Power and status theory as a lens to view knowledge sharing and knowledge building issues in an IOIS project

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Abstract

This qualitative study used power and status theory as a lens to view and analyze knowledge sharing and knowledge building issues in an Inter-Organizational Information Systems (IOIS) project to further the understanding of how the experience of power and status affect perceptions concerning knowledge sharing and knowledge building. The case was a three-year-long IOIS project spanning nine organizations altogether. The data were collected by interviews, observations of project meetings, diaries, project memoranda and emails sent by project members to each other during these years. We demonstrate how power and status colors experiences about the knowledge sharing and knowledge building work in an IOIS project. The paper concludes by discussing theoretical and practical implications of our findings.

1. Introduction

Information system (IS) development and implementation work has been recognized to be a very challenging process [24]. In fact, it has been proposed that IS projects are repeatedly confronted with several obstacles [3]. IS work has for example been viewed several decades as a political process and managers’ power over users has often been analyzed critically e.g. [18], [25], [26], [36].

Contextual factors pertaining to organizational culture, power, structure, and strategy have been seen as important factors for IS development processes though it has also been highlighted that there is a lack of studies about organizational power in relation to information systems of a knowledge sharing context [2].

This paper focuses on knowledge sharing and knowledge building vs. power and status issues in an inter-organizational information system (IOIS) project. In particular, the effects of an actor’s power and status on the attitudes, emotions and behaviors are investigated.

It has been highlighted by Bunderson and Raegan [6] that formal and informal hierarchies of power and status affect not only organizational learning but also shape perceptions, motivations, and behavior. In management science it has pointed out that persons in high organizational positions (positions with more power and status) are also usually better informed e.g. [19]. It has also been recognized that the relationship between the sender and the recipient influence what is the motivation for information sharing. Two critical and crucial elements are trust and the power and status of the recipient [28].

Kemper and Collins [23] argued that human actors are involved both in relational issues of control and power, and of acceptance and positive associations (status). It has also been highlighted that when individuals experience respect, it arouses satisfaction and well-being, and individuals are more likely to express positive sentiments to others, thus increasing the flow of positive emotions [22]. According to Fast et al. [13], in order to understand how power and status interact we should study their isolated effects. They argue that having power without status leads easily individuals to demean others [13].

In the field of IS, Levina and Vaast [24] have focused on the status differences in offshoring contexts. They have highlighted that not only physical distance but also social boundaries separate participants on multi-party projects and make it difficult to establish, for example, shared practices. Boundaries can also be used by participants as sources of separation. This can create status inequalities between participants. However, they have highlighted that the boundaries that produced status differences were context specific [24].

This study revisits the data of an empirical study that discussed lived experiences of project members who worked in a three year long project e.g. [32], [33]. This study contributes by showing that in order to generate new knowledge in an IOIS project we
need first understand how social hierarchy can affect the knowledge sharing and building process and outcomes. The research question addressed by this research paper is as follows: How does the experience of power and status color perception concerning knowledge sharing and knowledge building issues in an IS project?

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

2. Literature review

Relevant research literature on the paper topic are power and status issues and knowledge across boundaries in an IS project which are discussed in this section.

2.1. Power and status issues

It has been pointed out that power and status are highly intertwined to each other. The common feature of power and status is that both are related to influence over others. [4], [13], [15], [16]. The divider is the source of influence. Status describes how an individual is respected, admired or regarded by others whereas power describes how an individual exercise power over others by withholding or manipulating resources. [15], [16], [21], [22].

Fast et al. [13] have highlighted that people who have power but lack status, choose more degrading behavior towards others. They have argued that low-status is more threatening and aversive and because power gives people the possibility to act on their internal feelings, it encourages disparaging behavior towards others. Fragale et al. [15] have pointed out a counter view - they argued that on average, high status individuals are stereotyped to be more self-centered, less warm and sincere than low status individuals.

