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Abstract

This interpretive grounded theory (GT) study describes and analyses the lived experiences of project members who worked in a three year long inter-organisational information system (IOIS) project. The Inter-Organisational Information Systems (IOIS) project was a Nordic project which spanned four user organisations, two suppliers, one national organisation, a research organization and a Ministry who funded the project. The data was elicited by means of narrative stories, observations of project meetings, diaries, project memoranda and emails sent by project members to each other during these years. This study shows how GT can be used to gain significant insights into a case study, and generate new concepts. We identified Certainty, Significance, Connection and Contribution as important selective codes that make up the emotions category. This study shows that emotions have a remarkable role during the process of an IOIS. The paper concludes by discussing how certainty, significance, connection and contribution issues could be attributed to emotions and considers some theoretical and practical implications.

Keywords: Emotions, Glaserian grounded theory, IOIS project

1 INTRODUCTION

Explanations for human behaviour have been sought over many decades – even centuries – by 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 (e.g. Groth 1999).

It is known that social and behavioral aspects associated with IS continue to present complex challenges to researchers and practitioners alike, although IS development (ISD) has for decades been recognized as an intensely political and technical process (e.g. Kotlarsky & Oshri 2005). One of the most urgent interests in the IS field is how project team members collaborate together. Especially in geographically distributed IS projects there is a need to understand whether and how social aspects contribute to successful collaboration (Levina & Vaast 2008, Sarker *et al.* 2000.)

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). Given this fact we should pay critical attention to the emotions in IOIS projects as well, and especially because IOISs have appeared to be a key factor for organisations growth (Daniel & White 2005). In the 21st century, IO projects are increasingly common as a consequence of globalisation and multinational companies in IS (Levina & Vaast 2008, Sarker *et al.* 2010). So far IOIS - and especially their implementations with several stakeholders - have received only minor attention in the IS research (e.g. Evaristo *et al.* 2004). There has also been a lack of research in public sector IOIS implementation (Allen 2003).

The emotions are said to play a large role in decision-making and collaborational issues (Goleman 1998) among other areas, yet, to date, literature on IS projects largely ignores the substantive studies of emotions (McGrath 2006), unlike the literature of organisational behavior in other disciplines (e.g. Askanasy 2004). The importance of social issues in ISD has long been acknowledged (Kotlarsky & Oshri 2005), but studies of how emotions affect IO collaboration are unknown in IS research. The research described in this paper contributes to that body of knowledge.

In this paper, we were interested in how emotions occurred in the context of a large, three year long Nordic, public sector IOIS project. The research question addressed by this paper is as follows: *What is the role of emotions in an IOIS project?*

The paper is organized as follows. In the next section we present a summary of the literature relevant to this study. The third section outlines the research methodology. The fourth section gives the project case background of the study. The fifth section presents the findings of our Glaserian GT analysis. The sixth section discusses the implications of our findings, and we conclude our study with a brief summary of our contributions.

2 LITERATURE REVIEW

This is a Glaserian GT study and the purpose of this chapter is to create a preliminary literature review of the research area. This is to avoid the possibility of concepts from the literature being imposed on the analysis (Urquhart & Fernández 2006). There is an obligation on grounded theorists to link their emergent theory with the literature, and often this involves adding extra literature once concepts from the data are known.

2.1 Emotions and organisational studies

Over the last three decades, an acceleration has occurred in the development of theories of emotion. Recognising emotions as important issues in organisational studies has increased gradually research on emotions which tries to understand workplace behaviour (e.g. Dasborough 2006, Sturdy 2003). 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 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 (Sturdy 2003).

Although it is acknowledged that emotions are an essential part of group processes (Moir 2005, Spoor & Kelly 2004) and leadership processes (e.g. Dasborough 2006), there is a scarcity of studies of how organisational socialisation processes are related to feelings and display outcomes (e.g. Scott & Myers 2005). It has also been emphasised that emotions occur and are communicated rapidly, and yet these issues often happen subconsciously and have an impact on social processes, such as trust in others and group commitment (Lord & Kanfer 2002) and group performance (Ashkanasy 2004).

