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Illustrating The Process Of Ontology Concept Formulation In A Multi-Perspective Social Setting

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BUILDING A SUBSTANTIVE THEORY OF EMOTIONS FROM AN IOIS PROJECT

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Abstract

The object of this grounded theory study was a three year long, public sector inter-organizational information system (IOIS) project which spanned four user organizations, two suppliers, one national organization, a research organization and a Government Ministry. The data were 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. Glaserian grounded theory method was used as the technique for theory building. Three core categories were identified: governance, power and emotions. The study offers two key contributions: first, it builds a substantive theory of Emotions of Control in an IOIS project, presented in the form of propositions. The theory offers an approach to understanding the meaning of emotions in project work and the consequences of emotions in collaboration. Second, we offer a window into the theory building process using Glaserian grounded theory. We argue that the findings of this study have some implications of value to researchers studying emotional issues in IOIS projects or information system (IS) projects in general, because the role of emotions in project work can be pivotal in determining project success.

Keywords: Grounded theory, IOIS project, Substantive theory, Emotions

1 INTRODUCTION

The past decade has witnessed increasing globalization with an attendant growth in inter-organizational information system (IOIS) projects as multinational firms and organizations seek to standardize IS across regions and countries. Especially in geographically distributed IS projects, there is a need to understand how social, political and behavioural aspects contribute to successful collaboration (Levina & Vaast 2008). IS development (ISD) as a social phenomenon has been approached earlier in several ways in IS. Good examples are Giddens's (1984) structuration theory (Jones & Karsten 2008), and Habermas's (1987), theory of communicative action (Lyytinen & Hirschheim 1998), both of which have been used as theoretical frameworks for understanding ISD. Others have studied social action (Newman & Robey 1992) and discourses in various ways (Sarkkinen & Karsten 2005).

McGrath (2006) argues that the socio-emotional aspects of design are largely ignored in the IS area. Moreover, others have suggested that organizations and work are defined by emotions, and emotion is necessary for producing reliable knowledge (Dasborough 2006). Emotions are also said to play a large role in decision-making (Goleman 1998). Emotions as a research object are acknowledged to be a very demanding research area (Callahan 2004). In our study, narratives were used to develop theoretical categories and to provide rich insights into an IOIS project. The development of a cohesive data collection and analysis method, based on a Glaserian approach to grounded theory (Glaser 1978; 1992; 1998) allowed the researchers to discover the emergent substantive theory, *Emotions of Control* in an IOIS project. The overarching research question addressed by this study is as follows: *What are the major emotional issues in an inter-organizational public sector project?*

This study reveals a perspective on the complex set of structures that govern performance in an IOIS project (the operation of governance, power and emotions in IOIS development project). Because IS projects are not purely technical or rational endeavours, this perspective has merit in extending how the IS community views and understands both the development and implementation of IOIS.

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

2 LITERATURE REVIEW

Our preliminary literature review contains three streams of literature which we considered relevant to our research problem: 1) the aspects of IOIS projects, 2) emotions and organizational studies of emotions, and 3) emotions in the IS literature. There is an obligation on grounded theorists to link their emergent theory with the literature after the theorising (Urquhart et al. 2010), thus we elaborate the extended literature review in the chapters where the substantive theory and discussion are presented.

2.1 Inter-organizational information system projects

Over the past decade we have seen increased globalisation, with an attendant increase in IOIS projects, as multinational firms and organizations seek to standardize information systems across regions and countries (Levina & Vaast 2008). So far IOISs and especially their implementations using several stakeholders have received only minor attention in IS research, although there are articles within the e-government research area which deal IO aspects of e-service development (e.g. Punia & Saxena 2004). Rodon and Pastor (2007) studied the role of managers during and after the implementation of an IOIS. It is logical to assume that due to the number of organizations involved in IOIS projects, and the scale of such projects that things change over time, the project management structures may find it

difficult to respond and collaboration becomes even more demanding. One issue in IS projects, and also in IOIS projects, is how project team members collaborate (Levina & Vaast 2008) given that IS projects fail at an alarming rate with organizational consequences (Lyytinen & Robey 1999). One stream of research claims that most ISD and implementation failures for human and organizational reasons (Griffith & Northcraft 1996). Kumar and van Dissel (1996), for example, studied IOIS development projects from the cooperation and conflict perspectives. 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 emphasised both economic and technical arguments and socio-political perspectives.