According to Kemper [22] the basic assumption of power and status theory is that those with power or gaining power experience positive emotions such as satisfaction, and confidence, whereas those who have less power experience fear and loss of confidence. Kemper also highlights that basic human feelings are not only fear, anger, happiness and satisfaction but also sadness and depression. Other feelings like guilt, shame, pride and love are different kinds of combination of basic feelings [22].

It has also been highlighted by Kemper [22] that when individuals experience obeisance, it arouses satisfaction and well-being, and individuals are more likely to express positive sentiments to others, and thus increase the flow of positive emotions. e.g. [22]. Kemper [22] defines a power as an ability to get a person to follow her/his desires. Status describes how people give and get status via interaction. Status describes the state when regard, acquiescence and respect are received voluntarily.

Turner and Stets [39] have also highlighted that when individuals lose status, the relationships become much more complicated because the emotions experienced and expressed depend on the accusations made. They have argued, for example, that when individuals blame others for their loss of status, they become angry and easily project aggressive behavior and seek to force others to honor their view to achieve status back [23]. Power and status theory make claims about the emotional reactions of individuals who give, or fail to give status to others. It has been highlighted that emotional dynamics revolve around the issues like how individuals meet expectation states associated with their importance in the group and the degree to which individuals accept as legitimate the ranks, associated expectation states, and resulting behaviors of people at different ranks [39: p. 35]. Most power and status theories are unquestionably micro in their focus on the relations among power, and emotions. Relatively few studies on power and status issues focus on the emotions in a more inclusive societal system (i.e. macrolevel) [39].

2.2. Knowledge across boundaries in an IS project

Knowledge is recognized as a valuable resource for organizational growth e.g. [12], [17], [40]. Knowledge sharing across boundaries is a key issue within knowledge management [7], [10], [37]. In an inter-organizational context, the transfer of knowledge between organizations and boundaries is critical [1].

Knowledge sharing across boundaries has been studied in IS research [7], [8], [10]. The studies in learning in an inter-organizational setting has also risen [24], [35]. It is highlighted that each situation depicts a different combination of boundaries due to the different internal and external dynamics which have an effect on collaboration [24].

It is highlighted that the ‘knowledge as object’ perspective assumes that knowledge can be owned by
the organization. The view of knowledge that sees knowledge as residing within the minds of individuals presumes that knowledge can be codified and exchanged with the organization just as it would be in any other exchange [40]. Carlile [7] has pointed out three different views of knowledge: 1) mechanistic views (focus on knowledge as something to capture, store and transfer), 2) the cultural view (emphasizes the requirements of social interaction in translating knowledge before it can be shared), 3) the ‘contested’ or ‘political’ nature of knowledge.

In their model Nonaka and Takeuchi’s [31] divide knowledge into tacit and explicit knowledge. Tacit knowledge is implicit and consists of received experiences, emerges over time, and is therefore difficult both to express and manage. Explicit knowledge consists of rational knowledge; it is easier to express, write down, and pass verbally to others; therefore, it is seen more easily to be transferred [5], [31]. Nonaka [30: p. 15] distinguishes between “information” and “knowledge”: information is defined as “a flow of messages or meanings which might add to, restructure, or change knowledge,” while knowledge is “created and organized by the very flow of information, anchored on the commitment and beliefs of its holder.”

It is argued in management literature that the concept of tacit knowledge is complex [27]. Tacit knowledge is usually been characterized to be knowledge that is personal, context-specific and thus not easily visible or expressible, and that is why it makes it harder to communicate to others [20], [38]. Nonaka and Takeuchi [31] believe that new knowledge is created through the interaction between single-loop learning (where explicit knowledge is put into practice) and double-loop learning (where one’s fundamental assumptions are questioned) forming a kind of dynamic spiral. It has been highlighted that it is a very big challenge for organizations to implement double-loop learning by themselves [41]. Gasson and Shelfer [17] have presented how two alternative views, knowledge-as-process vs. knowledge-as-thing, may produce a way of analyzing systems of information technology that support human information processing. Their study presents mechanisms by which knowledge of various forms is transferred – revealing failures for example in training, interpersonal communications, information communication technology system support, and reward structures.