Although the study of emotions in organisational settings has attained considerable prominence, with varying intensity, focus and methodology, Moir (2005) has stated that emotion is still often represented in terms of a metaphor of heat: 'cool' rational thought versus 'hot' emotions. Many organisations have operated under the belief that emotions and rationality are mutually exclusive, and yet organisations have tried to control their members to promote rationality over emotions (Pescosolido 2002). Some studies (Ashkanasy 2004, Scott & Myers 2005) have highlighted the continuing lack of studies examining the relationships between emotion and performance. Sturdy (2003) has also claimed that there are a large number of methodological and ethical problems in studies of emotions. 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.

Some researchers have been interested in understanding the processes and outcomes of collective emotions like the effects of group members developing shared moods and emotions. For example, it is stated that guilt and gratitude promote group member cooperation and both positive and negative moods may also affect hierarchies within a group. They have also highlighted that a shared affect may facilitate the group in achieving shared desired outcomes as well. (e.g. Spoor & Kelly 2004.)

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 honestly. It is claimed that project managers could be the catalyst for making this happen within their organisations.

2.2 Emotions in the IS literature

In the IS discipline, it is argued that the traditional research on emotions has concentrated on purely cognitive aspects of human action and intentional behaviour. It is argued 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. McGrath (2006) has argued that, in research on work in organisations involved with technology, people are seen as instrumental factors, obeying specific logics designed to promote organisational effectiveness. She emphasises that there is still a lack of understanding of the emotions involved in work situations.

Researchers in human computer interaction (HCI) have become more interested in exploring the affective aspects of computing (e.g. McGrath 2006). HCI studies have utilised a large number of theories from psychology (e.g. Isomursu *et al.*, McGrath 2006). In HCI research, Isomursu *et al.* (2007), for example, have investigated emotions as a part of user experience in mobile use.

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 is silent on 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 acknowledges that affections are involved in the IS process but engages 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. We will follow this last approach.

3 METHODOLOGY

This research studied 8 organisational project teams and 2 IO project teams, in a large, three year long IOIS development and implementation project. The IOIS project studied was a Nordic public sector organisation collaboration. This research tracked the whole IS project (2004-2006) and it had a unique approach – no framing questions were used. The open nature of the interviews enabled the interviewees to explain their deep feelings and their own story about the project. It is said that through narrative stories we are able to get close to people's experiences (e.g. Myers & Newman 2007).

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 memorandums of project and steering group meetings, and e-mails (over 700) containing details of the messages project members sent to each other during these years. Other secondary data were also analysed. Over the three year timeframe of the project, there were 20 active project members in the project, 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.

This study is an interpretative study using Glaserian GT for data analysis (Glaser 1978, Glaser 1998). The GT method is very suitable for research areas where there is little existing theory. This is the case here as there is little existing theory in IOIS projects and especially their implementation area. Since 1990, GT has evolved into two distinct versions (Urquhart 2007, Urquhart & Fernández 2006).

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 preconceived questions, categories and hypotheses. It is also recommended by grounded theorist that researchers collect the data over many phases of research. When the same concepts occur over and over again, the saturation of concepts can be considered reliable. This was our experience that the concepts recurred over different phases. Glaser (1992, 1998) also recommends the collection of rich, versatile data in the form of different interviews, observations, and diaries, and our data collection followed this directive.

We followed the Glaserian GT coding stages – open coding, selective coding and theoretical coding. At the open coding stage, the interview data, field notes and e-mails were analysed line by line, and the project memorandums were analysed paragraph by paragraph. Urquhart (2007) has pointed out that line by line coding is recommended by both Strauss and Glaser and is demonstrably effective. However, as the project memorandums were secondary data, it was appropriate to code at a paragraph level. During selective coding and through an iterative process, we discovered our emergent categories. We then considered the relationships between categories during theoretical coding, and analytic memos (Glaser 1992) assisted with this process. In this study we can indicate some main strengths of Glaserian GT method. A detailed analysis of data allows the discovery of new concepts.