2.2 Emotions and organizational studies of emotions

The meaning of emotion can be seen as complex and multifaceted, and as interest in emotions in organizations continues to grow among both researchers and practitioners (Callahan 2004). Emotion is the word used to describe the kind of phenomena which have also been described variously as, for example, feelings (Browne 2004), moods, behavior (Lord & Kanfer 2002), and affects (Spoor & Kelly 2004). 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 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). Research from psychology has pointed for example out that it is not meaningful to consign human action to fall strictly into the analytical or affective dimension (Slovic et al. 2004). Sociology furthermore has had a long tradition of understanding human action as a hybrid of affective, traditional and typical rationalities (Weber 1978). Although the study of emotions in organizational settings has attained considerable prominence, with varying focus and methodology, 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).

Ashkanasy (2004) highlighted the lack of studies examining the relationships between emotion and performance. Sturdy (2003) pointed out that there are a large number of methodological and ethical problems in studies of emotions. Pescosolido (2002) 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. Other researchers (e.g. Spoor & Kelly 2004) have been interested in understanding the processes and outcomes of collective emotions like the effects of group members developing shared moods and emotions. They have, for example, shown that a shared effect may facilitate the group in achieving shared desirable outcomes. Indeed while much of the literature adopts a particularly focused perspective on emotions, there are numerous approaches associated with a range of disciplines such as behavioural, physiological, linguistic, or cultural perspectives. Furthermore, these may be explored in relation to specific emotions (Sturdy 2003). It has been claimed there is a lack of studies of how organizational socialisation processes are related to feelings and display outcomes (e.g. Dasborough 2006). 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 and group performance (Ashkanasy 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 team members help each other to achieve their goals and where people enjoy working because they are able to express their feelings honestly.

2.3 Emotions in the IS literature

In her study of IS innovation processes, McGrath (2006) states 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 those processes. Moreover, researchers in human computer interaction (HCI) have become more interested in exploring the affective aspects of computing (e.g. Zhang and Li 2005). McGrath (2006) have stated 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 ISD 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.

Our reading of this literature then leads us to believe that emotions in IOIS projects, indeed in any IS project play a major role. The fact that organisations promote rationality over emotion does not mean that emotions are not influential, especially when one considers that project work is essentially a social process and thus emotions are pivotal.

3 METHODOLOGY

The IOIS project studied, ViWo (Virtual Work), was a public sector organization collaboration. This research spanned 8 organizational project teams, a Government Ministry who funded the project, and 2 IO project teams. Over the three year timeframe of the IOIS development and implementation project, research data collected in the project ranged from in depth interviews; 14 of the 20 active project members in the project were interviewed (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 communications between project members over these years. The study used overlapping data collection and analysis over the three year span of the project, and employed theoretical sampling – deciding on analytical grounds where to sample from next. Glaser also recommends the collection of rich data in the form of different interviews, observations, and diaries (Glaser, 1992; 1998), and our data collection followed this directive. Table 1 contains interviewees and their roles in ViWo project.

Organisation	Interviewees and their roles
Research organization (Epsilon)	Matthew, Organiser; Ruth, Project manager; Thomas, Member of Quality Group; Simon, Member of Quality Group
User organizations	Lucy, Organiser, Alpha; Sophie, User, Delta; Lisa, User, Alpha; Kathy, User, Beta
Eta/Zeta (Suppliers)	Peter, John, Jack, Daniel
Kappa	Sarah (Member of the project group), Sheila (Member of the steering group)

Table 1. Interviewees and their roles.

