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Abstract

This interpretative grounded theory (GT) study describes and analyzes governance issues in a Nordic inter-organizational information system (IOIS) project which spanned four user organizations, two suppliers, one national organization, a research organization and a Ministry. This study shows how GT can be used to gain significant insights to case study, and generate new concepts. We identified Organizing the project personnel, Leadership styles and Organizational learning and knowledge work as important selective codes that make up the Governance category. The paper concludes by discussing how organizing the project personnel, leadership styles and organizational learning issues could be attributed to governance and considers some theoretical and practical implications.

Keywords: Governance, Glaserian grounded theory method, Inter-organizational IS project

INTRODUCTION

Over the past decade we have seen increased globalization, with an attendant increase in the number of Inter-Organizational Information Systems (IOIS) projects, as multinational firms and organizations seek to standardize ISs across regions and countries. This trend is exacerbated by the standardization required for ERP systems, and ever lengthening supply chains. How then can we respond to the challenge of ever more complex IS projects that span several organizations?

So far IOISs, and especially their implementation with several stakeholders, have received only minor attention in the IS research. There has also been a lack of research in public sector IOIS implementation (e.g. Salmivalli 2008). It is difficult to say if IOIS projects are more prone to failure than other IS projects, as little research has been done in this area. It is logical to assume that an IOIS project has built in complexity due to the number of organizations involved and the scale of a project. Moreover, with large projects, events unfold over time, and the project management structures may find it difficult to respond appropriately.

One stream of research claims that most of IS development and implementation failures are known to occur for human and organizational reasons (e.g. Panteli and Sockalingam 2005). Therefore the collaboration issues are extremely important (e.g. Levina and Vaast 2008). When there are several different organizations involved in a common project instead a single one, collaboration becomes even more demanding. The complexity of IT projects is increasing, and careful project management is required to enjoy the benefits of IT.

Governance issues are acknowledged as an important and vital aspect of project work though it is claimed that project governance has attained much less attention than project management. It is even argued that project governance is not so well understood. The governance concept spans the ability of an organization to govern its own operation to avoid conflicts between people. To date, there is a lack literature about governance issues in IOIS context (e.g. Croteau and Bergeron 2009.) The research described in this paper contributes to that body of knowledge. In this paper, we were particularly interested in how governance occurred in the context of a Nordic

public sector IOIS project called ViWo. The project was a continuation to another IS project. The research question addressed by this research paper is as follows: *How does project governance enable or constrain the progress of 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 methods. The fourth section gives some of the complex project case background of the study. The fifth section presents the findings of our Glaserian GT analysis. The sixth section discusses the observations of our findings, concluding our study with a brief summary of our contributions.

LITERATURE REVIEW

This section covers the key literature relevant to the research problem – governance, project management and organizational learning and knowledge work issues. This is a grounded theory study, so we point out that the literature presented here is preliminary literature review (Urquhart and Fernández 2006). That is to say, we have wanted to avoid concepts being imposed on the data during the coding process. Hence, we are not using a theoretical lens in the way, for instance, Levina and Vaast (2008) do in their MISQ article.

Governance

The concept of IT governance emerged in the late 1990s. It has become a more popular topic of analysis in IS research, and many different views of analysis have been presented (Kaarst-Brown 2005). Sambamurthy and Zmud (1999) have specified IT governance as the patterns of authority including IT infrastructure, IT use and IT project management. IT governance's objective is to define structures, processes and relational capabilities. The term project governance is used in the IT sector to describe the processes used to help assure a successful project. It is said that project governance is not well understood and it is argued that the concept of project governance and its application in practice have not been clearly presented in the IO context (Croteau and Bergeron 2009).

Governance embodies a distinct part of management and leadership processes. It covers management, policies, processes and decision rights given for a special area of responsibility (Krishnan and Sivakumar 2004). Governance has also been described as 'directed influence of social processes', covering all mechanisms which are connected with public policy processes (Jones et al. 1997). It has been argued that there is a scarcity of research exploring how organizations define their IO governance of IT (Croteau and Bergeron 2009).

