rid of them’ (Kathy). One user stressed that PreViWo imposed pressures on the current project in the sense that an element of competition became involved in the project work. The situation was confusing because it was unclear whose rules would be applied.

There were some feelings of separation evident regarding leadership in the project:

‘A skewed relationship developed between us and the project manager, where the project manager assumed we could do much more [than] we were able to do…’ (Jack, Supplier, Zeta).

The project manager also felt that there was a lack of cooperation:

‘…I have had the feeling that we all are not pulling together… I have had the feeling that people try to find disadvantages about me, and that people approach what I have or haven’t done with a predominantly negative viewpoint. Well I know very well that I haven’t done things as they’re presented by the books…’ (Ruth, Project manager, Epsilon).

One interesting phenomenon in the project was the situation where members felt that there was competition concerning whose project this project was:

‘I would have loved to say to them, when you’re competing outside, you can’t choose the weather...’ (Ruth, Project manager, Epsilon).

**Seeking the bond of belonging:** The open code seeking the bond of belonging was something which contributed to the views of connection. There were, for example, situations where project members tried to avoid issues which separated people from each other, such as by avoiding the use of jargon. There were also a
large number of situations where project members analysed probable reasons why collaboration did not work and why people were not able to work together in the best way.

According to Jack, collaboration did not function at all in the project, because there was no common language; no readiness for communication existed between different representatives. Jack also thought that his company, as a supplier, was given an interpreter’s role in the project. According to Jack, one problem with collaborating with the users was that the users gave unclear, ambiguous answers to questions. On the other hand, Jack felt that this project was unable to deal with all of the users’ wishes related to the system. Eta’s other representative, John, felt that collaboration with Zeta was close. Despite that, he felt that disagreements were frequent and faults were dealt with by ‘tattling’ to the project manager. The bond of belonging was found through positive emotions, when project members were able to joke with each other.

According to Sheila (Kappa), Eta should have made sure they kept Alpha (User organisation) up to date on what their areas of operation were. According to Eta’s representative (Peter), they again acted according to instructions received from Kappa (see also the Power category). Kappa’s representative, Sheila, thought that not even Alpha (User organisation) had a picture of how these two projects related to each other:

‘Perhaps they didn’t have an exact picture of how these two projects [PreViWo and ViWo] relate to each other either, which itself is quite a strange situation – let’s not say any more about that…[Loud laughter]’ (Sheila, Steering group member, Kappa).

According to Sheila (Kappa), ‘we had to reinvent the wheel’ in the ViWo project. Her comment related to the efforts made to familiarise the new project members with the task. Sarah (Kappa, the Consortium of user organisations) wondered why her organisation could not continue in its leading role even though it had worked in close collaboration with the other supplier (Eta) that had been an expert in PreViWo and now continued as a supplier. (Sheila also commented ‘we lost the gate-keeper role.’)

At the beginning of the project, the people in project management felt that both suppliers were very good for the project. At the beginning, the suppliers’ representatives discussed the proprietary tool proposed by Zeta with which the work would be done. Eta did not want to agree to use the tool proposed by Zeta, and there was discussion among the project management people about how it was
not easy persuade Eta because of the skill and know-how owned by the company. The fact that the other supplier’s (Zeta’s) software contained some business secrets, and that one of the user organisations had no rights to it, had a significant impact on the solution to the software problem at this stage.

Kappa’s representative saw collaboration between suppliers as

‘problematic in the distribution of work and mutual relationships between the suppliers’ (Sheila, Steering group member, Kappa, Email sent 12th June 2005).

According to Sheila, this again had the effect of hindering integration of the current project (ViWo) and the previous project (PreViWo). In addition to the problems of collaboration between the suppliers, Sheila was also surprised that Zeta had begun to design a user interface even though one was already available (Sheila, Steering group member, Kappa, Email sent 12th June 2005).

A member of the project’s management, however, argued that the project lacked correct agreements for functional collaboration. Furthermore, project members and the steering group had different understandings of the functionality of collaboration: the members of the steering group had a more positive view of collaboration. Thomas (a member of project management) thought that the members of the steering group felt that there was no conflict. He suspected that the steering group’s understandings resulted from how the project manager presented the matter to them.

Feeling one is a member of the group: In the experiences of project members, the open code ‘feeling one is a member of group’ also emerged. For example, Lisa (User, Alpha) felt that collaboration was very challenging and required patience due to the variety of actors and the physical distance between them. She felt that collaboration became easier as she got to know the people better. Lisa felt that her adaptation to the project took a very long time. Nevertheless, it was not easy to find reasons for the difficulty of collaboration, although she thought it possibly resulted from people’s manner of communicating and taking care of matters. Another user representative, Sophie, also felt that collaboration did not materialise in the project, despite numerous meetings:

‘And this collaboration is an interesting thing. No matter what kind of meetings were held, collaboration was not created…’ (Sophie, User, Delta).

Affirmative/Positive emotions: It is important to note that there were positive emotions exhibited in the project. For instance, Ruth, the project manager
(Epsilon), said that it was very important to respect others’ work, and she was optimistic:

‘Now I know that we will get that system…’ (Ruth, Project manager, Epsilon).

Project members were also capable of joking with each other. Consider the following communication in a project meeting (2nd November 2006):

‘I wonder what I was doing, because I didn’t notice it there on the screen…’ (Lisa, User, Alpha).

‘You were probably on Messenger with someone.’ (Ruth, Project manager, Epsilon).

‘No, I was surfing porn sites. [Laughter]’ (Lisa, User, Alpha).

At the same project meeting, the participants also pondered the explanatory text of the user interface, one user asking them to add the following to the explanatory text:

‘Add this “if you dare – it depends on what kind of day the official is having…” [Laughter]’ (Ann, User, Delta, project meeting 2nd November 2006).

Some users, such as Lisa, Alpha, were motivated:

‘The way I was able to motivate myself during even the worst moments was greater than the dislike I had towards matters at the time. That was always the light at the end of the tunnel: that I believed this system would be delivered even if it were the last thing I did in this world…’ (Lisa, User, Alpha).

Figure 11 below shows the dimensions of connection: separation, seeking the bond of belonging, feeling one is a member of the group, and affirmative/positive emotions.
In the experiences of project members, the selective code ‘contribution’ emerged in many ways. It was interesting how contributions were important and meaningful not only to the project but also to the project members themselves. I identified three open codes which were part of the selective code contribution (division of work, frustration and improving/learning).

**Division of work:** The open code ‘division of work’ contributed to contribution. This open code is also interesting because it seemed to manifest itself in different ways, for example as conflicting visions and as unclear responsibilities.

The project management people felt uncertainty about the supplier’s attempt to avoid commitment and responsibility. The field notes indicate the following, for example: Ruth said (Field notes of 12th November 2004) that Matthew...
(Organiser, Epsilon) and Ruth (Project manager, Epsilon) had visited the Eta organisation to discuss agreements, and the result of the discussion was that Eta did not want to be responsible for anything. Eta’s representative, Jack, felt he could not sign any agreement because he did not trust the skills of his subordinate, a young girl named Ellie. Jack thus felt that Ellie would not be able to do the work given to her well enough for him to dare to put his name on the agreement (see also expert power).

Organisational memory was another issue which was part of division of work. There were contradictory views: it was felt that there was a loss of organisational memory and the project organisation was criticised for lack of continuity, while on the other hand, previous specifications from the PreViWo project were deemed to have caused more harm than good. Some people felt that it was a challenge to clarify what the previous vision had been, both in the previous project (PreViWo) and even further back in history.

In this project, division of work between the suppliers (Zeta and Eta) proved to be challenging. The suppliers experienced division of work in different ways. There were also differing views on division of work within Eta’s organisation. According to Jack (Eta), all possible work belonging to the suppliers was given to them in the project, while according to John (Supplier, Eta) they could have put more effort in some matters.

Thomas (Epsilon) emphasised that this project showed him again how important relationships are in this kind of project:

‘It will be sad if the project fails because of non-essentials…’(Thomas, Member of quality group, Epsilon).

Dissatisfaction in division of work was evident in situations where project members expected more from the project manager. Sarah and Sheila (Kappa) and Jack (Eta), for example, felt that the project manager did not inform them early enough about tasks they were expected to do. Another example is the situation where supplier Eta was asked to finish some tasks and it was not evident they would complete the tasks. Jack (Eta) felt that the project manager was not aware of Eta’s resources and expected that they would be able to do more work on some tasks. Thomas (Epsilon, Research Organisation) also pondered:

‘One big problem of [a] matrix organisation is the situation, in the case I’m referring to, where the project manager’s ability to have an influence is
almost nil… so it gets to a situation where people are concentrating on who is the king in decision-making…” (Thomas, Member of quality group, Epsilon).

The project manager felt that she was ‘under the spotlight’ all the time and she was expected to be perfect. Eta’s third representative, Daniel, considered Zeta to be a professional software producer that did a respectable tailoring job in the project. According to Daniel, Zeta was able to ‘squeeze’ the necessary information from the client. However, Daniel felt that Zeta’s bluntness hindered collaboration. Contribution emerged also as a feeling of being helped (see also knowledge sharing: ‘We certainly have the instructions for how to use it, and we can always ask Walter [Supplier, Zeta] for help and get an immediate answer’, Lisa, User, Alpha).

It has already been explained how expert power was used in the project in different ‘tug-of-war’ situations. Because of disagreements, supplier Eta needed the project manager’s help in order for them to get their work contribution accepted. Lucy (Organiser, Alpha) for her part said that when the project manager pointed something out in a plausible way, she gave the necessary final authority (see also the section on final authority under Section 4.3.2).

Eta’s representative Daniel thought there were also unreasonable demands as to how they were expected to contribute to the project. (See also the section on governance, knowledge sharing, under Section 4.3.1). There was also dissatisfaction with others’ contribution: for example John (Supplier, Eta) felt dissatisfaction with the professionalism of the quality assurance group. He questioned their work:

‘The review group did not take a stand on whether the process was done correctly; they only paid attention to whether the documents were correctly recorded, which is a slightly different matter… [Laughter]’ (John, Supplier Eta).