4 PROJECT BACKGROUND

4.1 History of the project

Here we give some of the complex background of the IOIS project, to help with interpretation of the findings. ViWo was preceded by a pilot project called PreViWo which was also influential in framing the organisation of the larger project we studied (ViWo). 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 2002-2003. Alpha was the leading organisation for the pilot project as the organisation that applied for and received funding for the project. Table 1 contains the actors in the pilot project.

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

Table 1. Organisations involved in PreViWo

4.2 Main players – ViWo project

The goal of the IOIS, would be designed and taken into use by several organisations of the same type. The project aimed to carry out a pilot test of the IS in these organisations before establishing the system at the national level. The development of ViWo involved the electronification of a work process to facilitate office work, consolidate information across organisations, and manage key activities. In the ViWo project, Kappa was no longer in charge of the project - a project management organisation, Epsilon, was brought in. They also managed some research objectives around the project. The key user organisations now consisted of Alpha, Beta, Gamma and Delta who came from Kappa and Lambda. The organisations collaborated with the relevant Ministry, suppliers and consultants. Table 2 contains the actors in the ViWo project.

Organisations	Role of Organisation
Ministry	• Ministry responsible for funding the IOIS project
Kappa	• 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 research-related issues and administrative practices
Alpha, Beta, Gamma, Delta	• Lead user organisations in the project Alpha was also the fund holder for the project
Epsilon	• Organisation responsible for project management and research objectives
Zeta	• Software company that supplies the software solutions for the project
Eta	• Part of the national research network that develop 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

Table 2. Organisations involved in ViWo

5 FINDINGS

Governance, power and emotions are core categories which emerged through the GT analysis. The higher level of abstraction, the scaling up process (Urquhart *et al.* 2010) produced one core theme

'emotions of control'. This paper focuses on emotions category and links with any other categories are not shown. This limits the scope of our theory building in this paper. However, this study shows how GT can be used to generate new concepts.

For space reasons, our findings concentrate on some main findings. We identified Certainty, Significance, Connection and Contribution as important selective codes that make up the Emotions category. Other articles have been written about the case (e.g. Hekkala et al. 2010, Hekkala et al. 2011). Hekkala et al. (2010) describes and analyzes governance issues whilst the other paper (Hekkala et al. 2011) analyses emotions in leadership, focusing on leadership issues in the emotion category. The process of construction of emotion category is shown in Table 3.

Open codes	Selective Codes	Category
Changing actors, Control, Fear	Certainty	
Views about people's presence, Importance, Blame, Hostility	Significance	
Separation, Seeking the bond of belonging, Feeling one is a member of the group, Affirmative emotions	Connection	Emotions
Division of work, Frustration, Improving/ Learning	Contribution	

Table 3.Construction of Emotions Category

5.1 Certainty

We found three open codes (changing actors, control and fear) which contributed to the certainty selective code. **Changing actors** manifested itself for example the way that organisers sought certainty when organising the staff for the project: there were many reasons why organisers wanted to adopt a different pattern of organisation for the ViWo project. The project manager from Kappa was changed because of project management issues and the suppliers were replaced one year later because of the poor quality of the specifications. Lucy (Organiser, Alpha) had trust in Matthew (Organiser, Epsilon) although she was worried about reorganising. She thought 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 (Organiser, Alpha) 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...'*.