IS projects implemented in several organizations are increasingly common with the advent of globalisation and multinational companies. It is suggested that because of this change, IT governance will reflect corporate governance principles to an increasing extent (e.g. Croteau and Bergeron 2009).

Corporate governance includes the set of policies, customs, regulations and institutions – and all of these influence the way the corporation is controlled or managed – involved in organising the production and sale of goods and services (Bhasa 2004). There has been a growing interest in IO governance issues in organizational literature and both academics and practitioners have had an increasing interest in IO issues. Croteau and Bergeron (2009) define network governance as involving 'a selected, persistent, and structured set of autonomous firms engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges. These contracts are socially – not legally – binding'. There are three basic principles of IO governance: market, hierarchy, and network. Market governance is phased, formed only for the purpose of transferring goods and resources. Hierarchy governance, for its part, lasts longer than market governance and it is supported by legitimate authority. Network governance is classified as a hybrid form of market and hierarchy governance

Project Management

A 'project' has been defined as a unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements including the constraints of time, cost and resources. The influential role of project management in IS has long been acknowledged (Barki and Hartwick 2001; Smyth and Morris 2007). It has been highlighted effective plans, procedures and clear goals/milestones which all were found to be critical to project success. Project management theories have stressed that project work must be structured, and emphasise the coordination of the project work. (Choudhury and Sabherwal 2003). Smyth and Morris (2007) argue that, though the context-specific nature of projects is acknowledged, research methodologies still overlook this. In their article they have the epistemological aim of evaluating how we know what we know about projects and their management by means of research. Napier et al. (2009) have also stated that although effective project management is a critical issue for the success of IT projects, there is little empirical research on the project manager's requirements for successful IT management.

Defining, organising and controlling are acknowledged as important and vital activities in a project. The activity of defining includes the intent of management, the outline of the project scope and the description of the results. The assignment of an experienced manager, the responsibilities of the project manager and team members and the maintenance of the balance of power are vital issues to do with organization. The project's elements, such as time, cost and quality, also need to be controlled. Lockyer and Gordon (2005) have identified eight elements of

project, which are: 1) a specification for the product, 2) a project plan, 3) a time frame, 4) a budget, 5) a cost plan, 6) a statement of required quality, 7) identification of any areas of uncertainty and 8) an evaluation of possible risks including the appropriate responses. A more elaborate definition that focuses comprehensively on process is given by Fujinami and Marshall (2001). They provide three main steps (define, plan, implement) which include thirteen clear substeps.

Andersen (2008) examines project management from an organizational perspective. A project can be seen as a temporary organization, established by its base organization to carry out an assignment on its behalf. Andersen highlights that we should take into account the specific demands of individual projects – there is no 'right way' to carry out projects. Hartman and Ashrafi (2002) stress that most IS problems are concerned with both management of organization and cultural issues rather than with technical issues. In this light, project management is a very important, critical issue in IS projects.

Organizational learning and knowledge work

One of the most significant discussions in organizational learning is the question of whether organizational learning happens at the micro or macro level. This of course is very relevant to our consideration of organizational learning at the project level. Argyris and Schön (1996) have asked if organizational learning is just the sum total of the individual learning occurring in the workplace. By contrast, Dodgson (1993) has stated that organizational learning is more than the sum of parts of individual learning.

Organizational learning has identified by some key concepts and perspectives. Very common perspectives are technical, cognitive, and social perspectives. The technical perspective includes the processing and interpretation of information from inside or outside the organization. The cognitive perspective focuses usually on individual learning, with the assumption that organizational learning is a cumulative impact of individual learning. The social perspective focuses on social interaction that is characteristic of a specific organizational context. Organizational learning has also been defined both as a process but also as having a behavioral outcome. The latter perspective suggests that the learning can be measured or assessed by examination of behavioural outcomes. An important feature is whether an organization learns from or with a leaning partner and organizations can learn together as a network, rather than members are sharing knowledge between each other. Organizational learning has been acknowledged as a political process as well. (Rashman et al. 2008.)