Jack thought that the project manager was not aware of Eta’s resources and expected that they would be able to do more work on some tasks.

‘The project manager of ViWo didn’t understand that although we sign contracts, that doesn’t mean that employees will immediately fly in as if sent from above. We then have to go through a recruitment process’ (Jack, Supplier, Eta).
**Frustration:** Frustration was evident in many members of the project. Thomas (Epsilon) felt frustration in the project; he was not convinced of the significance of his role within the project. Lisa (User representative, Alpha) felt frustration in many phases in the project:

‘Those people, mainly Zeta and the project manager and then the Eta people themselves, kind of talked over our heads, bypassed us in matters where I didn’t even know if we were supposed to take a stand on the matters…’ (Lisa, User representative, Alpha).

Her frustration was also palpable in the way she summarised the project in one of the last project meetings (2nd November 2006):

‘Now that the system is ready, we can commit mass suicide…’ (Lisa, User, Alpha).

Jack (Supplier, Eta) felt frustrated at the lack of communication, especially between the project manager, the other supplier (Zeta) and the users in the project:

‘So I feel it’s a completely unnecessary discussion and probably one reason is that I felt I was sitting at a meeting where people were mainly talking about matters and excluding them [the users], even though these matters did in fact concern them very closely, and this interpretation, this translation for the users we felt was a big job, but at that time no one did it…’ (Jack, Supplier, Eta).

One way frustration manifested itself regarding leadership issues was when the organiser of Alpha (User organisation) commented on one appointment as follows:

‘Ruth [Project manager, Research organisation] was appointed in the middle of the clearing phase. She must have been confused at the beginning of this chaos. How could she have known this background history…?’ (Lucy, Organiser, Alpha).

Thomas also highlighted in a project group (1st November 2004) that

‘it is worrying that the project manager is talking about the resource problems of Eta… The bigger concern to her seems to be that the project is some weeks late…’ (Thomas, Member of quality group, Epsilon).
Thomas also criticised the way that some things which were presented to the steering group by the project manager were wide of the mark:

‘Documents are meaningless, if things are embellished’ (Thomas, Member of quality group, Epsilon).

**Improving/learning:** Improving and learning had a positive effect on contribution and are shown, in particular, in issues where people felt that they or other people were able to contribute more than at first anticipated. For example, Lucy (Organiser, Alpha) at first doubted whether the project manager was able to cope with her task: the biggest doubt was caused by the fact that the new project manager was geographically far away.

Some feedback was also given that some people felt that project members were able to make good decisions in some project meetings:

‘I haven’t any other comments, except that I don’t remember the last time I was in such a good meeting. There were a lot of good ideas and we made good decisions which will help our operation’ (Heather, User, Beta, Email sent 9th June 2006).

‘I have learnt that IS projects have their own nature, they have a beginning and an end, and it’s not possible to do everything’ (Lucy, Organiser, Alpha).

There was one interesting example of ‘learning’: Ruth (the Project manager) said at one phase of the project that she had learned that it was Kappa’s project:

‘In terms of the separation of ViWo and PreViWo, these projects are going to connect to each other, although attempts have been made to separate them from each other, I have learnt that this is Kappa’s project and I am just working in that project… and I think there has also been a change in the way of thinking in the steering group’ (Ruth, Project manager, Epsilon).

But interestingly enough, in the final report the owner was not Kappa:

‘I didn’t make this a Kappa project in the final report. I have had discussions with Walter a couple of times and I have to note that I am not envious of him’ (Ruth, Project manager, Epsilon, Email sent 25th January 2007).

‘In that project we were in it for the long haul, and the line-up was a broad church and mixed company, and so quite challenging. But what was more pleasant was that we can always remember that the outcome was good.’ (Lucy, Organiser, Alpha, Email sent 7th February 2007, from Lucy to Ruth).
A very important and remarkable decision was made at the end of the project. Regardless of what the interviews and emails have brought out in this study, the final evaluation of the project in the steering group was that:

‘This was administratively a good experiment’ (Ruth, Project manager, Epsilon).

In the steering group they discussed the concluding report of Viwo at the end of the project:

‘This is truly a successful project.’ (Ruth, Project manager, Epsilon, 27th November 2006).

The project manager’s notes (29th July 2006) emphasise how:

‘The project has been successful and it seemed like this is the first project ever that has been a success, where everything goes as planned and the output is satisfactory.’ (Ruth, Project manager, Epsilon).

Figure 12 below shows the dimensions of contribution: work distribution, improving/learning, and frustration.
Fig. 12. Contribution.

Summary of the Emotions Category

The findings of this research have provided an interesting illumination of emotions in the IS field. Specifically, this research has shown how emotions are an extremely important component affecting the progress of project work.

With regard to the Emotions category, it was evident that how people felt about their work in ViWo had a remarkable influence on the whole attitude to work. One interesting issue is how different categories manifested ‘polarities’ and ‘dualities’ in their categories. This is why there seem to be paradoxes as well.

I illustrated different selective codes of Emotions that occurred: certainty, significance, connection, and contribution. The selective code certainty consisted
of three open codes: changing actors, control and fear. The organisers changed actors in order to achieve goals. Control manifested itself for example in the way that some people wanted to restrict others’ abilities to have an effect on decision-making or the actors’ willingness to control what others thought about issues. The open code fear shows cases where people wanted certainty and felt fear about issues which hindered certainty, such as fear of change, seeing other members as a threat and insecurity.

With regard to the selective code significance, it was evident that project members viewed people’s presence in very different ways, and that they had contradicting views about personnel. The open code importance is one good example of ‘polarities’ and shows in an interesting way how project members wanted to feel that they were somehow unique: people from Kappa manufactured the belief that they did things which they did not in fact do, people from Eta wanted to emphasise their expertise, and some members questioned other people’s importance. Blame and hostility were other open codes which contributed to the selective code significance.

*Connection:* With regard to the selective code connection, this research raises many important issues related to research on emotions in organisational learning and knowledge work in the IS field. Separation was one selective code which contributed to connection. The open code separation highlights in particular feelings about governance and leadership issues.

The open code seeking the bond of belonging brings out how project members tried to avoid issues which separated people from each other, some of them wanted to keep other people up to date, and many project members analysed why collaboration did not work. Collaboration became easier as people got to know each other better and contributed to the feeling one is a member of the group.

*Contribution:* Project members experienced the division of work in different ways, such as being able to ‘extract’ necessary information, the feeling of being helped, unreasonable demands, dissatisfaction with some people’s professionalism. In this selective code (division of work), it could be seen that due to a lack of authority in leadership – both real and perceived – how people felt about the division of work was a major issue. One interesting issue is how frustration improved people’s willingness to resolve problems of contribution.

The open code improving/learning revolves around the following issues: other people were able to contribute more than first expected, project members
were able to make good decisions in project meetings. One interesting issue is that of how the conception of ownership was experienced in the project.

This study shows how certainty, significance, connection and contribution are important parts of collaboration, and how it is important that people experience these when working together. There are various theories and articles which have highlighted the same kinds of issues.

McMillan and Chavis’s (1986) theory emphasises four elements of sense of community: 1) membership, 2) influence, 3) integration and fulfilment of needs and 4) shared emotional connection. Members of a group expect belonging, and acceptance by the community. McMillan and Chavis (1986) say that influence in a community is bidirectional: members of the group or community have to feel empowered to have an influence over the group and group consistency depends upon the group having some influence over its members. They have pointed out that people who take into account other people’s needs, values and opinions are often the most influential group members, whereas people who try to dominate others and ignore the opinions of others are often the least powerful members.

Sarker et al. (2000) identified four different stages which virtual teams pass through during the course of the project: 1) initiation, 2) exploration, 3) integration and 4) completion. Different groups may have varying rhythms, and transitions may not necessarily take place from one stage to another. 1) Initiation includes roles, shared goals and the norms which should be followed in teamwork. In addition to these the use of communication technologies creates its own challenges because of the differing abilities and experiences which team members have. 2) The exploration stage highlights that there is a clear differentiation between intra- and inter-location interests, and team members appear to focus on local goals and concerns rather than discussing the broader goals of the project. 3) The integration stage requires that both local and remote members have a common understanding of their goals, their roles, and the norms guiding their collaboration. 4) The completion stage includes, for example, emotional involvement: the expression of joy at a completed project and positive shared social experiences of members in working together.

Argyris (1971) has stated that those employees who prefer to experience some degree of challenge, to have some control or to make some decisions will be inclined to feel frustration and a sense of psychological failure. Those employees who do not prefer challenging work or control over their work activities will tend to express satisfaction and involvement.
Allen (2003) has emphasised that in their study there was a feeling that ‘we sink or swim together’ and that the resolution of problems was achieved through participative decision-making. Critical to the maintenance of this environment was that teams maintained positive interpersonal relationships. (Allen 2003.) This phenomenon is described as ‘affective acceptance’ (Amason & Schweiger 1994), and research (Korsgaard et al. 1995) suggests that this has a critical impact on decision-making (See Allen 2003: 73).

It has been argued that an organisation is not only a group of roles, it also has its own personality, the aims and values of which are shaped by an individual or group. Emotions are important (as vital dimensions of individual and organisational identities) and have a powerful influence on everyday organisational processes and functioning. Emotions are also interrelated, interactive and interdependent with learning, and periods of changes in particular make extreme demands on individuals’ and organisations’ abilities to learn and on their emotional lives (Antonacopoulou & Yiannis 2001).

It became evident in this study that emotions are an important component affecting the way a leader or manager will act, but also that they affect the subordinates of the leader. It is also stated earlier that a leader or leaders affect the emotions of group members at some level (Bass 1990, Dasborough 2006, George 2000, Pescosolido 2002). It has been highlighted that projects need emotionally aware project managers who are strong in interpersonal skills, knowing how to create an environment where people feel valued and motivated to contribute to their maximum potential, where problems are considered challenges and errors are considered learning experiences (Verma 1996).