Glaser (1992) recommends using open-ended questions in order to ensure that concepts genuinely arise from the data as opposed to preconceived questions, categories and hypotheses and in our study, no framing questions were used. Since we were studying the lived experiences of project members, we did not exclude participants: every project member was asked to tell their own story about the IOIS project. The interviews lasted from 45 minutes to two and a half hours. Most researchers agree that there is more to GTM than 'Glaserian versus Straussian', and one view of GTM is that we should view it as a family of methods (Bryant & Charmaz 2007). GTM has been very much a living and evolving method. There are variations in the way Glaser presents GT in his books (Glaser 1978; 1992;1998). The process of constant comparison as described by Glaser combines open coding, selective coding, theoretical memos, and sorting by existing theories. After our open coding phase, open codes were

sorted into selective codes, where coding proceeded according to the most important codes identified. We then proceeded to theoretical coding, where the relationships between selective codes were considered and the core category emerged. We used analytical memos to help us theorize about the categories (Glaser 1978). One of those memos we wrote in the theoretical coding stage resulted in the formulation of a substantive theory about Emotions of Control in an IOIS project, consisting of three categories: Governance, Power and Emotions. The constant comparison phase required going back to the data many times, where data were compared with all existing concepts to see if it enriched an existing category. With a 3 year study, selecting data for constant comparison was a challenging task.

4 MAIN PLAYERS – from PreViWo to ViWo PROJECT

ViWo was built substantially on the pilot project PreViWo. The development of ViWo involved the computerisation of work processes to facilitate office work, the consolidation of information across organizations and the management of key activities. Table 2 below sums up the actors and their previous role, if any, in PreViWo.

Actors	Role of Organization	Previous Role in PreViWo
Ministry	-Ministry responsible for funding the IOIS project -A part the Steering Group.	Yes , as funder.
Nofco	-Consortium of 21 user organizations (Virtual organization) -The basic function of Nofco was to promote and develop locally, regionally, and nationally the utilisation of IT and to enhance inter-organizational collaboration in multiple research-related issues and administrative practices. Oversees technical system and human resource coordination between all organizations. -A part of both the Steering Group and the Project Group	Yes , the consortium was in charge of PreViWo.
Alpha, Beta, Gamma, Delta	-Lead user organizations in the project Alpha was also the fund holder for the project -A part of both the Steering Group and the Project Group	Yes , Alpha initiated PreViWo.
Epsilon	-Organization responsible for project management and research objectives -A part of both the Steering Group and the Project Group The Quality Assurance group came from Epsilon.	No . A new player, Stakeholder.
Zeta	-Software company that supplies the software solutions for the project	No . A new player.
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	Yes , advised on PreViWo.

Table 2. Organisations involved in ViWo

In the ViWo project, Nofco was no longer in charge of the project management organization. Epsilon was brought in to perform the project management instead. The operation of Nofco was not parallel to that of the other organizations engaged in the project; instead it enabled a form of joint operation. The basic function of Nofco was to develop locally, regionally, and nationally the utilisation of information and communication technology and to enhance IO cooperation in multiple research-related issues and administrative practices. Furthermore, Nofco aimed to accomplish flexible interchange of people and information between the member organizations (21 organizations altogether that would eventually use ViWo including Alpha, Beta, Gamma and Delta). These four, key organizations (Alpha, Beta, Gamma and Delta collaborated with the relevant Ministry, suppliers and consultants.

5 THE SUBSTANTIVE THEORY

This chapter presents the substantive theory, Emotions of Control in an IOIS project, which was derived from the grounded theory study. The emergent substantive theory indicates the importance of

the roles of governance, power and emotions in IOIS projects, and constitutes new perspective on project structural modalities, and presents a new frame for IOIS behaviour.

5.1 The Substantive Theory: Emotions of control in an IOIS project

The emergent categories governance, power and emotions showed that political and historical issues had significant effects on individuals in the ViWo project. There were some issues which 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 beliefs were produced and reproduced by social processes, for instance, the reasons why some people were participating in the project. Governance contributed issues related to power, which in turn had an impact on emotions and vice versa. The emergent category ‘emotions’ reveals that emotions influence structure and are intimately linked to social structures of power. Emotions shaped the politics of the encounters, and project members more or less consciously ‘enacted’ organizational practices by the group’s activity. Emotions were neither neutral nor free from power effects, and the spaces in which people were controlled had emotional consequences. Neither emotions nor power are located in a purely individual space. Table 3 shows the categories, *Governance*, *Power* and *Emotions*, and their respective selective and open codes.