Knowledge is also closely linked to organizational learning. In an IOIS project, the transfer of knowledge between organizations is critical, and that knowledge is aided by organizational learning. Knowledge is defined in many different ways in the literature, and a universally applicable definition of knowledge and learning most likely cannot be found. In the field of sociology, there has been discussion as to whether the origin of knowledge is social or cultural (e.g. Goffman 1974; McCarthy 1996). Learning and knowledge is also linked to the learning situation and the context of information (Lave and Wenger 1991). One frequently cited framework for categorizing knowledge is Nonaka's and Takeuchi's (1995) model where they divide knowledge into tacit and explicit knowledge. Tacit, subjective knowledge consists of received experiences. Explicit, objective knowledge consist of rational, deduced knowledge. The theory emphasizes cultivation of tacit knowledge and the organization as the creator of knowledge. Their theory is based on four different ways of modifying knowledge: socialisation, externalisation, combination and internalisation.

Recent debates in information systems have criticised an unthinking application of tacit/explicit knowledge (Thompson and Walsham 2004). Some tacit knowledge however can be embedded in organizational routines. Polanyi's (1966) definition of tacit knowledge is knowledge that is personal, context-specific and thus, not easily visible or expressible – not easy to formalise and communicate to others (Kakabadse et al. 2001). Nonaka and Takeuchi (1995) believe that new knowledge is created through the interaction between single loop learning (where explicit knowledge is put into practice) and double loop learning (where our fundamental assumptions are questioned) forming a kind of dynamic spiral. Most organizations seem to engage mainly in single-loop learning, while not engaging in double-loop learning - they do not question and rebuild existing perspectives, frameworks, or decision premises (Wenger and Snyder 2001).

METHODOLOGY

Data sources from ViWo (2004-2006)
In this project, there were eight organizational project teams and two IO project teams. Data collected in the project ranged from in-depth 14 interviews (250pages of transcripts), to observation of project meetings (20), researcher diaries (80 pages of notes), 48 memorandums of project and steering group meetings, and e-mails (over 700) containing messages project members sent to each other during these years. 14 active project members were interviewed once. Among the interviewees were managers from the steering group, representatives of suppliers, members of the research organization (Epsilon) associated with the project, and users active in the project. The interviews lasted from 45 minutes to two and a half hours. This research tracked the whole IS project and it had a unique approach – no framing questions were used. To our knowledge, no other research in IS has had either this focus – the lived experience of the project member or has utilized such an

approach. The open nature of the interviews enabled the interviewees to explain their deep feelings about the project that would not have surfaced otherwise. It is stated that through narrative stories we are able to get close to people's experiences (Clandinin and Connelly 1994).

Glaserian grounded theory method

This study is an interpretive study using Glaserian GT for data analysis and theory building (Glaser 1978; 1992 1998). The GT method is very suitable for research where there is lack of existing theories. This is the case here as there is little existing theory in IOIS projects and especially their implementation area. Also there is a lack of research about governance issues in IOIS projects (e.g. Croteau and Bergeron 2009).

For this study, the Glaserian version of GT has the twin advantages of being closer to the original, classic version of GT (Glaser and Strauss 1967), and is much more flexible. Although Glaser (1978) represents many coding methods, he encourages the researcher to use a code method which helps categorizing and flexibility. We followed the Glaserian (and classic GT) coding stages – open coding, selective coding and theoretical coding. At the open coding stage, the interview data, field notes and e-mails were analyzed line by line, and the project memorandums were analyzed paragraph by paragraph. As the project memorandums were secondary data, it seen as appropriate to code at a paragraph or page level (Urquhart 2007). During selective coding and through iterative process, we discovered our emergent categories. Three core categories were identified in this study: governance, power and emotions. In this paper we are focusing on the Governance core category. Next we provide some background to the project.