I agree with Fisher (2008) and Goleman (1998) that when feelings are ignored, people are not as committed to do things as they could be, and they are not as motivated in their work. This is why I argue that the expression and management of feelings in a leader’s work is a significant issue. I also agree that we need research on leadership that investigates directly a leader’s management or influence on group emotions (George 2000, Pescosolido 2002, Dasborough 2006).

In contrast to the traditional approach, which has concentrated on purely cognitive aspects of human action and intentional behaviour (McGrath 2006), this research contributes to emotional experiences and how these experiences relate to knowledge work.

These findings have illustrated the complexities of knowledge work and organisational learning in an IOIS project. I have also endeavoured to show how
emotions were an important component affecting the flow of that knowledge work. I agree with McGrath (2006) that cognitive (knowledge) and social (emotional) aspects are not mutually exclusive, and should be studied together.

Recent research has identified the lack of information as one thing which causes organisational insecurity and decreases the manager’s willingness to take a risk. The example provided by the current case study also demonstrates the lack of trust between service managers and senior managers (Allen 2003: 75).

Predictability has been seen as an important issue when working together. Allen (2003) has pointed out that in his case insecurity was exacerbated by the fact that respondents felt that organisational history would not help them to understand the nature of the changes, or to predict how the changes would affect the organisation.

It is also worth mentioning that the emotions fear, separation and frustration in particular were very much linked to the issue of authority. The project manager felt, for example, that she was ‘under the spotlight’ and project members were not pulling together.

Fisher (2008) also notes that teams need to understand their emotional reality at the emotional level. For example, why is it that they do not work together as a team, or why do they feel uncomfortable resolving conflicts? Teams often change their behaviour only after they have recognised their emotional reality. This is why I conclude that it is easy to admit that feeling is the very fountain head of action (power), and why the emotions so easily overcome the intellect.

Conclusion of the Emotion category

With regard to the code Emotions, it was evident that emotions were easily taken at the personal level. Emotions can be seen as a double-edged sword: the dilemma seems to be between ‘association’ and ‘dissociation’. It is challenging for team members and leaders to try to view situations ‘objectively’. So, it is easy to agree with Fisher (2008) that in this respect, there is no difference between managing the emotions of others and of oneself. So, it is important to manage relationships and conflicts with others by understanding others’ feelings and communicating accordingly with them at appropriate levels.

In this case, negative feelings were connected to work conditions, problems with the project work, to certain people, or to human relationships. Some project members felt threatened by others. In such conditions, it was very hard to work together or find the thread, and this negatively affected organisational learning
and knowledge work. In many cases, people in the project did not like it when changes happened, and found it hard to adapt. These negative emotions influenced daily knowledge work a great deal.

Barsade (2002) has emphasised that one also needs to take into account the emotional contagion which occurs in groups. It was evident that the expectations of some project members (from Kappa) affected a large number of other project members. This was the case in particular when reasons were sought for unsatisfactory situations, which were explained to be a consequence of some other people. Most of the positive emotions arose from situations where people were able to feel satisfaction in work done or were able to behave with humour.

If we are to understand IOIS work, we have to understand its emotional aspects. Emotions are difficult to study and subjective by their nature, but this study did show that emotion influenced daily knowledge work. I would contend that micro-level studies of emotions are extremely important in the area of organisational learning and knowledge work. This study also showed that individuals were not free to shape their actions, because of how the project was organised. So the constraining nature of the project organisation needs to be taken into account. This is why I conclude by asking whether ‘organisational learning’ in many cases simply requires a submission to authority; whether there is in fact no freedom of choice as to whether to conform to organisational and social norms in an organisation. The key findings about and relationships between categories will be covered in the next chapter.
5 Building the Theoretical Framework

‘When you experience, it is no longer intellectual.’

(Lester Levenson & Hale Dwoskin 2002)

5.1 Chapter Overview

This chapter reviews the key findings from the discussion on the emergent theme of Emotions of Control. It builds the theoretical framework that emerges from the findings, enlarging on the relationships between the categories. This chapter is the result of a scaling up process. It is argued that one common problem in grounded theory studies in IS is the production of a low-level theory which is then hard to relate to the broader literature. Scaling up helps to group higher-level categories into broader themes and contributes to the generalisability of the theory (Urquhart et al. 2010).

This chapter then explains the material that supported those relationships, describing the nature of the relationships. The framework is then related to existing literature. I introduced the literature review in Chapter 2. As has been presented, the idea is that the emergent theory of the study determines the relevance of the literature review (see e.g. Urquhart & Fernández 2006). This, of course, is in order to avoid the possibility of concepts from the literature being imposed on the analysis. Once the theory has emerged, it is then the duty of the grounded theorists to engage their emergent theory with the existing literature. Therefore much of the literature review is revisited in this chapter as well.

Urquhart et al. (2010) have stated that scaling up – grouping high-level categories into larger themes – is one mechanism which has proven to be successful. This of course helps then to relate these to competing theories. It is believed that the desired level of abstraction can be achieved by coding around one or two core themes (see also Glaser 1978, Glaser 1992). Scaling up will be discussed in Section 5.3. Section 5.4 introduces the main findings of the main categories, and Section 5.5 discusses the relationships between the main categories. There is also some theoretical integration presented in this section (5.5).

As a result of grouping these emergent categories following an inductive thinking path, one core theme, Emotions of Control will be treated with theoretical integration in Section 5.6. The core theme Emotions of Control shows
not only that emotion is essential to control different processes, but also that emotions need to be understood in terms of the social structures of which they are a part.

The focus of this research project was to look at the lived experiences of the IOIS project members, and this research attempted to gain a profound understanding of how IOIS project members experienced their work. Section 5.6 answers the final research question, which is the logical outcome of considering the core theme (Emotions of Control).

The final research question is defined as follows:

What is the role of Emotions of Control in an IOIS project?

5.2 Building the Theoretical Framework – The construction of higher-level core categories

In Section 4.3, I presented the analysis of the ViWo project up to the category level. The aim of this section is to dissect the categories discovered in order to make the core theme emerge. From the three-category framework developed in the previous chapter, I now analyse the research material and intermediate results at a higher level of abstraction in order to find the conceptual relations between the categories. Naturally, these three categories are strongly bonded to one another because they emerge from the same data. It has become evident that these categories cannot be completely separated from one another.

5.3 Scaling up

Glaser presents many criteria for the core category (1978: 95–96): 1) It must be central; 2) It must occur frequently in the data; 3) It will take longer to saturate the core category as it is related to many other categories; 4) It relates meaningfully and easily to other categories; and 5) It is in a substantive study.

According to Urquhart et al. (2010) grouping high-level categories into higher-level core categories is a very useful practice to scale up the substantive theory. High-level categories are not necessarily named core categories. They may be named ‘themes’, for example. A similar tactic can be used to generate propositions. Suggestions for scaling up a theory include:

talking about the strategies used by analysts when talking to their clients, one
could talk about the strategies used by professionals when dealing with their
clients’. So, we are talking about cultivating people not cultivators (see e.g.

2. Comparing it to the data from other substantive theories (Urquhart et al.
2010).

3. Putting the theory into the context of other theories in the field. Urquhart et
al. (2010) have emphasised that one advantage of the grounded theory
method is that it needs to engage with theories outside the discipline. This is
why Urquhart et al. (2010) have highlighted the significance of the GT
method for IS – its rigorous approach to theory building makes scrutiny of
high quality exemplars from other disciplines possible.

It is also suggested by Glaser (1978) that the substantive theory can be analysed
by comparing it with other substantive theories in the field. Urquhart et al. (2010)
have also pointed out that because of Glaser’s suggestion, formal models of
process, structures and analysis may be useful to integration. Meta-theories such
as structuration theory or actor-network theory may be useful lenses through
which to view the theory which is emerging.

The emergent theme of this study indicates important aspects of the roles of
governance, power and emotions in IOIS projects. One emergent theme is
Emotions of Control. The methodology for the substantive theory is as follows:
relevant data have been reanalysed for the core theme to produce a more refined
substantive theory. The substantive theory will then be engaged with the relevant
literature, in accordance with grounded theory recommendations for building

5.4 Summary of Findings

This summary has been drawn from the three major categories, 1) Governance, 2)
Power and 3) Emotions, which generated the core theme. Categories were
discussed in Chapter 4. These categories form the foundation for the theoretical
framework. The key findings for each category are given below. The aim is to
present the findings at a higher level of abstraction.
5.4.1 Summary and Conclusion of the Governance Category

The key findings under the Governance category can be summarised as follows:

- Governance has a critical impact on the management of an IOIS project.
- Governance does need to be defined between organisations in such projects.
- Behaviour (action) and different changes (structure) need to be evaluated in terms of context – they cannot be separated from each other.
- Individuals’ single actions can be seen as the basis of broader formations, and vice versa.
- Political and historical factors have influences on current work.
- Particular governance structures might either constrain or enable conflicts in such projects.
- In this kind of setting, a project group may require different behaviours from its leadership over time.
- Leadership is context-bound and very hard to measure through certain traits.
- Structures of governance in this kind of setting can be very complex, and can work against project members communicating and may hinder knowledge transfer and organisational learning in a project.
- The constraining nature of the project organisation needs to be taken into account. That is why it has been asked in this study whether ‘organisational learning’ in many cases simply requires a submission to authority: whether there is any freedom of choice to conform to organisational and social norms in an organisation.

5.4.2 Summary and Conclusion of the Power Category

The key findings under the Power category can be summarised as follows:

- The study of power poses challenges because of the twofold nature of power: 1) power that arises from positions of authority and 2) power’s informal dimension, i.e. politics (see Silva 2007). Some challenges in this study arose from the informal dimension, which then came up against a veto in the formal authority structures.
- Power relations had an impact on collaboration: it was not easy to work, together which had a negative effect on organisational learning as well.
- Power was more likely to be determined by the nature of the ‘employment’ than by professional title or expertise.
Political power was used to take credit for work that had been neither planned nor implemented alone. Kappa people thought they had the ‘right’ to define themselves as completers of the project. It was interesting that they behaved in this way rather than behaving as a ‘victim’ (compare the reorganisation that happened between PreViWo and ViWo).