Categories	Selective Codes	Open codes
Governance	Organising the project personnel	Historical influences, The challenge of reorganising
	Leadership styles	Authoritarian leadership, Democratic leadership, Passive leadership
	Organizational learning and knowledge work	Organizational memory, Conflicting visions, Knowledge sharing
Power	Sources of power	Legitimate power, Expert power, Political power
	Power as resistance	Control of decision-making, Tension between old and new, Apparent acceptance, Insecurity
	Reasons for the power struggle	Previous project, Jargon, Time pressure, Unclear responsibilities
	Power as exercised	Final authority, Veto power, Forged power
Emotions	Insecurity	Changing actors, Control, Fear
	Need to be valued	Views about people’s presence, Importance, Blame, Hostility
	Need for unity	Separation, Seeking the bond of belonging, Feeling one is a member of the group, Affirmative emotions
	Task Related Feelings	Division of work, Frustration, Improving/Learning

Table 3. Categories and their selective and open codes

5.2 Propositions and Theoretical Integration

This section is concerned with conceptualisation and the relationships between different categories and it also forms the foundation for the theoretical framework. Table 4 shows the substantive theory as a set of propositions, and after the table we present the supporting literature review.

Interrelated categories	Propositions
GOVERNANCE VS. POWER	1. Organizational learning is rather ‘learning with organizing’ and it is a political process 2. Governance has a critical impact on the management of an IOIS project. 3. Individuals’ single actions can be seen as the basis of broader formation , and vice versa. Political and historical factors have influence on current work
GOVERNANCE VS. EMOTIONS	4. The beliefs and feelings of individuals and groups (even organizations) about the identity and purposes of the process, the organization and its environment, strongly affect organizational actions. 5. Different emotions - either displayed or suppressed - shape

	actions and outcomes.
POWER VS. EMOTIONS	<p>6. The explanations of resistance are important because, however informal or implicit, they guide the behavior and influence the actions taken by actors.</p> <p>7. Resistance very often seem to be a sign of a lack of rapport. If people are having difficulties in understanding each other they will be more likely to resist. Resistance is 'more the rule than the exception'.</p> <p>8. Emotional presentation can be seen as a resource for the project members, in which different emotional expressions can be used to deflect others' influence.</p>

Table 4. The substantive theory as a set of propositions.

The preliminary literature review does not include assumptions about the relationships between governance, power and emotions. The substantive theory has been engaged with the extended literature in this section in accordance with grounded theory recommendations for building theory. The integrated literature needs to be at the same substantive level as the emergent theory. It is also important for grounded theorists to show how the emergent theory confirms, contradicts or extends existing theories (Urquhart et al. 2010). The emergent theory can be also engaged with other theories, so it needs to be at a sufficient level of abstraction (Glaser 1992, 1998, Urquhart et al. 2010).

Proposition 1: Organizational learning (OL) is rather 'learning with organizing' and it is a political process. When considering the relationships between the selective codes of the governance and power category, this study highlights that the concepts learning and organizing are not distinct activities in practice. This confirms Gherardi and Nicolini's (2001) study. This study shows that OL in many cases requires a submission to authority, because there may not be freedom of choice of organizational and social norms. Thus OL can be seen as a political process. Some project members did not support the use of the previous material in the new project, and the material was described as suitable for throwing into a waste paper basket. This is an example of the link between the selective codes, reasons for the power struggle and OL and knowledge work. It was often necessary to revisit decisions due to questions or criticisms from participating organizations. It is an example of the link between open codes like veto power (power) and organizational memory (governance). One example in our data 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 members felt that decisions made in the previous project should not be questioned or changed. These issues show a strong link between selective codes such as power as resistance and OL and knowledge work.

It is argued that there is a lack of theory connected to organizational politics and organizational learning (Lawrence et al. 2005) and the findings of their study supports the view that it is important for theories of organizational learning to understand the political dynamics in projects to be complete. Structures of governance in this kind of setting can be very complex, work against project members communicating and may hinder knowledge transfer and organizational learning in a project. Some challenges in this study arose from the informal dimension, which then came up against a veto in the formal authority structure. The pressure from the Ministry to incorporate one organization for the project associated with the work environment (public institutions) may induce feelings of 'hidden rules' and 'automatic continuity'. It has also 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). It has been emphasised that 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 (Silva 2007).