PROJECT BACKGROUND

PreViWo project

ViWo was preceded by a pilot project called PreViWo. PreViWo was implemented in three steps (specification, interface pilot and planning) in the years 2002-2003. Table 1 contains the actors in the pilot project. The pilot project was influential in framing the organization of the larger project we studied (ViWo), and it could also be seen that the history of the pilot project influenced the perceptions of the participants. Alpha was the leading organization which applied for and received funding for the project. PreViWo was a very complicated project, entailing two consortia (Lambda and Kappa), and two software houses (Theta and Iota).

Table 1. Organizations Involved in PreViWo project

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

ViWo project

The core system ViWo (developed in years 2004-2006) was a Nordic public sector organization collaboration, whose aim was to implement an IOIS. The goal of the IS project was that an IOIS, named ViWo, would be designed and taken into use by several organizations of the same type. The project aimed to carry out a pilot test of the IS in these organizations before establishing the system at the national level. The ViWo project involved computerization of work processes, consolidation of information across organizations, and management of key activities. They also managed some research objectives around the project. The user organizations consisted of Alpha, Beta, Gamma and Delta. User organizations were the members of Kappa. Kappa consisted of 21 organizations, and it would be these organizations that would eventually use ViWo. The organizations collaborated with the relevant ministry, suppliers and consultants.

Table 2. Organizations Involved in ViWo project

Organization	Role of Organization
Ministry	Ministry responsible for funding the pilot project
Kappa	Consortium of 21 user organizations (Virtual organization)The basic function of Kappa was to promote and develop locally, regionally, and nationally the utilization of IT and to enhance IO collaboration in multiple-related issues and administrative practices
Alpha, Beta, Gamma, Delta	User organizations in the project (Members of Kappa and Lambda) Alpha was also the fund holder for the project
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

Epsilon	needs of research and education, and the supporting IT administration
	Acted as an expert advisor. Withdrew from the project before it ended.
	Organization responsible for project management and research objectives

FINDINGS

We identified three selective codes which contributed on Governance category: organizing the project personnel, leadership styles and organizational learning and knowledge work. Table 3 shows the composition of the category and the selective codes and their open codes are discussed in turn.

Table 3. Construction of Governance Category

Open codes	Selective codes	Category
Historical influences, The complications of reorganizing	Organizing the project personnel	
Authoritarian leadership, democratic leadership, Passive leadership	Leadership styles	GOVERNANCE
Organizational memory, Conflicting visions, Knowledge sharing	Organizational learning and knowledge work	

Organizing the project personnel

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

As Kappa and Lambda were separate organizations working towards a similar target, they also had their own strategies and ways to proceed. Lambda's proposal was approved by the Ministry that gave partial funding for the development of the core IS towards the needs of Kappa. The cooperation between Lambda and Kappa was organized, and the common project of these two large consortia began in spring 2002. The responsible unit for organizing this project was Alpha that also was in charge of running the core IS development project for Lambda. The project manager in 2002 was recruited from Kappa, and two software houses (Theta and Iota) were engaged to the work that would produce a system called PreViWo to enhance virtual work.

During autumn 2002 it became evident that two consortia and two software houses was very complicated to manage. There were conflicts between the goals of the two consortia, and the project manager apparently did not have enough experience of running a project of this size and complexity. Some people felt that there was some overlapping work done in the projects. This overlapping appeared to be a surprise to some other project members: *'I didn't hear about this 'project that has been planned since last summer' until after the project meeting last week – nobody cared to email me before I read about it in the project plan (and the 'project' is not even mentioned there!!)'* (Email from Lambda, 19th December 2002).