Control: Some examples how control manifested itself in the project was that for example, the project manager, Ruth controlled issues around her. She complained that decisions were not seen as final, even though the decisions had been made at previous project meetings. She was manipulating the situation by using her legitimate power and not inviting all members to the project meetings (one member of Kappa and one member of Epsilon). 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. Both suppliers thought that Kappa inhibited decision-making, and they wanted to take control of decision-making to ensure the project was able to go on and reach its goals, 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, Kappa). Control also occurred in the form of resistance. Jack (Eta) felt it was not surprising: *'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.'*

Fear manifested itself in the project for example in terms of seeing other members as a threat, a fear of change and insecurity. Some project members felt that Kappa members were a threat to the project, and that they effectively held an informal veto due their involvement in PreViWo. 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. 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, Kappa).

5.2 Significance

The selective code significance includes, for example, a large number of issues concerning mutual social relationships and the conceptions that project members had about each other. The open code **views about people's presence** describes how project members experienced their own and other people's presence in the project. 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), for example, pointed out that the new organisation was chosen because of unsatisfactory experiences in the previous project (PreViWo). The project manager considered it unnecessary to employ two people from the background project (PreViWo). 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, 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 analysis that the project members wanted to feel that they were somehow unique for the project. Again, the paradox seemed to be that there were contradictory ways in which this feeling occurred or was achieved. One example is 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, May 6th 2004). It was not clear to Zeta's representative what Eta actually did or planned to do in the project. According to Simon (Epsilon), the language that was used was inappropriate. 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 and Eta's unclear role in the project significantly hindered the progress of the project. As the project progressed, the project management people's trust in Eta's expertise began to wane: *'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, 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.

Blame: 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. **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.

5.3 Connection

Separation was one open code which contributed to connection. 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 stressed that PreViWo imposed pressures on the current project in the sense that an element of competition became involved in the project work.

The open code **seeking the bond of belonging** 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 for users in the project. According to Jack, one problem with collaborating with the users was that the users gave unclear, ambiguous answers to questions. 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 organization) 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. Kappa's representative, Sheila, thought that not even Alpha (the user organization) 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.... [Loud laughter]'* (Sheila, 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. A member of the project's management, for example, 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 (Epsilon) 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.

The open code **feeling one is a member of the group** contributed to connection: 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 but 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 (Delta), also felt that collaboration did not materialise in the project, despite numerous meetings. It is

important to note that there were **positive emotions** exhibited in the project and project members were also capable of joking with each other.

5.4 Contribution

We identified three open codes which were part of the selective code contribution (division of work, frustration and improving/learning). The open code **division of work** seemed to manifest itself in different ways, for example as conflicting visions and as unclear responsibilities. Organisational memory was one 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 and commitment in some matters, and take more responsibility. One good example is also when 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]'.*

Dissatisfaction with the 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. Eta's third representative, Daniel, considered Zeta to be a professional software producer and was able to 'squeeze' the necessary information from the client.

Frustration was evident in many members of the project: Thomas (Epsilon) 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...'* . 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. Thomas (Epsilon) 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 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.'*

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 because of 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).

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. 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 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, Epsilon).

6   DISCUSSION

The findings of this research provide an interesting perspectives on emotions in the IS field. Specifically, our research shows that how people feel about their work has a remarkable influence on their whole attitude to work. It has been stated earlier that the literature on IS projects largely ignores the substantive studies of emotions (McGrath 2006). We argue that cognitive (knowledge) and social (emotional) aspects are not mutually exclusive and should be studied together: they are highly important in cases where several organisations need to coalesce into one cohesive group.

A significant theory about sense of community (McMillan & Chavis 1986) emphasises four elements of sense of community: 1) membership, 2) influence, 3) integration and fulfillment of needs and 4) shared emotional connection. Members of a group expect a feeling of belonging and acceptance by the group. The influence in a group is bidirectional: members have to feel empowered to have an influence over the group and group consistency depends upon the group having some influence over its members. Sarker *et al.* (2000) for their part identified four different stages which virtual teams pass through during the course of a project: 1) initiation (e.g. roles, shared goals, and the norms), 2) exploration (stage highlights that there is a clear differentiation between intra-/inter-location interests), 3) integration (requires that both local and remote members have a common understanding of their goals, roles, and the norms guiding their collaboration) and 4) completion (includes, for example, emotional involvement: positive shared social experiences of members in working together). Different groups may have varying rhythms and transitions may not necessarily take place from one stage to another.