The language and rhetoric used by the members of Kappa reflect the power they had assumed as ‘completers of the project’: in their journal, they define the completion of the project ‘in a binding way’ as a joint effort by themselves and one of the suppliers and ‘forget’ to mention the names of the other contributing actors (see e.g. Bourdieu 1998 on ‘authorised language’).

The pressure from the Ministry to incorporate one organisation for the project associated with the work environment (public institutions) may introduce feelings of ‘hidden rules’ and ‘automatic continuity’.

The manifestations of power as a determinant of reality, as an aspect of action, and as a separate, mechanised structure can be essentially associated with the work environment (public administration).

Power relations were continuously reproduced between social actors, and tended to be issue-dependent. Power shifts occurred over time and depended to a small degree on the task in hand.

In some situations it is easy to use power over others in some position, but on the other hand, it is also shown that it is possible to counter that power.

In all, power is clearly a complicated matter and there is no clear cut way of defining ‘whose power over whom’ is to be analysed, in an IS setting or elsewhere.

5.4.3 Summary and Conclusion of the Emotion Category

The key findings under the Emotion category can be summarised as follows:

- It is evident that how people felt about their work in ViWo had a huge influence on the whole attitude to work.
- Feelings and emotions are subjective by nature. This is why there seem to be paradoxes as well. The words that project members use are not the event(s) they represent.
- Every behaviour seems to be motivated by a ‘positive intent’ (but how we see and analyse the world around us differs), but intent is not the same as behaviour; for example, in the ways in which people seek significance or
connection, the intent is ‘positive’ but the way to achieve it may be ‘negative’.

– The meaning of communication is the response you get.
– Cognitive (knowledge-based) and social (emotional) aspects are not mutually exclusive, and should be studied together.
– A strong link can be identified between work, certainty and organisational motivation. The impact of this is a significant barrier to progress.
– Feeling the connection with a group makes collaboration much easier.
– The beliefs and feelings of individuals and groups (even organisations) about the identity and purposes of the process, the organisation, and its environment strongly affect organisational actions.
– Resistance very often seemed to be a sign of a lack of rapport. It seems that if people are having difficulties understanding each other they will be more likely to resist. It is also evident that resistance is ‘more the rule than the exception’. One interesting question is that of when the issue of resistance is a person’s own personal problem and when it really is the problem of organisation.
– One interesting discovery is that all the selective codes which contributed to the Emotions category include ‘dualities’. On the other hand, this can be seen as a result of life’s underlying unity (if we have ‘right’ we also have ‘wrong’). So, in conclusion, ‘there are two sides to every coin’.
– It seems very obvious that there are feelings which describe feelings of ‘uncertainty’ (such as separation, fear, blame, frustration), and this should be taken into account in the research of emotions. ‘Negative’ emotions do not necessarily mean that something is really wrong: they are a way of reacting to a situation where there are no immediate solutions to problems, for example.

5.5 The relationships between the main categories: Governance, Power and Emotions

This section explains what supported the appearance of the higher-level core categories extending and describing the relationships and nature of the main categories. This section mainly discusses the relationships between these categories but also shows some theoretical implications of these findings.

The emergent categories Governance, Power and Emotions are all related to the aspects of the political and historical context. These three categories show that
political and historical issues had very strong effects on individuals and many cultural operations in the ViWo project.

There were some issues which, it became evident, were due to people who were no longer participating in the project. Some new project members had no idea where certain influences were coming from. These findings confirm Allen’s (2003) findings that the beliefs of individuals and groups about the identity and purposes of the process, the organisation, and its environment strongly affect organisational actions.

These beliefs were produced and reproduced by social processes and accessed, for example, through myths (for instance, regarding the reasons some people were participating in the project, etc). This study confirms that these belief structures are seen as being significant at the collective or group level (Allen 2003) and at the individual level as they form a ‘conceptual lens’ (Allen 2003, Gioia et al. 1994).

One key relationship was evident between categories: organisational structures and management processes determined to a large extent what was required of employees. Governance contributed issues related to Power, which in turn had an impact on Emotions and vice versa. The categories not only defined the nature of the core theme but also formed a connection between the categories. The emergent category ‘Emotions’ shows that emotions influence structure and are intimately linked to social structures of power, and that ‘inequality’ is an essential part of that theme.

It became evident that feelings and emotions created and shaped the politics of the encounters, and project members more or less consciously ‘enacted’ organisational practices by the group’s mutual activity. Emotions, as opposed to processes, were neither neutral nor free from power effects, and the spaces in which people were controlled had a large number of emotional consequences. It is also clear that neither emotions nor power are located in a purely individual space. I found a notable reciprocal influence between these three main categories, each one reinforcing the other as shown in Figure 13.
As stated earlier, this IOIS project was very complex in nature, and required a large number of independent tasks, relying on distributed expertise. It is evident that individuals were simultaneously part of their own organisation, the project group, and a larger IO group. Through the interviews it became clear that mutual understanding and alliance is the critical starting point and also the foundation for mutual relationships. It became evident that ‘joining the community’ took time. The feeling that project members belong to the community and experience others’ acceptance was a crucial issue, and it is evident that it is a condition for ‘target-oriented’ collaboration. Table 16 shows the main categories and their selective codes. The relationships between these categories and codes are discussed in more detail after the table.
Table 16. Main categories and their selective codes.

<table>
<thead>
<tr>
<th>MAIN CATEGORIES</th>
<th>SELECTIVE CODES</th>
<th>OPEN CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVERNANCE</td>
<td>Organising the project personnel</td>
<td>Historical influences, The challenge of reorganising</td>
</tr>
<tr>
<td></td>
<td>Leadership styles</td>
<td>Authoritarian leadership, Democratic leadership, Passive leadership</td>
</tr>
<tr>
<td></td>
<td>Organisational learning and knowledge work</td>
<td>Organisational memory, Conflicting visions, Knowledge sharing</td>
</tr>
<tr>
<td>POWER</td>
<td>Sources of power</td>
<td>Legitimate power, Expert power, Political power</td>
</tr>
<tr>
<td></td>
<td>Power as resistance</td>
<td>Control of decision-making, Tension between old and new, Apparent acceptance, Insecurity</td>
</tr>
<tr>
<td></td>
<td>Reasons for the power struggle</td>
<td>Previous project, Jargon, Time pressure, Unclear responsibilities</td>
</tr>
<tr>
<td></td>
<td>Power as exercised</td>
<td>Final authority, Power of veto, Forged power</td>
</tr>
<tr>
<td>EMOTIONS</td>
<td>Certainty</td>
<td>Changing actors, Control, Fear</td>
</tr>
<tr>
<td></td>
<td>Significance</td>
<td>Views about people’s presence, Importance, Blame, Hostility</td>
</tr>
<tr>
<td></td>
<td>Connection</td>
<td>Separation, Seeking the bond of belonging, Feeling one is a member of the group, Affirmative emotions</td>
</tr>
<tr>
<td></td>
<td>Contribution</td>
<td>Division of work, Frustration, Improving/learning</td>
</tr>
</tbody>
</table>

The literature review Chapter 2 only includes minor assumptions about the relationships between Governance, Power and Emotions. This section is concerned with conceptualisation and the relationships between different categories and codes, and the next section (5.6) is more concerned with the scope of the theory.

When considering the relationships between the selective codes of the Governance category, this study highlights that the term ‘organisational learning’ implies that organising and learning are strongly related to each other, rather than that the organisation is learning. This study confirms Gherardi and Nicolini’s (2001) study, which argues that organisational learning is rather ‘learning in organising’ – highlighting that the concepts learning and organising are not distinct activities in practice.

Learning in an IO setting seems to make issues much more complicated. This observation confirms the previous findings of Levina and Vaast (2008) where a situation presents a different combination of boundaries because of the different internal and external dynamics which have an effect on collaboration and aims.
This research also shows that there were several – incompatible – views on knowledge in organisations and this for its part confirms Carlile’s (2002) findings. One interesting question is that of what knowledge is; can we codify and exchange it between organisations as if it were like any other exchange?

This study suggests that people are not always interested in sharing all types of knowledge, and it is organisational culture that has a significant effect on whether people are willing to exchange knowledge. This finding confirms the previous findings of Wasko and Faraj (2000).

When considering the relationship between organising, organisational learning and emotions it is easy to confirm that supporting individuals in gaining an emotional understanding of themselves and of others can be seen as a vital part of organisational learning. This confirms the findings of Antonacopoulou and Yannis (2001). One of the most significant discussions in organisational learning is the question of whether organisational learning happens at the micro or macro level. This is very relevant to consideration of organisational learning at the project level. So one issue is whether individual learning is a prerequisite of organisational learning. The question is raised earlier in this study of whether organisational learning in many cases simply requires a submission to authority; whether there is any freedom of choice of whether to conform to organisational and social norms in an organisation.

The observation above confirms the findings of Lawrence et al. (2005) that organisational learning is also a political process and has a strong link with power issues. There are several examples in the data which tell us about the link between governance and power issues. One example is where some people assumed that since certain people were chosen to be part of the project group they could ensure the continuance of information. These issues show a strong link between selective codes such as power as resistance (Power) and organisational learning and knowledge work (governance).

It also became evident that some project members did not support the use of the material in the further project, and the material was described as suitable for throwing into a waste paper basket – this is an example of the strong link between the selective codes reasons for the power struggle and organisational learning and knowledge work.

Too often, problems that emerged from practical work or were brought up in discussions were ignored by pointing out that the process had already been defined. This is an example of the link between open codes like power of veto (Power) and organisational memory (Governance). This also has a link to the
Emotion category and especially to the selective code contribution and its open code frustration, because it was felt that those specifications of the process were not adequate. The open codes knowledge sharing (Governance) and division of work (Emotion) were also strongly linked: for example, there was a situation in which some members trusted others’ expertise, saying that they definitely had the instructions, but just needed to ask for help from other people.