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

This all lead to discussions between the area leaders of Alpha, Beta and Gamma, and Epsilon (Matthew, Organizer) how to secure the smooth progress of the project that would produce ViWo. A sensible strategy seemed to be to restrict the set of active organizations to a minimum. This meant that ViWo would first be developed for Alpha, Beta and Gamma. After these three organizations had taken it into use, and possible defects removed, according to the real use experiences, other organizations would adopt it. This was discussed informally with the Ministry: *'The implementation of an IS in collaboration with Kappa might be a concrete possibility. The specifications will be ready in May and bidding for offers will begin in the summer or at the beginning of the autumn at the latest. […]'* (Email to the Ministry, 22nd January 2003).

On 10th February 2003, an application was sent to the Ministry in order to get funding for an undertaking to implement and pilot ViWo. There were three organizations applying for the funding but the stakeholders representing PreViWo (Kappa, Lambda) were not among them. However, PreViWo was mentioned as a starting point for the new development project. The forthcoming leader of the project ViWo informed other organizations about the application: *'This proposal is going among our other efforts. That means that it is in the category of "joint projects and networks".'* (Email from Alpha, 5th February 2003). Her email was responded by Kappa: *'We have incidentally heard that you are planning this kind of a project. However, we have not been informed of the*

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details. I suppose that we are right in thinking that this is about 'bidding'? We see that your planned effort does not contradict Kappa's plans. Please keep in mind that Kappa's plans have included the intention to continue our earlier project. […]' (Email sent 11th February 2003).

Kappa also arranged workshops in March 2003, in which the interface pilot and planning were introduced to the future users. Among other issues, ownership was also discussed in the workshops: *'The extension of the maintenance, too, must be agreed. That is the case especially if the IS will be managed by some other organization.'* According to the normal state procedure, Alpha was informed by the Ministry in April 2003 that it would get the formal responsibility as well as the funds to lead the development of ViWo. Funding would begin in 2004. One essential change following that information was to replace the Kappa representative with the representative of Epsilon (Ruth). The Ministry which provided the funding also demanded that the fourth user organization (Delta) should be included. The reason for this was that Delta had a different legacy IS installed. *'Thus they (Delta) were invited to participate in the project as the Ministry was putting pressure on us, and they (Delta) were eager to join because they have always been very progressive in IS projects…'* (Lucy, Alpha)

The complications of 'reorganizing': In this study, it is interesting to note the extent to which the actions of reorganizing from PreViWo to ViWo had repercussions on the opinions expressed by the interviewees. However, it is essential to point out that many project members were longing for their earlier partner companies, and some felt that they were reinventing the wheel, when they were essentially rectifying the defective specifications. These repercussions were due to the use of power: the organizers were able to change the key actors, and some people accordingly felt disempowered. The aim was to ensure that the ViWo project produced what it should produce.

The reorganization revealed that there were evidently unclear roles and expectations among the stakeholders in the project. For example, the project management people thought that the supplier Eta's involvement was inevitable because of the previous project, whereas the supplier themselves (Eta) felt that they were engaged in the project because of small-scale 'blackmailing'. There were contradictory views among others about the organization pattern: *'The organization pattern of this project is very strange [laughter]. I have never seen such a loose project as this'* (Jack, Supplier Eta) and regarding personnel, changes in project parties and their personnel caused problems and affected the presence of appropriate skills: *'I was concerned that some members of the project might have interpreted the launch of the project as an indication of a lack of confidence in them…'* (Lucy, Organizer, Alpha)

The results of the reorganization showed that, when conflicting understandings interact in collaboration, the interplay of individuals and groups within a particular context shape the whole IS project. Different parts of the analysis will reveal how governance influenced the whole process of the ViWo project. Collaboration between two suppliers proved to be very challenging; issues related to avoidance of responsibility, scheduling and trust were identified. Furthermore, the supplier felt that some decisions had already been made by the network organization (Kappa), which had been involved in the previous project and had at that time made many decisions influencing this project. Clearly power and politics can also be related to this observation. In addition, there were conflicts between different organizations and the network organization, aiming at facilitating IO collaboration, and the organizations clearly ran into many difficulties in doing so.