Proposition 2: Governance has a critical impact on the management of an IOIS project: The constraining nature of the project organization needs to be taken into account. There might not be any freedom of choice to conform to organizational and social norms in an organization. We point out that power is the ability of a person or group to have top management implement the organizational change that it favours. Managerial power was aligned strongly with shareholders' interests, confirming Krishnan and Sivakumar's (2004) research findings. One of the most important and interesting elements of the concepts of organizing and learning is that they are both desired and avoided. As an

example in our case is that organizers wanted to see a structure that supports both the practice of the individual(s) and the performance of the organization(s). However there are conflicts around potential changes and situations where power relations are contested. In this kind of setting, a project group may require different behaviours from its leadership over time. **Proposition 3: Individuals' single actions can sometimes be seen as a process of appropriation for the whole group, with or without their consent and vice versa. Political and historical factors have influence on current work.** Political power can be used to take credit for work that has been not done. Power is likely to be determined by the nature of the 'employment' than by professional title or expertise. Some people defined themselves in the publicity as the completers of the project, while other members from other organizations wondered why they were not mentioned as belonging to the project. People who defined themselves as the completers of the project were not defined as completers in the final project report. Druskat and Pescosolido (2002) have emphasized the importance of a team's ownership over its work processes. There was not a collective belief in ViWo project that all the members of a team are part owners and that outcomes belong to the team.

Proposition 4: The beliefs and feelings of individuals and groups (even organizations) about the identity and purposes of the process, the organization and its environment strongly affect project actions. These belief structures are seen as being significant at the collective or group level and at the individual level as they form a 'conceptual lens'. These findings confirm that the beliefs of individuals and groups about the identity and purposes of the process, the organization, and its environment strongly affect organizational actions (Allen, 2003). This also has a link to the emotion category and especially to the selective code Task Related Feelings 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. When considering the relationship between governance and emotions, these categories in particular reflect how prominent project members felt what 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. For example, why some members were able to trust others' expertise in some situations, but not in others? The aims of the individuals in the project group are not the same as the official aims, and these official aims are not the sum of workers' aims. Aims can be unconscious, a combination of unspoken feelings. Goldkuhl (2003) has highlighted that verbal communication can never be explained outside of the concrete situation.

Proposition 5: Different emotions - either displayed or suppressed - shape actions and outcomes. It became evident that different emotions - either displayed or suppressed - shaped actions and outcomes in ViWo. One good example of this is how the project was organised and why. The suppliers were replaced because of the poor quality of the specifications: When it came to the choice of software vendors, there was an argument that Zeta should have been chosen because it was capable of delivering the system that the client needed, even when the client was not able to express what it needed (i.e. it was thought that Zeta would deliver a useful system even in the situation where client requirements were unclear). **Proposition 6: The explanations of resistance are important because, however informal or implicit, they guide the behaviour and influence the actions taken by actors:** Power relations have an impact on collaboration, and how it is felt. The open codes division of work (emotions) and forged power (power) in particular showed the link between the power and emotions categories, how there was an ability to share knowledge, and how some people accepted 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: the members felt they had no power to impact these issues and that work simply fell into their laps. Our findings confirm Fineman and Sturdy's (1999) study, which argues that resistance to organizational change is sometimes easier to define as problematic rather than thinking that resistance could also be a result of oppressive managerial control.

Proposition 7: Resistance very often seem to be a sign of a lack of rapport. If people are having difficulties in understanding each other they will be more likely to resist. Resistance is 'more the

rule than the exception': We claim that changes are critical, and it seems as though it does not matter whether it is a small or a big change, it still causes resistance. Situations where people have no control over issues are more likely to cause resistance. Resistance is the desire to control issues (e.g. to hinder decision-making process or avoid change). It seemed that change, without exception, means giving something up (a competing idea, strategy or position). We found that when people had to confront unknown situations it brought about feelings such as blame, separation and frustration. **Proposition 8: Emotional presentation can be seen as a resource for the project members, in which different emotional expressions can be used to deflect others' influence:** This study highlights the importance of emotions in organizational behavior especially at the individual level, and confirms that it is worth understanding the processes of collective emotion. One good example of this is the link between the power and emotion categories, and especially between the open codes final authority and fear. In our case, some people 'tattled' about faults they experienced to the project manager in order to gain the final authority indirectly.