One of the most important and interesting elements of the concepts of organising and learning is that they are both desired and but also avoided. There is a strong link between the Governance, Power and Emotions categories and especially between open codes like democratic leadership, seeking the bond of belonging and final authority. As an example, leaders/organisers want to see a structure that supports both the practice of the individual(s) and the performance of the organisation(s); however there are conflicts around potential changes and situations where power relations are contested.

This study highlights the elements of social, political and also relational interpretations of organising and learning. It is argued that there is a lack of theory connected to organisational politics and organisational learning (Lawrence et al. 2005) and the findings of Lawrence et al.’s study supports the view that it is very important for theories of organisational learning to understand political dynamics to be complete. This can offer information as to why some organisations ‘succeed’ better than others.

Still in terms of the relationship between the Governance and Power categories, I point out that power is the ability of a person or group to have top management implement the organisational change that s/he or it favours. Managerial power was aligned strongly with stakeholders’ interests (such as the large influence of the possibility of carrying out research work, etc.) and this confirms Krishnan and Sivakumar’s (2004) observation that the power of the top managers is a significant prediction of diversification posture and strategies.

When considering the relationship between Governance and Emotions it is evident that these categories in particular reflect how prominent project members felt their own position to be, how they tried to find their own role and significance in the project, and why they acted as they did.

There are several examples which show the link between the Power and Emotions categories. The open codes division of work (Emotions) and forged power (Power) in particular show how there was an ability to share knowledge, and some people felt a tranquillity about the fact that they did not need to know everything. The link between Power and Emotions also became evident in
situations where it was difficult to plan project schedules and estimate future workloads but the members felt they had no power to impact on issues, and that matters simply fell into one’s lap.

The findings show that the aims of the individuals in the project group are not the same as the official aims, and that these official aims are not the sum of workers’ aims – it seems that aims can also be unconscious, a combination of unspoken feelings. In some phases the aims were blurred and undefined, which also explained the fact that there were different beliefs and attitudes which were guiding project members’ operation (for example the issue of ownership). The question of ownership is a good example of the link between all the main categories. Some people defined themselves in the publicity as the completers of the project, while others wondered why they did not mention other people as belonging to the project. It is interesting that the people who defined themselves as the completers of the project were not defined as completers in the final project report.

Many risk factors (as laid out by Erickson & Evaristo 2006), such as the development and management of user relationships, project management and planning, scheduling, the development process, personnel and staffing were also identified in the project. In the project, there were evidently unclear roles and expectations among stakeholders. The ‘sponsorship and ownership’ risk factor highlights the risk of a lack of commitment and ownership by the key set of stakeholders, and the risk of the project owner not being able to communicate effectively with the responsible teams. (Erickson & Evaristo 2006.)

Questions related to ‘project ownership’ are of interest from the point of view of project organisation and background. The existing literature has already emphasised the importance of a team’s experiencing ownership over its work processes and outcomes, and that there should be a collective belief that all the members of a team are part owners and that outcomes belong to the team (Druskat & Pescosolido 2002).

It is evident, in any case, that common experiences came with time, and it is evident that it is difficult to hurry to get these to emerge. This study supports the view that feelings are the way in which group entities can be recognised and it is the development of group emotion that defines a group and distinguishes it from a mere collection of individuals. This confirms Barsade’s (2002) findings.

This study highlights the importance of emotions in organisational behaviour especially at the individual level, and confirms that it is worth understanding the
processes and outcomes of collective emotion. Kelly and Barsade (2001) and George (2000) have highlighted the same issues.

Regardless of the fact that it is acknowledged that emotions are an essential part of group processes, it has been highlighted that there is a scarcity of studies on how organisational socialisation processes are related to feelings (Scott & Myers 2005). Some studies have investigated the particular process by which newcomers learn to experience and display emotions in ways that are coherent with organisational goals (Katz 1990). It has also been highlighted that emotionality is the outcome of people’s engagement within social practices rather than reactions to matters that represent some inner state (Moir 2005).

However, it has been pointed out that cohesiveness is the most investigated group-level affective construct (Kelly & Barsade 2001, Spoor & Kelly 2004). It is argued that emotions have an effect on group commitment because emotions occur and are communicated rapidly, emotions often happen subconsciously, and have an impact on social processes, such as trust in others and group commitment (Lord & Kanfer 2002). It has been highlighted that emotional competence has an effect on group performance in particular (Ashkanasy 2004).

The common planning work, contemplation of ideas, implementation and analysis of results involve investigating common experiences in depth. The big challenge seemed to be association and dissociation as mentioned earlier; the challenge is for team members to try to view situations ‘objectively’.

It became evident that different emotions, either displayed or suppressed, shape actions and outcomes. One good example of this is the link between the Power and Emotion categories, and especially between the open codes final authority (Power) and fear (Emotion) – this was illustrated by some people ‘tattling’ about faults to the project manager in order to gain the final authority indirectly.

Emotional presentation can be seen as a resource for the project members, in which different emotional expressions can be used to deflect others’ influence. Fineman and Sturdy (1999) have stated that emotion encodes the time and place of the encounter and emotional experience is a key and unavoidable feature of organisational control.
5.6 The appearance of the higher-level core theme: Emotions of Control

Once the theory has emerged, it is then the duty of grounded theorists to engage their emergent theory with the existing literature. I introduced the preliminary literature review (Urquhart & Fernández 2006) in Chapter 2. As presented there, the idea is that the emergent theory of the study determines the relevance of the literature review. This is to avoid the possibility of concepts from the literature being imposed on the analysis. I elaborate upon the findings in the context of the extended literature review (theoretical integration) in this section. I presented some theoretical integration in Section 5.5, in which the relationships between categories were presented.

It has been stated that grounded theory has the capability to generate theory which belongs to some of the following categories: theory for analysing, theory for explaining, theory for predicting, theory for explaining and predicting, and theory for design and action (Urquhart et al. 2010).

It is essential that grounded theory ‘has the capability to generate theory that exists in all these categories, because it contains the essential building blocks of any theory – constructs in the form of categories, and relationships between those constructs in the form of theoretical coding’. GTM emphasises constructs and relationships, and that is why it is stated that it is easy to generate propositions which may be hard to test (Urquhart et al. 2010: 365).

There are two vital aspects for theorising, namely conceptualisation and theory scope. Conceptualising relates to the process of building a GT and, theory scope relates to the outcome of building a GT. The aim of GT research is ‘greater and greater depth of analysis of the data’, and ‘the precise nature of the association between constructs is critical to theorising’ (Urquhart et al. 2010: 367, 368).

This section describes the elements of Emotions of Control which became evident in the interviews and observations of this study. The framework is related to the extended literature review in this section.

This study shows that change is difficult. It seems as though it does not matter whether it is a small or a big change, it still causes resistance. Resistance is the desire to control issues or an unwillingness to change. It was also evident that change, without exception, means giving something up (power, work, position, etc.). In the case studied here this was, for example, a belief or a competing idea, strategy or even position. This study shows that changes are not easy, and this
should be taken into account when creating and changing organisational structures. Situations where people have no control over issues are more likely to cause resistance.

It also became evident that when an individual had to give something up, he or she had to confront the so-called unknown. This brought about feelings such as fear, blame, separation and frustration. It has been pointed out that most people are often extremely uncomfortable when they are not able to predict their own feelings or responses (Fineman & Sturdy 1999). So it is not only the change but also the fear of unknown which becomes another obstacle. This is a natural explanation of why change undoubtedly produces resistance, which is a process of avoiding change (Fineman & Sturdy 1999).

This study also shows that there were many forms of control, such as controlling project members’ requirements or controlling other people in order to create the desired state. It is evident that forms of control are varied and intertwined. It has been said that they range from the control of the display of social interaction, for example, where and how people work, and appropriate thoughts and values for their work. The interactive and internal tensions of these multiple structures, combined with human reflexivity, accounts for the way control is shaped and transformed. It also accounts for its consequences, both predictable and unpredictable. (Fineman & Sturdy 1999: 3.)

In this study it is also shown that some members recognised the presence of problematic emotions such as fear of the unknown and resistance to organisational change. Yet these feelings were often regarded as hindering progress towards particular managerial ends. This study confirms Fineman and Sturdy’s (1999) study, which argues for example that resistance to organisational change is sometimes easier to define as problematic, rather than considering that resistance could also be an oppressive managerial control.

It is also argued that stress-related emotions have become individualised as a problem of the employee rather than thinking that these, too, could be oppressive managerial controls (e.g. Fineman & Sturdy 1999).

Scott and Myers (2005) have emphasised that another emotion management challenge is not to avoid or mask feelings altogether but to control them in order to maintain a suitable level of emotional intensity.

It was evident that emotions had an effect on choices, and were socially and discursively constructed through interaction with project people as well. Some research on emotion in organisations suggests that control and emotion are often
linked. It is also argued that emotion is fundamental to control processes (e.g. Fineman & Sturdy 1999).

In that substantive theme (Emotions of Control), as in some other studies where Emotions of Control were examined (e.g. Fineman & Sturdy 1999), a paradigm occurs which can be expressed as follows:

‘Emotion is intrinsic to control processes and emotion needs to be understood in terms of the social structures of which they are a part’ (Fineman & Sturdy 1999: 1).

Substantive theory is the synthesis of the findings of empirical data and theoretical integration. It has been argued that a substantive theory extends its explanatory power to the phenomena on the basis of which it was developed. Urquhart et al. (2010: 367) say that ‘a substantive theory has significant empirical support’.

The relationships between the core categories form the emergent theory. The particular focus in this study is on inter-organisational control but this also develops insight into intra-organisational control. I found that the higher-level core category adds interesting dimensions on the phenomena being investigated.

Governance is essentially linked to control. This study also shows that control reflects and reproduces broader social structures of power through which organisations (or institutions) and their incumbents act out and transform both cultural and professional ideologies and interests. In such terms control is shaped by different forms of actor resistance, cooperation and compliance, by or for morally questionable means or ends. The theme of control has long been central to management and organisational theory and practice. It has been highlighted that discussions have for a long time (since 1920) focused on how specific organisational structures and management processes can determine what is required of employees (Fineman & Sturdy 1999).