According to John (Supplier, Eta), the change in the project organization affected the manageability of the project. The point of the criticism was that the applicant for the financing (Alpha) did not eventually assume responsibility for the financing but *'outsourced it'* (John, Supplier, Eta) to the person in charge of the project (Epsilon, Research Organization). This had a disintegrating effect on project organization and management. In the opinion of this interviewee, the responsibilities were distributed among too many people. Also related to project management, the project manager was blamed for focusing on managing the project instead of focusing on the development work. What made the managerial level of governance extremely challenging was the fact in particular that the authority of Kappa, the user consortium, and its relationship to the lead organizations was poorly defined. What makes it even more complicated is that the background of the project was extremely ambiguous and unclear to many participants.

Leadership styles: This selective code describes how leadership was actualized and experienced in the ViWo project. Leadership had strong engagements with the surrounding environment (context): the steering group, the Ministry who awarded the funding and numerous organizations and their different representatives such as users and experts. According to Jack (Supplier, Eta) the biggest problem in the project was how to manage the project so that this was not some kind of programming or IS project.

The open code **Authoritarian leadership** describes how leadership was actualized at the strategic level. Two organizers - Matthew (Epsilon) and Lucy (Alpha) – applied to a Government Ministry for a grant and were awarded it. After this, potential executors and project members were considered and organized. Matthew pointed out that PreViWo was instructive to him and other organizers - i.e. they had learnt from experience that it is not wise to have too many member organizations in a project. This also meant that those within the project should be capable of co-operation. Authoritarian leadership also became evident in the project work. Some members

claimed that the leader often did not look for alternative solutions for problems, but made decisions based on position or time, In other words she chose the fastest way to get something done but not necessarily the best one: *'Project members were at the mercy of the project manager and were not able to interfere or say that why we didn't pay attention to… or ask if we could do this a different way…'* (Sophie, User, Delta). Project manager (Ruth, Epsilon) for her part pointed out that the management of project group was hard: *'It has been hard to get the project group to work in a constructive spirit and I thought they might not necessarily learn how to at all. I felt it was not so important to work in a project- oriented way, but more important was to come up with a system which works…'.*

It was interesting how **Democratic leadership** became evident in experiences of the project members. The views about democratic leadership were contradictory according project members. It was emphasized that leading was hard because of the fact that the responsibility was shared. John (Supplier, Eta) for his part stated that: *'[the] project manager can't take all the responsibility for the project – that's impossible… or maybe it also depends on the guy…'* John also speculated that: *'Although [the] project manager feels that this is her project, there is a big problem because it's possible that she won't get support from her own manager who is sitting in a steering group - support which she'll need if she is in a bad situation…'*

Thomas (Epsilon) highlighted that the conditions should be taken into account, and that one should understand the fact that the leadership is highly multidimensional and conflictual as well. Thomas suspected that *'The steering group's understandings resulted from how the project manager presents the matter to them…'* So, it was important that there could also be a common perception of how matters are and how they are progressing. Many of the project members' comments highlighted the significance of the interaction process in achieving a common viewpoint. There were also many situations which emphasised the importance, for example, of the project manager's having the ability to be polite and cooperative, to manage the budget better, and to manage tasks, timetables, responsibilities and roles, etc.

Passive leadership: Jack criticized the project manager for trusting Eta's expertise too much. According to Jack *'We can just see Eta as merely a tool for the project, but there has to be someone who has a leadership role, so that it is not possible to shift responsibility to the supplier.'* Some project members also stated that the project manager tried to go too fast and tried to show, for example, that in this way the project progressed well but that it became evident that it was not possible in this way to measure how well the project was actually going. Jack (Eta) commented critically: *'The project manager was more worried about these schedules and that certain matters were taken care of rather than clarifying social issues…or that we understood why certain issues didn't work… and there were a lot of things that weren't handled professionally…'*

Organizational learning and knowledge work

Organizational learning and knowledge work was one selective code which emerged through the GT analysis, and this section discusses this selective code in detail. We identified organizational memory, conflicting visions and knowledge sharing as important open codes of this selective code. This selective code (organizational learning and knowledge work) describes how knowledge work in the ViWo project was primarily affected by work carried out in PreViWo. It became evident that people in the ViWo IOIS project had very different starting points, because some people had been involved in the previous PreViWo project, while others had not.