6 DISCUSSION

The focus of this research was to look at the lived experiences of the IOIS project members. The research question addressed by this study was as follows: *What are the major emotional issues in an inter-organizational project in a public sector project?* Since there is no previous theory on emotions in IS projects, together with an innovative methodological approach and large data set gathered longitudinally, the inductive, contextual and methodological nature of the GT method is appropriate in this study (Orlikowski 1993). The emergent substantive theory, Emotions of Control in an IOIS project, highlights that emotion and control are intrinsically part of or dependent upon the other in an IOIS project. This study also indicates important elements of the roles of three categories: governance, power and emotions in IOIS project and offers an approach to understanding the meaning of emotions and an original perspective of project structural modalities, thus presenting a new framework for IOIS behavior and collaboration. The essential elements of the substantive theory can be summarized as follows: 1) we should focus on what emotions do, and the essential focus should be on how emotions are produced to get a better understanding of, for example, IOIS project structural modalities, 2) Control reflects and reproduces broader social structures of power and emotions which organizations and their members act out and transform both cultural and professional interests, 3) Control, its many forms and the response to them, are substantively emotional processes. 4) Emotions need to be understood in terms of the social structures of which they are a part. Fineman and Sturdy (1999) in the organizational literature express the view that control, and the responses to it, are substantively an emotional process whatever moral lens is applied. For consistency with GT, we now examine our substantive theory in light of existing theories.

Goldkuhl (2003), Te'eni (2001), and Twitchell (2004) among others have developed new models for understanding communication in the IS field. Goldkuhl (2003) developed Speech Act Theory as the Language-Action Perspective, and identified the following principles when modeling business interaction: 1) To communicate is to act (to perform linguistic actions), 2) Actions within a social interaction situation are related to each other as initiatives and responses, 3) Both linguistic actions and non-linguistic (material) actions and their different results should be acknowledged; as well the interdependence between these different types of actions, 4) Social interaction is conceived to consist of both giving and taking (i.e. intervening and receiving/interpretation), and 5) The use of pre-defined interactional patterns should be undertaken with caution.

A method for creating profiles for large amounts of synchronous computer-mediated communication conversation has been created by Twitchell et al. (2004). The Language Action Perspective of business conversations is founded on two theoretical bases: 1) from speech act theory comes the assertion that with each utterance in a conversation an action is performed by the speaker, 2) these actions (or speech acts) are organized into conversations according to predefined patterns. Te'eni (2001) has highlighted that it is necessary to understand the way people choose to behave in order to direct the new

communication process. “The result is a more complex description of communication behavior that has multiple purposes (e.g., to accomplish a task and maintain a good relationship) and uses a range of cognitive and affective strategies.” His model includes three basic factors: 1) inputs to the communication process (task, sender-receiver distance, and values and norms of communication with a particular emphasis on inter-cultural communication); 2) a cognitive affective process of communication; and 3) the communication impact on action and relationship.

If we compare our findings to Speech Act theory (developed as the Language-Action Perspective in the IS literature (Goldkuhl 2003) we can find several common features. Like Speech Act Theory, our theory about Emotions of Control in an IOIS project makes sense and emphasizes the close relation between linguistic and other behaviors. Both theories have a focus on single speech acts, and both consider the impact of these utterances (in our case, the impact is on the governance and control of the project). The cognitive affective process of communication in Te'eni's (2001: 5) model describes the choice of (1) one or more communication strategies, (2) the form of the message, and (3) the medium through which it is transmitted. The communication impact aspect highlights (1) the mutual understanding and (2) relationship between the sender and receiver. Our framework highlights that emotions had an effect on choices, and were socially constructed through interaction with project people as well. Our study also expands the view that emotions and the status of the project person affects communication strategies. For example, in our case disagreements were dealt with by ‘tattling’ to the project manager to get some issue approved because the project manager was able to give the necessary final authority. Instead of highlighting the communication impact aspect we would like to highlight the political aspects of communication.

Our study also highlights that emotions need to be understood in terms of the social structures of which they are a part. There are also many challenges when researching other people's emotions: 1) Emotions have many kinds of structures and impressions at both the verbal and the non-verbal level. There are also a large number of linguistic variations in how people choose to express their feelings. People can also hide their thoughts and feelings and their words may not express emotions profoundly. 2) Cognitive and emotional issues are intertwined with each other in experiences. The role of history in this project was striking. Like Robey et al. (2000: 134) stated ‘A fundamental problem with experience is that recent experience must always vie with older experience’. 3) Emotions 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 or vice versa. 4) It is not clear that a researcher can imagine what other people are feeling 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. This study highlights that everything we experience is defined by our emotional attachment to what is going on.