We illustrated four selective codes of emotions: certainty, significance, connection, and contribution. One interesting issue is how different categories manifested 'dualities' and 'paradoxes' in their categories. 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. The open code **fear** shows cases where people felt fear about issues which hindered certainty.

With regard to the selective code **significance**, it was evident that project members viewed personnel in highly contradictory ways. 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.

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. The open code separation highlights in particular feelings about governance and leadership issues while 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 of being 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, and dissatisfaction with some people's professionalism. One interesting issue is how frustration improved people's willingness to resolve problems of contribution. The open code improving/learning revolves around the issues like other people were able to contribute more than first expected, and project members were able to make good decisions in project meetings.

It seemed that those employees who experienced some degree of challenge also felt frustration and failure. It is also worth mentioning that the emotions fear, separation and frustration in particular were linked to the issue of authority. Some studies (Fisher 2008, Goleman 1998) emphasise 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. Predictability has been seen as an important issue when working together as well. 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.

7   CONCLUSION

This research has unique qualities: this research tracked the whole IS project (2004-2006), the focus was entirely on the experience of the project members, it has a unique and large data set and the methodological approach is similarly innovative. Being a longitudinal study, this study gives interesting insights not only on emotions in the IS field but also to a 'socialisation process' of project organisation. In contrast to the traditional approach, which has concentrated on purely cognitive aspects of intentional behaviour (McGrath 2006), this research contributes to our understanding of emotional experiences. The IS field will benefit from a deeper insight into the emotional and collaborative aspects of an IO project.

As shown, emotions have a powerful influence on everyday organisational processes and functioning, and periods of changes make extreme demands on individuals and organisations. We 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? It is a very interesting question to point out as this research brought out a large quantity of different emotions, and revealed a variety of ways in which emotions affected IS development work. This project was defined 'truly a successful project' in the final project report. It would be interesting and useful to deepen and further our analysis to uncover what led to that success in the face of many contradictory experiences.

References

Allen, D.K. (2003). Organisational climate and strategic change in higher education. Organisational insecurity. Higher Education, 46(1), 61-92.

Ashkanasy, N. M. (2004). Emotion and Performance. Human Performance, 17(2), 137-144.

Daniel, E.M. and White, A. (2005). The future of interorganisational system linkages: findings of an international Delphi study. European Journal of Information Systems (EJIS), 14(2), 188-203.

Dasborough, M.T. (2006). Cognitive asymmetry in employee emotional reactions to leadership behaviors. The Leadership Quarterly, 17, 163-178.

Evaristo, J.R., Scudder, R., Desouza, K.C. and Sato, O. (2004). A dimensional analysis of geographically distributed teams: a case study. Journal of Engineering and Technology Management, 21(3), 175-189.

Fisher, E. (2008). Manage feelings in your project well, and you are more likely to deliver your project successfully. APM Risk SIG Conference, London.

Glaser, B. G., and Strauss, A. L. (1967). The Discovery of Grounded Theory. Aldine Publishing Company, Hawthorne, NY.

Glaser, B. G. (1978). Theoretical Sensitivity: Advances in the methodology of Grounded Theory. Mill Valley, CA.

Glaser, B. G. (1992). Emergence vs. Forcing: Basics of Grounded Theory Analysis. Mill Valley, CA..

Glaser, B. G. (1998). Doing Grounded Theory: Issues and Discussions. Mill Valley, CA.

Goleman, D. (1998). Working with emotional intelligence. Bantam Books, New York.

Groth, L. (1999). Future Organisational Design. The Scope for the IT-based Enterprise.John Wiley & Sons, Ltd, Chichester.