In organizational studies Bunderson and Raegan [6] have pointed out that although several models are quite useful in articulating how knowledge might be stored, manipulated, and represented in order to generate new knowledge, there is a lack of studies of how social hierarchy (power and status) can affect learning-related process and outcomes. It is also acknowledged and highlighted in the IS field that people are not always interested in sharing all types of knowledge and it is organizational culture that has an important effect on whether people are willing to exchange knowledge [6], [40]. Bunderson and Raegan [6] also argue that learning in organizations is enacted within formal and informal hierarchies of power and status.

3. Methodology

This study revisits the data of an empirical study that discussed lived experiences of project members who worked in a three year long (2004-2006) IOIS project e.g. [32], [33]. This research studied 9 organizational project teams and 2 IO project teams, in a, three year-long, public sector IOIS development and implementation project.

The data was collected by the first author of this article. 14 project members were interviewed and the interviews lasted from 45 minutes to two and a half hours and resulted in 250 pages of transcripts. Table 1 shows interviewees and their roles. In addition to interviews observations of project meetings (20), research diaries (80 pages of notes), memorandums of project and steering group meetings (48), and e-mails (over 700) containing messages project members sent to each other during these years were used as a data.

<table>
<thead>
<tr>
<th>Organizations</th>
<th>Interviewees (14) and their roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research organization (4 interviews)</td>
<td>Matthew, Organiser, Member of steering group; Ruth, Project Manager, Member of steering- and project group; Thomas, A member of Quality Group; Simon, A member of Quality Group</td>
</tr>
<tr>
<td>User organizations (Alpha, Beta, Gamma, Delta) (4 interviews)</td>
<td>Lucy, Organiser, Alpha, A member of steering group; Sophie, User, Delta; Lisa, User, Alpha; Kathy, User, Beta; (Sophie, Lisa, Kathy; members of project group)</td>
</tr>
<tr>
<td>Suppliers; Delta and Zeta (4 interviews)</td>
<td>Peter, John, Jack, Daniel (Suppliers, Members of project group) (John, Peter and Jack, members of PreViWo as well)</td>
</tr>
<tr>
<td>Nofco (2 interviews)</td>
<td>Sarah (Project group member, Member of PreViWo) Sheila (Steering group member, Project manager of PreViwo)</td>
</tr>
</tbody>
</table>
This research followed the whole IS project and focused on the experience of the project member. The main data were collected using narratives. It is claimed that through narrative stories we are able to get close to people’s experiences [11], [29]. The focus of narrative approach is understanding how people deal with experience and construct stories e.g. [34]. That is to say, interviews are critical for the creation of narratives because that is how people construct their experience into a meaningful whole [9].

4. ViWo and PreViWo projects

Here we give some of the complex background of the IOIS project, to help with interpretation of the findings. All the names (personal and company) are disguised in this paper.

4.1. Main players – PreViWo project

History of the project: ViWo (Virtual Work) was preceded by a pilot project called PreViWo. PreViWo was a specification, interface pilot and planning project in the years 2002-2003. The pilot project 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. Alpha was the leading organization for the pilot project (ViWo) as the organization which applied for and received funding for the project. PreViWo was a challenging project because it entailed two consortia (Lambda and Nofco) and two software houses (Theta and Iota). Table 2 contains the names of the actors in the pilot project.