Organizational memory: It became clear that there were issues around knowledge transfer from the previous project, resulting in a loss of organizational memory. Though PreViWo had had many problems, it was nevertheless seen as a starting point. There were also different viewpoints about the suitability of that starting point. The diversity of the conceptions about project material was evident in the ViWo project. Matthew (Organiser, Epsilon) doubted the suitability of the material for the starting point of the new project in 2004: *'Perhaps we can say that there was some kind of blundering in the project. But it is difficult to know if this opinion is fully justified…Afterwards it turned out that the quality of the specifications was not such that further work could have been based on them…'*

From the same interview it also became evident that the representative of Eta, who was involved as an expert in PreViWo, did not support the use of material in the further project: *'John (Supplier Eta) described the specifications in his colourful style as suitable to be thrown into a waste basket…'* (Matthew, Epsilon, Research organization). Ruth (Project manager, Epsilon) felt that the background materials were partly a stumbling block and hindrance to the current project and he pondered that: *'Of course, I can't say that your project was a dud… If someone who is more valued than me says that it is very well done, I have to believe and accept it.'*

Ruth (project manager) doubted the suitability of the project material but when the steering group made their decision that the project would continue with that data, she thought there was no other choice. Jack (Supplier Eta) felt that the specifications from the previous project caused more harm than good: *'Too often problems that emerged from practical work or were brought up in discussions were ignored by pointing out that the process had already been defined...'* By contrast, within Kappa, the project organization was criticized for its lack of

continuity: Sheila (Kappa) said: *'Previously created knowledge was discarded and we lost the gate-keeper role that we thought we knew well...'* Sheila felt that they had to reinvent the wheel in the ViWo project. The comment related to the efforts made to familiarise the new project members with the task.

Conflicting visions: There were also many conflicting visions of the project. Ruth the Project Manager (Epsilon) said: *'I have tried to have an attitude that this project will end...but the operation will continue, and I can't manage it after that...'* Sophie (User, Delta) felt that the project management had become more important than the content of the project. She thought the relevance of the project had become twisted. Jack (Supplier, Eta) felt that the project was more of a *'technology project'* for the project manager and the other supplier, Zeta.

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

Knowledge sharing: Ruth (Project Manager, Epsilon) took the view that knowledge sharing between organizations occurred in a collegial and efficient manner, despite the hierarchical nature of those organizations. Her thought was that people filled each other in on the project: *'I got a feeling of tranquillity that I didn't need to know everything...'* On the other hand, Daniel (Supplier, Eta) felt that his role as an expert was not easy: *'I felt that I was supposed to be a telepathic database link, and have the talent of a clairvoyant if I was to know all the information they wanted us to know...'.* Lisa (User representative, Alpha), and previous member of PreViWo, for her part, trusted in the supplier's expertise: *'We certainly have the instructions for how to use it, and we can always ask Walter [Supplier, Zeta] for help and get an immediate answer'*

Lucy (Project Leader, Alpha) felt that she was making a lot of decisions relying on others' expertise, because she herself did not have IS skills. For example, when Ruth (Project manager Epsilon) pointed out something in a plausible way, she would give the necessary final authority. Sheila (Steering Group, Kappa) for her part, felt that the main problem was the integration of ViWo and PreViWo. It was hindered by the fact that Eta did not convey information about the previous project (PreViWo). She said: *'We assumed then that since Eta was chosen as the second supplier, it would ensure the continuance of that information...'*

DISCUSSION

The findings of our study provide an interesting illumination on governance issues in an IOIS projects. This paper argues that governance has a critical impact on the management of an IOIS project, with particular implications as to how knowledge is then transferred in that governance structure. In this particular set of projects we can also see how the governance of the final project was a complex evolution from experience gained in the previous project. It is evident that the governance of the project was particularly challenging because of the number of organizations and structures involved. This is a potential problem for all IOIS projects as of course governance does need to be defined between organizations in such projects. In this particular instance that the project structure, as set out, was a very complex one. Governance of such a project is interesting in and of itself.