Hekkala, R., Newman, M., Urquhart, C. and Heiskanen, A. (2011). Emotions in leadership in an IOIS project. Proceedings of the 44th Annual Hawaii International Conference on System Sciences (HICSS-44).

Hekkala, R., Urquhart, C., Newman, M. and Heiskanen, A. (2010). Understanding Governance Issues in an Inter-Organisational IS project. Proceedings of the 21st Australasian Conference on Information Systems, Brisbane, Australia.

Isomursu, M., Tähti, M., Väinämö, S. and Kuutti, K. (2007). Experimental evaluation of five methods for collecting emotions in field setting with mobile applications. Human-Computer Studies, 65, 404-418.

Kotlarsky, J. and Oshri, I. (2005). Social ties, knowledge sharing and successful collaboration in globally distributed system development projects, European Journal of Information Systems, 14(1), 37-48.

Levina, N. and Vaast, E. (2008). Innovating or Doing as Told? Status Differences and Overlapping Boundaries in Offshore Collaboration. MIS Quarterly, 32(2), 307-332.

Lord, R. and Kanfer, R. (2002). Emotions and Organisational Behavior. In R Lord, R Klimoski and R Kanfer (Eds.). Emotions in the Workplace: Understanding the Structure and Role of Emotions in Organisational Behavior: 5-19. San Francisco, CA: Jossey-Bass.

Maslow, A. H. (1943). A Theory of Human Motivation. Psychological Review, 50, 370-396.

McGrath, K. (2006). Affection not affliction: The Role of Emotions in Information Systems and Organisational Change. Information and Organisation, 16(4), 277-303.

McMillan, D.W. and Chavis, D.M. (1986). Sense of community: A definition and theory. American Journal of Community Psychology, 14(1), 6-23.

Moir, J. (2005). Moving Stories: Emotion Discourse an Agency. The 37th World Congress of the International Institute of Sociology. Stockholm, Sweden.

Myers, M. and Newman, M. (2007). The Qualitative Interview in IS Research: Examining the Craft. Information and Organization 17(1), 2-26.

Pescosolido, A.T. (2002). Emergent leaders as managers of group emotion. The Leadership Quarterly, 13(5), 583-599.

Sarker, S., Lau, F. and Sahay, S. (2000). Building an inductive theory of collaboration in virtual teams: An adapted grounded theory approach. Proceedings of the 33rd Hawaii International Conference on System Sciences.

Sarker, S., Sarker, S. and Jana, D. (2010). The impact of the nature of globally distributed work arrangement on work-life conflict and valence: the Indian GSD professionals' perspective. European Journal of Information Systems, 19(2), 209-222.

Scott, C. and Myers, K.K. (2005). The Socialization of Emotion: Learning Emotion Management at the Fire Station. Journal of Applied Communication Research, 33(1), 67-92.

Spoor, J.R. and Kelly, J.R. (2004). The Evolutionary Significance of Affect in Groups: Communication and Group Bonding. Group Processes and Intergroup Relations, 7(4), 398–412.

Sturdy, A. J. (2003). 'Knowing the Unknowable? – A Discussion of Methodological and Theoretical Issues in Emotion Research and Organisational Studies', Organisation, 10(1), 81-105.

Urquhart, C., (2007) 'The Evolving Nature of Grounded Theory Method: The Case of the Information Systems Discipline' In: Kathy Charmaz and Tony Bryant (eds.), The Handbook of Grounded Theory, Sage Publishers, 311-331.

Urquhart, C. and Fernandez, W. 2006. Grounded Theory Method: The Researcher as Blank Slate and Other Myths, in D. Straub and S. Klein (Eds.), Proceedings of the Twenty Seventh International Conference on Information Systems, Milwaukee, US, December, pp. 457-464

Urquhart, C., Lehmann, H. and Myers, M. (2010). Putting the Theory Back Into Grounded Theory: Guidelines for Grounded Theory Studies in Information Systems. Information Systems Journal, 20(4), 357-381.