It has also been proved that control is a central characteristic of modernity: we seek to gain control over other people, to create order and certainty. It is also stated that control is necessarily self-defeating (Fineman & Sturdy 1999).

Pescosolido (2002) has stated that many organisations have operated under the belief that emotions and emotional expressions and rationality are mutually exclusive, or that emotions are the antithesis of rationality. Some studies have shown that organisations have tried to control their members to promote rationality over emotions (Mangham 1998). Although the study of emotions has become more active, with varying intensities, focuses and methodologies, Moir
(2005) has stated that emotion is still often represented in terms of metaphors of heat: ‘cool’ rational thought versus ‘hot’ emotions.

The structuration theory created by Anthony Giddens (1984) presents control as a socially structured, regulating – and often in particular self-regulating – practice, which both constrains and enables action. It has been pointed out that power arises from the residual rights of control and that people in central positions have greater access to, and potential control over, relevant resources such as information (Krishnan & Sivakumar 2004). As is also well known, Foucault (1980) argued that power and knowledge are like two sides of the same coin.

Complex issues of emotions have been discussed in organisational literature and there are many studies (e.g. Fineman & Sturdy 1999: 5) expressing the view that emotions, and related dimensions of subjectivity, are subject to control. It is claimed that these processes are neither neutral nor free from power effects, and that being controlled can have emotional consequences. However, emotion and control are typically not fused – they do not suggest that one is intrinsically part of or dependent upon the other. Rather, emotion often assumes the status of an extra variable or object in the control process. Control, and the response to it, is substantively an emotional process, whatever moral lens is applied.

Fineman & Sturdy (1999: 5) have argued that people follow others who present the structural and emotional as interpenetrative rather than simply conflictual. Moreover, they (Fineman & Sturdy 1999) argue that people usually extend the typical empirical focus on those subject to control to include the Emotions of Control and the experiences of those who control. It is claimed that the organisational psychodynamic tends towards a confection of emotion and control. Fineman & Sturdy (1999) also state that the exploitation and production of fear and anxiety is an inherent feature of hierarchical enterprises. One good example is that in the shadow of the reward system and its sanctions there is prolonged anxiety about losing one’s job, esteem or status, and about failure to gain promotion. But these perspectives engage with a limited definition of emotion such that much of the complexity and variety of social relations is lost. (Fineman & Sturdy 1999: 5.)

Sturdy (2003) has claimed that it should be uncontentious to state that emotion is intimately linked to the social structures (or other conceptions) of power and inequality. Fineman and Sturdy (1999) argue that control is a central characteristic of people and that people seek control over other people to create order and certainty. Regimes and forms of control are varied and interrelated.
They range from the control of the body, such as in the display of social interaction (Goffman 1964), to the enactment of explicit and implicit regulatory regimes of physical control, for example, where and how people work, and ‘appropriate’ thoughts and values about work. The interactive and internal tensions of these multiple structures, combined with human reflexivity, accounts for the way control is shaped and transformed. It also accounts for its consequences, both predictable and unpredictable (Fineman & Sturdy 1999.)

Fineman and Sturdy (1999) argue that when we fail to identify and question broader structures of power and inequality, we endorse the notion that to know emotion is to control emotion. On the whole, we regard control, its use, and responses to it, as a dynamic, psychosocial process. Agents will consciously and/or subconsciously ‘enact’, make real, and transform organisational structures. They will similarly make possible and reproduce the wider social structures, ideologies and histories which contextualise different organisations. (Fineman & Sturdy 1999: 6–7.)

Anthony Giddens’s structuration theory provides a useful lens through which to view the theory which emerged in this study (Urquhart et al. 2010). Giddens’s structuration theory is, briefly, that action and structure cannot be separated from each other. To scrutinise the dualism between structure and agency, Giddens (1989) states that structure gives form and shape to social life but is not itself form and shape. Giddens (1989: 256) stresses that structure exists only in and through the activities of human agents. Organisations have effects on individuals. Agency refers to the flow of people’s actions. Giddens highlighted that while structural properties of social systems are real, they have no physical existence. Instead they reside in regularities of social reproduction.

The theory highlights that the structural properties of social systems exist only in so far as forms of social conduct are reproduced across space-time. The structuration of institutions is understood in terms of how it comes about that social activities become ‘stretched’ across wide spans of space-time. Power is also an essential element of structuration theory. It is also broadly derived from structuration theory, where control is regarded as a socially structured, regulating and often self-regulating practice, which both constrains and enables action. Regimes and forms of control are varied and interrelated.

This study has significance, in terms of theory, for the IS field. This study affords a rare insight into the detailed workings of an IOIS project, and not only the everyday reaction of project members but also a unique substantive theory for the IS field.
The management of emotions is acknowledged as an important and vital aspect of project work. Fisher (2008) claims that project managers who recognise this and act accordingly are more likely to conduct their project successfully. It has also been argued that when the emotional side of work is managed well, people are more productive because they feel better about each other (Goleman 1998, Verma 1996). Thus, maintaining a positive environment is one of the most important issues in IS development (e.g. Lytyinen 1988, Jiang et al. 2001). Because of the nature of project organisation (it is temporary and consists of a mixture of people, for example), project managers do not normally exercise direct line management responsibility. Consequently, it is claimed that managers need to manage the emotions of people over whom they have little or no control (Fisher 2008).

Emotional support provided by a leader is seen as a key factor in projects (Blanchard & Markus 2004). It has been shown time and again that the issue of management of group emotion has been identified to be a significant factor in leadership (Pescosolido 2002).

During the past three decades, emotional and value-based elements have been under-researched in the organisational literature (Fisher 2008, Yukl 2006). It has been argued that most leadership theory and most organisational theory deal with the topic of emotion only tangentially (Pescosolido 2002) and that the literature remains vague about emotion (Fisher 2008). Two vital aspects of research on emotions which require further study can be identified: firstly, relatively low-level affective states such as liking and satisfaction and secondly, emotions during specific critical organisational events such as organisational change. Some studies based on leadership behaviours have studied the issue of the management of group emotion, but only superficially (for example, Pescosolido 2002).

Pescosolido (2002) argues that the focus of behavioural theories has been on the ‘relational’ and ‘employee-oriented’ aspects of behaviour. Leaders should be able to set the ‘emotional tone’ for the group and to influence how group members will interpret and react to events that affect the group. A group may also require different behaviours from its leadership over time, not to mention the fact that two different groups even in very similar situations might require different treatment from their leaders. Fisher (2008) states that the ability to manage the feelings arising from conflicts will help the people that are on your side to deliver work packages successfully.

Many studies show that a leader affects the emotions of group members at some level (e.g. Dasborough 2006, George 2000). While this kind of ‘emotional
link’ between leader and group exists, it is argued that ‘the behavioural theories of leadership do not directly address the management or influence of group emotion as being a necessary action for group leadership’ (Pescosolido 2002: 585).

Trait-based theories of leadership have focused on the promotion of positive feelings and cohesion within the group, and the control of the expression of negative feelings. Charismatic theories of leadership highlight emotion, values, and the importance of leader behaviour in the communication process between followers. However, none of these theories poses the question of how the group leader affects the overall group emotions and what kind of consequences they have upon group processes and performance. (Pescosolido 2002.)
6 Conclusion

‘How come in a gentle project like ViWo such emotions were felt?’

(Matthew, Organiser, Epsilon)

6.1 Contribution – The value of the research

This research was a unique project from two perspectives: Firstly, longitudinal studies of IS projects are rare because it is often difficult to study complete projects from beginning to end (Allen 2003) – this research tracked the whole IS project. Secondly, it had a unique approach: no framing questions were used in interviews, the focus was on the experience of the project member. To the knowledge of the researcher knowledge, no other research in IS has had either this focus – the lived experience of the project member – or has utilised such a unique approach. As such it makes a unique contribution to both Scandinavian and international information systems research.

This research also has unique qualities – it has a unique and large data set and the methodological approach is similarly innovative. Many organisations now learn from the past by conducting retrospectives (Nelson 2007, Robey et al. 2000), and this research fits into that category.

The other qualities of the research are: 1) The IS research discipline will benefit from a deeper insight into the emotional and collaborative aspects of an inter-organisational project. The emotional experiences within IS projects have not hitherto been explored systematically in IS research, unlike other research into emotions where emotional experiences have assumed greater primacy, and emotions are said to be an essential part of understanding the organisational processes. 2) It is hoped that this research will have a contribution beyond its immediate discipline, IS. 3) The research results will be beneficial to practitioners, designers and financiers in planning new IS implementations. 4) The research uses grounded theory (Glaser & Strauss 1967, Glaser 1978, Glaser 1998, Glaser 2001, Glaser 2004) which is ‘rarely used to its full potential in information systems’ (Urquhart & Fernández 2006, Urquhart et al. 2010). The grounded theory method has been used in the IS field since the mid-1980s, but studies generating grounded substantive theories using the method, for example, are still rare (Urquhart 2007, Urquhart et al. 2010). 5) This research will promote discussions not only about how emotions should be taken into account in IS.
projects but also about how we should investigate emotions in future (Sturdy 2003). Thus this research has a meaningful theoretical contribution.

6.1.1 Theoretical contribution

As stated earlier, one common problem in grounded theory studies in IS is the production of a low-level theory which is then hard to relate to the broader literature (Urquhart et al. 2010). This research used the grounded theory method for data analysis and theory building (Glaser & Strauss 1967, Glaser 1978, Glaser 1998, Glaser 2001, Glaser 2004).

Three main core categories were identified in this study: Governance, Power and Emotions. The discussion that follows summarises how the development of concepts, generation of theory, the drawing of specific implications and contributions of rich insight occurred in this study.

This research raises many important issues related to research on governance in the IS field. This research contributes by providing an understanding of governance in IOIS projects. The results show that such governance structures are extremely complex and can in fact hinder knowledge transfer and organisational learning in a project. It was also evident that decisions on governance were taken mainly on the grounds of convenience as opposed to careful consideration as to how the structure would affect communication. Questions could also be asked about the role of the project management organisation, Epsilon. I would urge further research into what might be optimal governance structure for large IOIS projects such as these; as far as I know, this research is unique in identifying the knowledge transfer consequences of such structures.