From that point of view we should especially focus on what emotions do, and the essential focus should be on how emotions are produced to get a better understanding of, for example, IOIS project structural modalities. However, it may be impossible to obtain the very deep meaning of emotions of individuals, and on the other hand the emotions of project members may be only the tip of the iceberg (we do not usually know the history of others' experiences etc.). Thus it becomes even more important for a project manager be a catalyst to get everyone to communicate with understanding and respect, and in large project make a structure for participants very clear. These emotional aspects are also giving a new perspective how we could approach collaboration issues in IOIS projects.

Future research: This conceptual framework will form the basis of future research as the substantive theory is developed into a formal theory through additional studies. For example, Giddens's (1984) structuration theory provides a useful higher level theory to view the theory which emerged in this study. To scrutinize the dualism between structure and agency, Giddens states that structure gives form and shape to social life but is not itself form and shape. Structure exists only in and through the activities of human agents. Control is also regarded as a socially structured, regulating and often self-regulating practice, which both constrains and enables action.

7 CONCLUSION

The study presents a grounded theory study of the operation of governance, power and emotions in IOIS development project. The narratives were used to develop theoretical categories and to provide insights into the processes of situated collaboration in an IOIS development and implementation project. Our key contributions are twofold – firstly, we provide a more nuanced understanding of emotions in project work, through our substantive theory presented in the form of propositions. Secondly, we demonstrate in this paper a substantive theory building process using Glaserian grounded theory – something that is still rare in information systems research. We hope that this paper furthers interest in the role of emotions, something that is still understudied in our field.

References

- Allen, D.K. (2003). Organizational climate and strategic change in higher education. *Organizational insecurity*. *Higher Education*, 46(1), 61-92.
- Ashkanasy, N. M. (2004). Emotion and Performance. *Human Performance*, 17(2), 137-144.
- Bryant, A. and Charmaz, K. (2007). Grounded theory research: Methods and practices. In *The Sage handbook of grounded theory* (A. Bryant, and K. Charmaz.(eds), 1-28. Sage, Thousand Oaks, CA.
- Callahan, J.L. (2004). Reversing a conspicuous absence: Mindful inclusion of emotion in structuration theory. *Human Relations* 57(11), 1427-1448.
- Dasborough, M.T. (2006). Cognitive asymmetry in employee emotional reactions to leadership behaviors. *The Leadership Quarterly*, 17, 163-178.
- Druskat, V.U. and Pescosolido, A.T. (2002). The Context of Effective Teamwork Mental Models in Self-Managing Teams: Ownership, Learning and Heedful Interrelating. *Human Relations* 55(3), 283-314.
- Fineman, S. and Sturdy, A.J. (1999). The Emotions of Control – A Qualitative Exploration of Environmental Regulation. *Human Relations* 52(5), 631-664.
- Fisher, E. (2008). Manage feelings in your project well, and you are more likely to deliver your project successfully. *APM Risk SIG Conference*, London.
- Gehardi, S. and Nicolini, D. (2001). The sociological foundations of organizational learning. In *The Handbook of Organisational Learning and Knowledge*, M. Diekers, A. Berthoin, J. Child and I. Nonaka. (eds.). Oxford University Press.
- Giddens, A. (1984). *The Constitution of Society*. University of California Press, Berkeley.
- Glaser, B. G., and Strauss, A. L. (1967). *The Discovery of Grounded Theory.*, Hawthorne, NY: Aldine Publishing Company.
- 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.
- Glaser, B. G. (1998). *Doing Grounded Theory: Issues and Discussions*. Mill Valley, CA.
- Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam Books.
- Goldkuhl, G. (2003). Conversational Analysis as a Theoretical Foundation for Language Action Approaches? In *Proceedings of the 8th International Working Conference on the Language-Action Perspective on Communication Modelling*, pp. 51-69, Tilburg, The Netherlands, July 2003.
- Griffith, T.L. and Northcraft, G.B. (1996). Cognitive Elements in the Implementation of New Technology: Can Less Information Provide More Benefits? *MIS Quarterly* 20(1), 99-110.
- Habermas, J. (1987). *The theory of communicative action 2: lifeworld and system: a critique of functionalist reason*. London: Heinemann.
- Jones M. R. and Karsten, H. (2008). Giddens's Structuration Theory and information systems review. *MIS Quarterly* 32(1), 127-157.
- Krishnan, V.R. and Sivakumar, R (2004). Impact of top management power on corporate divestiture. *Corporate Governance* 4(1), 24-30.