Table 2. Organizations Involved in PreViWo

<table>
<thead>
<tr>
<th>Ministry</th>
<th>Ministry responsible for funding the IOIS project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nofco</td>
<td>Consortium of 21 user organizations (the Virtual organization)</td>
</tr>
<tr>
<td>Lambda</td>
<td>Consortium of user organizations (an organ of co-operation) that used a similar IOIS</td>
</tr>
<tr>
<td>Theta, Iota</td>
<td>Suppliers of the software</td>
</tr>
<tr>
<td>Eta</td>
<td>Expert consultants</td>
</tr>
<tr>
<td>Alpha</td>
<td>User organization that was a member of Nofco and Lambda and initiated the project</td>
</tr>
</tbody>
</table>

4.2. From PreViWo to ViWo project

ViWo was built substantially on the pilot project PreViWo, and contained some of the same actors. The aim of ViWo was to facilitate office work, the consolidation of information across organizations, and the management of key activities among others. Table 3 below gives the names of the actors and their roles in ViWo.

Table 3. Organizations Involved in ViWo

<table>
<thead>
<tr>
<th>Ministry</th>
<th>Ministry responsible for funding the IOIS project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nofco</td>
<td>Consortium of 21 user organizations (the Virtual organization)</td>
</tr>
<tr>
<td>Alpha, Beta, Gamma, Delta</td>
<td>User organizations in the project. Alpha was the fund holder for the project</td>
</tr>
<tr>
<td>Epsilon</td>
<td>Organization responsible for project management and research objectives</td>
</tr>
<tr>
<td>Zeta</td>
<td>Software company that supplies the software solutions for the project</td>
</tr>
<tr>
<td>Eta</td>
<td>Part of the national research network that develops research and IT based services for the needs of research and education, and the supporting IT administration. Acted as an expert advisor. Withdrew from the project before it ended</td>
</tr>
</tbody>
</table>

In the ViWo project, Epsilon was brought in to perform the project management instead of Nofco who was in charge in PreViWo project. Epsilon also managed some research objectives around the ViWo project. The operation of Nofco enabled a form of joint operation for the ViWo project. This was consistent with the basic function of Nofco which was to promote and enhance locally and nationally the utilization of information and communication technology and inter-organizational cooperation in multiple research-related issues and administrative practices. Furthermore, Nofco aimed to accomplish a flexible interchange of people and information between the 21 member organizations including key user organizations, Alpha, Beta, Gamma and Delta. The organizations did collaboration with the relevant Ministry, suppliers and experts.

5. Findings

As explained in the literature review, status and power have a similarity: both affect influence over others, and a difference: the source of the influence is different. Power describes the extent to which an individual can ‘punish’ others by withholding valued resources. Status describes the extent to which an
individual is respected and regarded by others [14]. The sections below analyzes what consequences do project members experience in an IOIS project, for example, when other project members possess power without status or status without power in knowledge sharing and knowledge building issues.

5.1. Sources of power vs. status and their effect on knowledge sharing and knowledge building

This section describes the differences between the sources of the influence (power and status) and how status can be used to gain aims/goals. Questions of power came up immediately at the beginning of the project, which was attributed to the reorganizing of the staff for ViWo. The members of the previous project (PreViWo) and the new actors (Ruth, project manager, Epsilon; the representatives of the other supplier, Zeta and academic researchers, Epsilon) had different kinds of ideas how things should be done in the project. It was a challenge for the project that the previous members and new members had different kinds of positions and expectations with regard to the background work that was carried out before the ViWo project was established.

The new leader of the ViWo project informed the other organizations about the project organization by email. Her email was answered to by Sarah, Nofco: ‘We have incidentally heard that you are planning this kind of a project. However, we have not been informed of the details [...]. We see that your planned effort does not contradict Nofco’s plans. Please keep in mind that Nofco’s plans have included the intention to continue our earlier project…’. In the new project (ViWo), Nofco had lower power and also lower status compared with the PreViWo project. This is probably the reason they tried to influence the process.