This study raises many important issues related to research on power in the IS field. I agree with Silva (2007) that we need research on power that emphasises the interpretations of meanings, intentions and actions which are suitable for making sense of such a complex phenomenon.

In contrast to traditional problems and power struggles between developers and users or managers, this research shows that in a multiparty IS project it is extremely difficult to say who ‘has’ power and who is in need of ‘empowerment’. In terms of IS professionals and users or managers and users, too, this research shows that in an IOIS project it is difficult to say who ‘has’ power and who ‘lacks’ power. In all, power is clearly a complicated matter and there is no clear cut way of defining ‘whose power over whom’ is to be analysed, in an IS setting or elsewhere.
I would also contend that, with the advent of globalisation, there are an increasing number of IOIS projects in existence, and that there is a need for research on power issues in such projects. The potential for conflicts in such projects is greater than in organisational projects, because of the need to set up agreements and governance structures between the parties involved in such projects. This is why I would urge IS researchers to explore how particular governance structures might either constrain or enable conflicts in such projects.

Emotional issues are a vital part of the study of organisational communication. Emotion and control are difficult concepts to deal with, since they mean so many different things to different researchers. They seem to be very complex and multifaceted concepts. (Fineman & Sturdy 1999.)

It was evident that emotions were many and varied at the project level. It is easy to agree with Fisher (2008) that managing the emotions of others is no different from managing one’s own. So it is important to manage relationships and conflicts with others by understanding the other party’s feelings and accordingly communicating with them at appropriate levels. It is clear that projects need emotionally aware project managers who are strong in interpersonal skills and know how to create an environment in which people feel valued and motivated to contribute to their maximum potential (Verma 1996). Experiences in this project suggest that when feelings are ignored, people are not as committed to doing things as they could be, and they are not as motivated in their work (Allen 2003, Fisher 2008, Goleman 1998).

The expression and management of feelings in employees’ work is a significant issue and we need research that investigates directly employees’ and leaders’ management or influence on group emotions (George 2000, Pescosolido 2002, Dasborough 2006). Teams need to understand their emotional reality at the project level. Teams often change their behaviour after they have recognised their emotional reality (Fisher 2008). I would go so far as to say that feelings are the basis of action (power) and that emotions easily trump the intellect.

I illustrated four selective codes of emotions: certainty, significance, connection, and contribution. One interesting issue is how different codes manifested dualities in their codes. As shown earlier in this study, emotions have a powerful influence on everyday organisational processes and functioning, and periods of changes make extreme demands on individuals and organisations. I urge IS researchers to study emotions and if there is a connection between negative team emotions and failed systems. Also do emotions matter in failed systems? Further, one of the most significant current discussions regarding
emotions is the claim that people are more likely to recall negative incidents than positive ones (Dasborough 2006) – does it matter, and if so, how?

This research raises many important issues related to research on IOIS development and implementation projects with respect to management of IOIS teams. This research contributes by providing an understanding of emotions in leadership in IOIS projects as well. Research shows that project members engage in behaviours which affect the emotions of team members at many levels. I urge IS researchers to explore how leaders manage or influence group emotions, and how this is connected to performance.

In Chapter 2, I presented a literature review in the form that Urquhart and Fernández (2006) would call a ‘non-committal’ or preliminary literature review. The idea is that the emergent theory of the study determines the relevance of the literature review. The aim is to avoid the possibility of concepts from the literature being imposed on the analysis. The output of this study is to provide an explanation of how the core theme Emotions of Control occurred in an IOIS project. Since there is no previous theory on the emotions in IS projects, the inductive, contextual and processual nature of the grounded theory method is useful for this study (e.g. Orlikowski 1993).

Earlier in this study I discussed four types of analytical generalisation from interpretive case studies suggested by Walsham (1995):

- Development of concepts: a concept can be part of several concepts, propositions and world views which form theories
- Generation of theory: a framework could suggest areas for theoretical development
- Drawing of specific implications: the implication can provide a good description of the case study which was investigated
- Contributions of rich insight: including insights/results that are not easily categorised, for instance as concepts or theories

If I were to evaluate the contribution of this study in terms of the four types of analytical generalisation from interpretive case studies as suggested by Walsham (1995), I see the following contributions: 1) Development of concepts: I developed several concepts using Glaserian grounded theory that can be seen as extensions or elaborations on existing conceptualisations of governance, power and emotions. For instance, this case highlighted concepts especially important to IOIS projects, such as control of decision-making. The impact of project history on power in the project was especially pertinent in this case and I wonder if the
role of project history in decision-making has been understudied, 2) Generation of
theory: this study has an important meaning to the IS area in terms of theory. The
study affords not only a rare insight into the detailed workings of an IOIS project
and the everyday reaction of project members, but also a very unique substantive
theory for the IS field. 3) Drawing of specific implications: some specific
implications can be drawn, for example about power in IOIS projects. In
particular, if decision-making responsibilities and governance structures are not
very clear, there is the potential for conflict.4) Contributions of rich insight: this
study provides many rich insights into the inner workings of an IOIS project.
Longitudinal studies into IS projects are rare, and to my knowledge this is the first
detailed interpretive longitudinal study into an IOIS project, with a particular
emphasis on the lived experience of project members.

6.1.2 Methodological contribution

Grounded theory has been frequently used in qualitative IS research and is
unquestionably a method/methodology which has been interpreted in various,
nuanced, and even conflicting ways, with many myths surrounding it (e.g.
Urquhart et al. 2010).

One problem in the IS field has been that many IS researchers have applied
the grounded theory method without knowledge of the fact that there are two
schools of GTM. Yet there are still few studies in the IS context which investigate
this issue in depth (Urquhart 2007, Urquhart & Fernández 2006, Urquhart et al.
2010). As stated, an awareness of the differences between the schools of thought
may help IS researchers choose a methodological approach most appropriate for
their study (Urquhart et al. 2010).

This research brings out a clear distinction between the different grounded
theory schools of thought and introduces a justification for how the method is
utilised in this study. It was an advantage of that research that main differences
between these schools were acknowledged before the data was gathered, and so
on.

The aim of the grounded theory method is to generate a theory (Glaser &
Strauss 1967). Urquhart et al. (2010) have asked whether the generation of the
theory is in fact also the Achilles heel of the method. In this study I would like to
ask how we should understand the method. Is it essential to distinguish between
the grounded theory method and grounded theory methodology? If we consider
Glaser’s (1994) comments about methodology as critical, this brings up an interesting point of view with relation to both positivism and interpretivism and quantitative and qualitative research. The method/methodology problem can occur not only for the researcher or theorist, but also in scientific discussion. If we consider grounded theory on the one hand as a methodological reference and on the other hand as a method in the narrow sense, its offering to empirical research is different in each case.

6.1.3 Practical contribution

IS work demands human relationship work. Every reform and development project should be seen as a unique project, for which the unique issues, organisation and communication arrangements have to be thought through. It is also important to be conscious of the challenges when the project in question is a further development project. In a case in which there are several organisations involved in an IS project, specific emphasis should be placed on straightening out the relationships, responsibilities and roles of each participant.

I would argue that emotional issues are just as important as technical issues in IS projects. Emotions have traditionally been seen as inappropriate for organisational studies, but the expression and management of feelings is unavoidable in organisations. At macro level, emotional norms are naturalised through employees’ talk, and employees engage in emotional activities through talk regardless of what the action is (emotional abuse, emotional performances of social support, compassion or empathy). That is to say, individuals at work usually cope with stress through interaction, giving advice, helping each other, etc. This study shows how emotional issues are a central part of organisational behaviour and communication.

Success and failure

It has been argued that most IS development and implementation failures are known to occur for human and organisational reasons (Griffith & Northcraft 1996, Laudon & Laudon 2006, Yardley 2002, Yeo 2002). It is difficult to define what success actually is, however.

Larsen and Myers (1999: 396) have pointed out that ‘success is a moving target’: it depends on the time at which the evaluation is carried out. White and Leifer (1986: 215) have highlighted that it also depends on who is carrying out
the evaluation: ‘perceptions of a system’s success or failure may vary depending upon an individual’s perspective of the system’.

This research has brought out a large quantity of different feelings and emotions, and revealed a variety of ways in which feelings and emotions affected IS development work. This study shows that it is very important that emotions are an important part of the IS development and implementation work. It is also interesting to ask whether emotions matter if we get failed systems. What are the connections between good styles and ‘positive’, supportive emotions, and ‘good’ outcomes?

Do success and failure even exist? Can we distinguish these elements when we are talking about IS development and implementation? It seems that they are the same thing – one brings the other – and this is why they come together as a key factor. Many people think of success as the achievement of a goal or aim, while failure is something bad or at least unfortunate. True success involves people being compassionate and honourable towards other people, and it can be claimed that failure takes place when we forget this. So success can be unfortunate and failure for its part the best thing what ever happened, because from failure we can learn how truly to succeed, in a way that will benefit us as well as others. So a success can be a failure; a failure can become our greatest success.

Limitations

The lifespan of the development project lasted several years; the majority of the interviews took place in the middle of the project. The perceptions might have been different if the interviews were repeated or scheduled later in the project’s lifespan. Therefore, prospective studies on the evolution of authority and decision-making in IOIS projects, for example, are also welcomed.

The role of the researcher

In this study, emotions were explored through the use of narrative stories. The interview data proved to be rich due to the use of these narrative stories, but narratives also proved a challenging way to examine this interdisciplinary theme. I have also had to think about how recording the interviews affected their interpretation, as there is a lack of visual information. I felt that interviewees had a great deal of trust and were willing openly to share their experiences. Below are
some good examples of how the interviewees reacted when I asked them to tell their own story about the project:

‘What would you like me to tell you?’ (Lisa, User, Alpha).

‘Well, you are like a therapist. [Laughter]’ (John, Supplier, Eta).

‘What kind of information are you seeking? Do you want me to tell you something about collaboration…?’ (Lucy, Organiser, Alpha).