We illustrated three selective codes of governance: 1) organizing the project personnel, 2) leadership styles and 3) organizational learning and knowledge work. There is no theoretical background to justify why select these three open codes as the composition. The reason was explained in the literature review chapter that we are not using a theoretical lens but our approach is much more that of a preliminary literature review. Organizing the project personnel revolved around historical influences and the complications of reorganizing. The selective code organizing the project personnel raise questions about 'obscure' organization and its influence on project management and on collaboration of project members, and point out that the question of organizing is significant issue in the IOIS project management. Instead, many political and historical reasons seemed to affect this process; e.g., the background work was carried out in an organization that was not among the organizations that applied for funding ViWo.

Related to problems of project management, Khazanchi and Zigurs (2007) have defined three elements that are involved in the management of virtual projects; co-ordination, communication and control. This research focused on the co-ordination aspect of project management, and more particularly to the people part of this subject matter: on the perceptions of how people are combined to carry out specified activities in order to accomplish stated goals. This happened in the beginning of the ViWo project and was heavily influenced by the previous project. One could also claim that there were shortcomings in doing so.

The selective code leadership styles: authoritarian leadership, democratic leadership, passive leadership show how leadership was experienced in different ways in the project. This shows how a group may also require different behaviours from its leadership over time (Pescosolido 2002). It has proved time and again also that project leaders need to manage the implementation process and project leaders must be clear about the vision and goals of the project and be able to communicate those to others (Napier et al. 2009).

The selective code organizational learning and knowledge work shows that the individual's single actions can be seen as the construction material of broader formations, and vice versa. It is easy to see how a view of knowledge as a social institution requires examination of 'socialness' or emotions. From this viewpoint, even knowledge can be seen as having two dimensions which in certain sense are contradictory: knowledge is a descriptive fact or knowledge includes essential meanings. These findings have illustrated the complexities of knowledge work and organizational learning in an IOIS project. It is clear from these findings that the knowledge transfer issues that project members were grappling with were primarily about tacit knowledge – how things had been previously done in PreViWo. It is our belief that the cultivation of tacit knowledge in this kind of situation is difficult and it is a big challenge to the organization to be the creator of the knowledge. These findings raise the question if it is at all possible to model knowledge in this kind of situation, where many workers from different organizations have to socialise into the project organization.

It is also fair to say that the project organization did not promote organizational learning, despite the project organization itself being a product of previous learning on a failed project. Lave and Wenger (2001) assert that it is difficult for organizations to carry out double loop learning by themselves; the irony here seems to be that double loop learning did occur between organizations in PreViWo, in that the project organization of ViWo was designed to combat known problems. However, it is also possible that this double loop learning did not fit the new situation as hoped. This paper also affords a rare insight into the detailed workings of an IOIS project and the everyday reaction of project members to difficulties of governance and understanding responsibilities. Our analysis shows that structures of governance worked against project members communicating despite a great deal of knowledge gained over the execution of the two projects. It was evident that governance made a lot of repercussions among the project members and we can notice that emotions were many and varied at the project level and in organizations.

CONCLUSION

Our research raises many important issues related to research on governance in the IS area. This research contributes by providing an understanding of governance in IOIS projects. Our results show that such governance structures are extremely complex and can in fact hinder knowledge transfer and organizational learning in a project. It was also evident that decisions on governance were taken mainly on convenience grounds as opposed to some careful consideration as to how the structure would affect communication. Questions could also be asked about the role of the project management organization, Epsilon. We would urge further research into what might be an optimal governance structure for large IOIS projects such as these. As far as we know, our research is unique in identifying the knowledge transfer consequences of such structures.

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