The power was used in different way in the project. For example, Ruth (Project Manager, Epsilon) did not invite all the former people who were also the members of ViWo (e.g. Nofco, Consortium of User Organizations) to the project meetings. It was analyzed by some coworkers that this way competition between her and the previous project manager of PreViWo was avoided. ‘I ask this because I don’t intend to invite the whole steering group. At the moment there are already 19 people invited. Do you think that your presence is also necessary?’ (Ruth, Project manager, Epsilon). She also let Simon (Epsilon) to know by email that Simon’s presence in project meetings was not necessary. Simon was astounded and questioned if some other project management presence was necessary if his presence was not. It was pondered by some other project members that for some reason they did not get on well with each other and it was a way that project manager was able to command and manipulate issues better from her point of view.

This led for example to the situation that some members who had low power and low status claimed that the leader often did not look for alternative solutions for problems but made decisions based on position or time, in other words it was criticized that she often chose the ‘fastest’ way to get something done but this was not necessarily the best one or it was not discussed with other project members: ‘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).

The other project leader/ organizer, Lucy (Alpha) said that she made a lot of decisions trusting in others’ views and suggestions, because she thought that she was layperson in these things. She highlighted, for example, that when the project manager proved something in a plausible way she gave the necessary authority. Authority was also sought for in some situations in the project. A good example about the ‘combat’ was the situation where the project manager and Sheila (Nofco’s representative) battled about the appearance of the display: the project manager finally climbed down on this. Thomas (Epsilon) thought that because legitimate power was not clearly defined in the project, project members ‘took’ power but did not always manage it. For example, supplier Eta was critical that disagreements were continual and faults were dealt with by ‘tattling’ to the project manager. It led to the situation that, for example, supplier Eta sought a boost for their work from other project members on the basis of their expert power. This was an example about the situation where high status led to high power. At that time, Eta had a good status probably because they were seen as experts in the project. Even project management people discussed in some situations that it was not easy to differ with Eta because of the know-how possessed by the company. Interestingly, the status of Eta started to wane later in the project.

There was also criticism that people who had high power trusted people who had high status: Jack (Zeta) 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 show by fast decisions that the project was progressing well.

Too high an expectation of people who had high status also created problems in this project. Daniel (Supplier, Eta) felt that his role as an expert was not easy: 'I felt that I was supposed to be a clairvoyant if I was to know all the information they wanted us to know...' .

At the end stage of the project, Nofco took merit from the ViWo work. Other project members (Supplier, Zeta and Project management people, Epsilopn) judged that Nofco wrongly collected merit from work that it had neither planned nor implemented alone. Thus, the representative of the supplier, Walter, posed the question: '...what was it that Eta had planned and Nofco implemented?' And noted that Zeta's name had not been mentioned at all in that connection ... ' (Walter, supplier Zeta, email sent 30th June 2005). This was an example how people who had more power and more status in a previous project used 'political' power in the project, as shown in how the project was represented to those outside the project.

It seemed to be evident in this study that those who have high power should try to work towards a collective view: Thomas (Epsilon) suspected that 'The steering group’s understandings resulted from how the project manager presents the matter to them...'. Many of the project members’ comments highlighted the significance of the communication in achieving a common viewpoint. In this study the dimensions high power vs. low power – low power vs. high power seemed to lead to the situation that the project members were questioning each other: Ruth (Project manager, Epsilon) believed that the biggest challenge was clarifying what the vision had been for the previous (PreViWo) project. It was often necessary to revisit decisions due to critiques from Nofco members, some of whom had been involved in PreViWo. Nofco seemed to have power in some cases due to their involvement in PreViWo.

The positive emotions were mostly experienced by those members who had high power: Ruth (Project Manager, Epsilon), for example, 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 shared information with each other on the project.

5.2. Power as resistance vs. status and their effect on knowledge sharing and knowledge building

Power as resistance shows how the project members wanted to have an influence – project members questioned/ tried to pull together or wanted to make a difference. Dissatisfaction seems to be worse when there is neither power nor status present. There were situations where project members wanted to combat and resist domination by other project members by controlling decision making in the project. 'Who decides, and on what? It would be good to know, so that the matters do not need to be hashed over unnecessarily at meetings.' (Walter supplier Zeta, Project meeting). The decision-making process was seen as for example as a 'competition' (Ruth, Project Manager, Epsilon). There were also tensions between ViWo and PreViWo members. Both Suppliers and Project Management felt that the representatives of Nofco (Consortium of User Organizations) inhibited decision-making. Sheila (Nofco), for her part, saw that a problem was that suppliers had the power to decide on matters in the project group.