‘So, I can say the first thing that pops into my head… [Laughter]’ (Lisa, User, Alpha).

‘Your own action is crucial – it's crucial that you interview these people and try to interpret what they say realistically. I am interested in the way that you have been in meetings and then in interviews – do you feel like they’re both part of the same project? Well, have I told you anything new, or did you know it already…? [Laughter]’ (Jack, Supplier Eta).

As a researcher I did not guide discussions and told interviewees that they could tell me freely about their experiences of that project and its progress. It was also interesting to get feedback after some publications were published on the analysis:

‘I think you will have guessed that I read the text with interest! Very nice comments. Now I can say that time heals all wounds. I had a mind to correct some views that I thought were wrong, but now I have to think again.’ (Ruth, Project manager, Email sent 25th January 2007).

The integration of researcher and researched is not just a question of methods, nor is it simply an alternative way of reflecting on the nature of knowledge production or emotion. It is also about power and ethics in terms of avoiding the privileging of a particular voice and language and thereby silencing other interpretations/voices. I have done my best not to prefer any interpretations.

6.2 Future work

This study has many possibilities for future research. In future the objective should be to extend the methodological contribution of the prior research by documenting and exploring the process of building a formal theory from the emergent theory developed in that research. Such contributions in IS are rare and
indeed most grounded theory projects produce low-level theories (Urquhart et al. 2010) – the objective here is to both abstract and formalise beyond the IS discipline. To my knowledge, this process of formal theory building has not previously been documented or discussed in IS research (see also Urquhart & Fernández 2006, Urquhart et al. 2010).

Formal theory is the highest level of abstraction in grounded theory. Glaser and Strauss (1967) indicate that, in order to generate formal theory, the researcher should carry out a comparative analysis between different substantive theories (in a particular substantive area) and compare substantive theoretical ideas from many different cases. (See also Urquhart et al. 2010).

The methodology for this objective is as follows: the process of building a formal theory will be documented in a journal article and discussed in the light of recommendations for theory building by Glaser and Strauss (1967), Strauss (1987), and Charmaz (2006). Guidelines will be put forward for building formal theory using grounded theory in IS research.

Urquhart et al. (2010: 367–368) have suggested that ‘A formal theoretical construct applies to the conceptual area that it has been developed for, which usually spans a set or family of several substantive areas. For example, a formal theory in IS would apply to many kinds of situations, systems and organisations (e.g. a theory regarding the implementation of IS in general).

There are many suggestions for future research, such as investigating the following questions: Are some issues gender-related? Is there a connection between negative team emotions and failed systems? Are there connections between ‘good’ leadership styles and positive, supportive emotions, and ‘good’ outcomes? How these findings (emotion, power and governance) develop or extend Giddens’ conceptualization of structural categories (signification, legitimation and domination)? Deeper conclusions about the reciprocal influences between these three types of structure will take some time to become very clear. For now, this synthesis raises points about the complexity, situatedness, and interrelatedness of power and emotion issues.

6.3 Reflections on the study

This study explored the feelings and emotions of project members in one Nordic IOIS development and implementation project which was carried out over the years 2004 to 2006. The Glaserian grounded theory method was utilised to analyse the data and for theory building. From the analysis of the data gathered,
three main core categories (Governance, Power and Emotion) were identified through grounded theory analysis. One core theme emerged (Emotions of Control) when the relationships of the main core categories were dissected.

The main findings regarding the core categories (Governance, Power and Emotion) show that behaviour and different changes do need to be evaluated in context. Action and structure are strongly linked to each other. Power poses challenges because of its nature: whether it is power that arises from positions of authority or its informal dimensions, i.e. politics. (See also Silva 2007). Most of the challenges came from the informal dimension, which then came up against a veto in the formal authority structures. This study also asks whether the manifestations of power are strongly associated with the work environment (a public institution). Power was more likely to be determined by the nature of the ‘employment’ than by professional title or expertise. Power relations were continuously reproduced between social actors, and tended to be issue-dependent and based on the task in hand.

It is evident that how people felt about their work in ViWo had a huge influence on the whole work attitude. The meaning of communication is the response we get, so managing emotions is a crucial issue to acknowledge.

The emergent categories are also all related in terms of the political and historical context. This study also highlights that organisational learning can be considered as a political process (see also Lawrence et al. 2005). Power seems also to be the ability of a person or group to have top management implement the organisational change that s/he or it favours (Rotemberg 1994). Managerial power was aligned strongly with stakeholders’ interest. Major difficulties for leadership/management include encountering uncommitted and uninvolved users or management and having no control over external resources (Blanchard & Markus 2004, Napier et al. 2009).

The feeling that project members belong to the community and experience others’ acceptance was also a crucial issue, and it is evident that this is a condition for ‘good’ collaboration.

The final research problem which occurred in this study was to understand the elements of Emotions of Control in a Nordic IOIS development and implementation project. This core theme (Emotions of Control) was explained in the Section 5.6. Like other earlier studies (e.g. Fineman & Sturdy 1999) this study shows the view that feelings and emotions, and related dimensions of subjectivity, are subject to control. These processes were not free from power effects, and being controlled has emotional consequences. Notwithstanding the fact that
emotion and control are not typically fused, it seems to be evident that emotion often assumes the status of an extra object in the control processes. Control, and the response to it, is for its part substantively an emotional process. It is also argued in this study that control is a central characteristic of people and that people seek control over other people to create order and certainty, consciously or unconsciously.

This IS project was defined as ‘truly a successful project’ in the final project report. As a researcher I faced the challenging question: which factors influenced the result that the IS project was perceived as successful even though experiences were contradictory? How is success evaluated? Is it in terms of a functional IS? What meaning do human elements have – such as the question of whether project members are satisfied? Kumar (1990) has also presented the criticism that the evaluation of a project is often used as a conclusion to the project rather than as an opportunity to learn something.

It is also clear that the feelings and emotions of project members can be characterised as only the tip of the iceberg. As an interpretivist researcher, I do not claim to have found the truth. I could say, instead, that I found a truth. The purpose of grounded theory is ‘to elicit fresh understandings about patterned relationships between social actors and how these relationships and interactions actively construct reality’ (Suddaby 2006: 636).

An interesting question is, are feelings and emotions as a research object a challenge or an opportunity? Methodological and theoretical issues of emotions have received relatively little attention in the IS field (McGrath 2006). The novelty of emotion research, combined with its multidimensional nature, makes the research issue challenging. Both methodological and theoretical issues present notable challenges because emotion is considered to be elusive and even ‘unknowable’ and emotion is defined in numerous and ambiguous ways in the literature (Sturdy 2003).

All individuals are different; each one has their own identity with their own knowledge, understanding, perceptions and attitudes. An individual’s emotional nature is unique. Emotions have an identity based on one’s own past experiences, personality, intention, knowledge, values and worldview. We have to recognise those differences in order to be able to deal with people in the best ways – we cannot simply expect someone to do (or to be able to do) what we have decided is right. Every individual sees situations from the point of view of their unique knowledge and interpretations, and act based on their own knowledge and
interpretations. We cannot control other people’s nature, but we can control how we deal with them. (e.g. Browne 2004.)

Emotions are a part of human life and the spectrum and nuances of emotions are wide. Emotions bring content and meaning to human life. Emotions have enormous importance in human interaction — I’ve already stated in the introduction that they seem to be the source of both cohesion and conflict (see e.g. Groth 1999). We know how another person experiences the environment, and which things are valuable and important to her or him on the basis of emotions. The inner management of life relates to a person’s own mental and psychological readiness to face and solve the problems which s/he has faced during her or his own life. How we are able to evaluate and handle stressful situations in our life depends on how we have been able to evaluate and handle our experiences of life. Emotions are things which work to ensure that the psychological balance of the human remains in place. (e.g. Browne 2004.)

The researcher faces many challenges when researching other people’s emotions: 1) Feelings have many kinds of structures and impressions at both the verbal and the non-verbal level: people can express their feelings in many ways. There is, for example, a large number of linguistic variations in how people express their feelings. People can also choose how they want to express their feelings – they can, for example, hide their thoughts and feelings. The words do not express emotions profoundly. There are also non-verbal experiences (gestures, tones, facial expressions, etc.).

2) Cognitive and emotional issues are intertwined with each other in experiences. 3) The emotional states of individuals are not always conscious. 4) It can also be difficult to remember one’s experiences exactly. 5) Feelings can be difficult to interpret when experiences are ambivalent – when they contain both positive and negative meanings. Some meaningful experience can be negative when it is experienced and expressed but can become more positive later, for example as a result of a person’s inner growth.

6) It is not clear that a researcher can imagine what other people are feeling. It is certainly not an easy task because the researcher has to imagine feelings for which s/he does not know the basis and different feelings mean different things to different people. Emotions are not us. We are not our emotions. They are inside us but they are not us.

It is acknowledged in this study that we all have our own history and our own experiences which shape the ways we react to and interpret matters. I interpret these matters from inside my own worldview. As a demonstration of this,
Matthew (Organiser, Epsilon), commented on the researcher’s analysis: where the analysis said ‘Her frustration was also palpable in the way she summarised the project in one of the last project meetings [2\textsuperscript{nd} November 2006]: “Now that the system is ready, we can commit mass suicide...” (Lisa, User, Alpha)’, Matthew commented that ‘as a long-term workmate I suppose this is her sense of humour’.

As a conclusion to this chapter I would like to underline the same issues that Ahmed (2004) underlined: that rather than to define what emotions are, a researcher should focus on what emotions do, and the essential focus should be on how emotions are produced.

I have come to the end of the dissertation project. I would like to finish my PhD work by quoting Hale Dwoskin (2004: 3):

‘All actions you choose to take in your life – or actions you choose not to take – produce the results that make up the life you are now experiencing. These actions, or inactions, are motivated by feelings. If you want to change your results, you must begin by addressing and releasing the feelings that cause you to take the actions you do or that prevent you from taking the actions you should take or that you want to take’.
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THE MANY FACETS OF AN INTER-ORGANISATIONAL INFORMATION SYSTEM PROJECT AS PERCEIVED BY THE ACTORS