- Kumar, K. and van Dissel, H.G. (1996). Sustainable collaboration: managing conflict and cooperation in inter-organizational systems. *MIS Quarterly* 20(3), 279-300.
- Lawrence, T., Mauws, M., Dyck, B. and Kleysen, R. (2005). The Politics of Organizational Learning: Integrating Power into the 4I Framework. *Academy of Management Review* 30(1), 180-191.
- 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 Organizational Behavior. In R Lord, R Klimoski & R Kanfer (Eds.). *Emotions in the Workplace: Understanding the Structure and Role of Emotions in Organizational Behavior*: 5-19. San Francisco, CA: Jossey-Bass.
- Lyytinen, K and Hirschheim, R. (1998). Information systems as rational discourse: an application of Habermas's theory of communicative action. *Scandinavian Journal of Management*, 4 (1&2), 19-30
- Lyytinen, K. and Robey, D. (1999). Learning failure in information systems development. *Information Systems Journal* 9(2), 85-101.
- McGrath, K. (2006). Affection not affliction: The Role of Emotions in Information Systems and Organizational Change. *Information and Organization* 16(4), 277-303.
- Newman, M and Robey, D. (1992). A social process model of user-analyst relationships. *MIS Quarterly*, 16(2), 249-266.
- Orlikowski, W.J. (1993). CASE Tools as Organizational Change: Investigating Incremental and Radical Changes in Systems Development. *MIS Quarterly* 17(3), 309-340.
- Pescosolido, A.T. (2002). Emergent leaders as managers of group emotion. *The Leadership Quarterly* 13(5), 583-599.
- Punia, D.K. and Saxena, K.B.C (2004). Managing inter-organizational workflows in eGovernment services. Proceedings of the 6th international conference on Electronic commerce ICEC 2004.
- Robey, D., Bourdeau, M.C. and Rose, G.M. (2000). Information technology and organizational learning: a review and assessment of research. *Accounting Management and Information Technologies* 10(2), 125-155.
- Rodon, J. and Pastor, J. A. (2007). Applying Grounded Theory to Study the Implementation of an Inter-Organizational Information System. *The Electronic Journal of Business Research Methods* 5(2), 71-82.
- Sarkkinen, J. and Karsten, H. (2005). Verbal and visual representations in task redesign: how different viewpoints enter into information systems design discussions. *Information Systems Journal*, 15(3), 181-211.
- Silva, L. (2007). Epistemological and Theoretical Challenges for Studying Power and Politics in Information Systems. *Information Systems Journal* 17(2), 165-183.
- Slovic, P., Finucane, M., Peters, E., and MacGregor, D.G. (2004). Risk as analysis and risk as feelings: Some thoughts about affect, reason, risk, and rationality. *Risk Analysis* 24(2) 2004, 311-322.
- 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 Organizational Studies. *Organization* 10(1), 81-105.
- Te'eni, D. (2001). Review: A Cognitive-Affective Model of Organizational Communication for Designing IT. *MIS Quarterly* 25(2), 251-312.
- Twitchell, D.P., Adkins, M, Nunamaker J, F, Burgoon, J.K. (2004). Using Speech Act Theory to Model Conversations for Automated Classification and Retrieval. Proceedings of the 9th International Working Conference on the Language-Action Perspective on Communication Modelling.
- 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.
- Weber, M. (1978). The definition of sociology and social action. In: *Economy and Society*, G. Roth and C. Wittich (eds.), University of California Press, Berkeley and Los Angeles, California, 4-26.
- Zhang, P. and Li, N. (2005). The Importance of Affective Quality. *Communications Of The ACM* 48(9), 105-108.