John (Supplier Eta) thought that users should take more part in decision-making. Lisa (User Representative, Alpha) felt that it was difficult to form opinions because she didn’t understand what was discussed [technical matters]: 'Let’s speak about matter without technology...' (Lisa). Eventually, the users asked that the project manager and supplier use language which they could understand. The existence of the previous project affected the power struggle in many ways. As explained earlier, as the organization of ViWo progressed, the managers from the previous project (PreViWo) were not invited to take charge of the new project. First, the project manager of Nofco (the consortium of user organization) and the suppliers were changed because of the poor quality of the specifications and the unsuccessful PreViWo project: 'And this was one reason why I thought that it might be useful to change actors and this was what led to the invitations for bids...' (Matthew, Organizer, Epsilon).

Leading questions could be asked by those who had knowledge of the previous project to those who did not. Ruth the project manager felt for example that it was difficult to see whose ideas and decisions should be followed: 'Naturally the previous project has caused pressures especially because the former people are there. I have sometimes sensed an air of competition concerning who is in charge...' (Ruth).

High power – high status (Matthew)/low status (Ruth): There was also diversity of the conceptions about project material in the ViWo project. Matthew (Organizer, Epsilon) questioned the suitability of the material as the starting point of the new project in 2004: 'We can say that there was some kind of
blundering in the project... 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 new project: ‘John described the specifications in his colorful style as suitable to be thrown into a waste basket...’ (Matthew). Ruth (Project manager, Epsilon) felt that the materials from PreViWo were a stumbling block to the ViWo project and she pondered that: ‘Of course, I can’t say that your project was a dud... If someone who is more valued [the steering group] than me says that it is very well done, I have to believe and accept it.’

Jack (Supplier Eta) also felt that the specifications from the previous project caused quite a lot of harm: ‘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...‘. Interestingly enough, these project members did not want to say to Nofco directly that your previous work was not so good. They tried to show it in a different way.

It was significant how much the actions of reorganizing from PreViWo to ViWo had repercussions on the opinions expressed by the interviewees. Many project members were longing for their earlier partner companies and felt that they were reinventing the wheel. Tensions between PreViWo members and ViWo members were evident. Ruth, Project manager felt that she was an ‘outsider’ when Sarah and Sheila (Members of Nofco) felt that maintaining a separation between these two IS projects caused problems for example for organizational memory. ‘We assumed then that since Eta was chosen as the second supplier, it would ensure the continuance... but the old information had not been passed on, that gatekeeper’s task did not continue...‘ (Sheila). Sheila was, for example, surprised that Zeta had begun to design a user interface even though one was already available that had been produced for PreViWo. These were example situations where some people were aware of controversial issues but were unable to use power or status effectively to influence outcomes.

Low power – low status: Within Nofco, the project organization was criticized for its lack of continuity: Sheila (Nofco) said: ‘Previously created knowledge was discarded and we lost the gate-keeper role that we thought we knew well...’ Sheila was frustrated because she thought that they had to reinvent the wheel in the ViWo project. The comment related to the efforts made to familiarize the new project members with the task.

These consequences were due to the use of power: the organizers changed the key actors for ViWo project, and accordingly some people who worked in PreViWo felt disempowered. The aim of the organizers 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.

Low power vs. low status: Zeta was a part of PreViWo project and it was probably why it had a ‘better’ status. Collaboration between two suppliers (Eta and Zeta) was not easygoing: issues related to avoidance of responsibility, scheduling and trust were identified. Furthermore, the supplier (Zeta) felt that some decisions had already been made by the network organization (Nofco), which had been involved in the previous project and had at that time made many decisions influencing this project. While Eta tried to get more power and status, Zeta tried to keep its’ status and power over Eta. This showed that if you have gained power and status you do not want to give up easily.

Low power vs. low status: Unclear plans, responsibilities and time pressure among others brought on a lack of confidence among the project members. It was difficult to plan project schedules and estimate future workloads. So the members of Nofco demanded that some kind of long term plans should be made. ‘In other words, matters have occurred kind of unexpectedly, or is that typical in IT projects and IS projects that it is so...’ (Sheila). Unclear responsibilities became apparent also in an e-mail message sent to the researcher by Eta’s representative: ‘It’s an interesting definition of policy, that because it is related to a [technical matter], it belongs to Eta! In my opinion the application form belongs to Zeta, but Eta has to take part in ensuring the implementation of the form by specifying necessary interfaces...’ (Peter, Email sent 31st August, 2004).

6. Discussion

The research question addressed by this research paper was as follows: How does the experience of power and status color perception concerning knowledge sharing and building issues in an IOIS project? Adopting power and status theory to view power and status vs. knowledge sharing and knowledge building issues in an IOIS project this study offers new insights. For example, we suggest how power and status can be used ‘psychologically’ to maintain hierarchies in a project. Social hierarchies also explain how power and status have an effect on whether project members are willing to exchange
knowledge, how project members do it and what they feel about it.

Those who had status in this IOIS project varied between organizations and even within in one organization. Because of the number of the organizations, it is very challenging to show all aspects of power and status issues of the project organizations and their effects on knowledge sharing. That is why we show some examples about the dimensions of power and status, and their manifestations in an IOIS project in table 4. The dimensions 1) High power vs. high status, 2) high power vs. low status, 3) low power vs. high status, and 4) low power vs. low status describes the relationships and consequence of knowledge sharing with sender and recipient and how power is used. Examples might vary depending on whose viewpoint is discussed.

**Table 4. The dimensions of power and status, and their manifestations in an IOIS project**

<table>
<thead>
<tr>
<th>STATUS</th>
<th>HIGH POWER</th>
<th>LOW POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>Matthew (Organizer, high status, high power) recommends (though he hesitates)</td>
<td>Eta (low power, good status) gained power via good status. There was</td>
</tr>
<tr>
<td>STATUS</td>
<td>that the project can utilize previous project material and Ruth (project manager) accepts it: 'If someone who is more valued than me says that it is very well done, I have to believe and accept it.'</td>
<td>discussion among the project management people that it was not easy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to disagree with Eta because of the know-how owned by the company.</td>
</tr>
<tr>
<td>LOW</td>
<td>Project manager (high power, low status) – the project manager was highly criticized by many project members. ‘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...’</td>
<td>Political power was used by Nofco members (low power, low status) in the project by showing how the project was represented as a success to those outside the project. (information that was sent out)</td>
</tr>
</tbody>
</table>

According to Kemper [22] the basic assumption of power and status theory is that those with power or gaining power, experience positive emotions such as satisfaction, and confidence, whereas those who have less power experience fear, and loss of confidence. This study confirmed that those with power experienced satisfaction and positive emotions about the project. For example, the project manager’s notes (29th July 2006) emphasized how: ‘The project has been successful and it seemed like this is the first project ever that has been a success, where everything goes as planned and the output is satisfactory.’ (Ruth, Project manager, Epsilon). Fast et al. [13] have also highlighted that workers in managerial roles may experience happiness for example because of the ability to delegate work, and possessing a high social regard.

This study has showed that there are many ways in an IOIS project which can be the sources of power. This study, for example, pointed out how the project manager used her legitimate power by preventing some project members from attending the project meetings. Suppliers used their expert (status) to achieve power and political power (i.e. ‘informal’ power) was used by Nofco members who had low power and low status.

This study also shows how the status differentiation affected their experience about both task performance and social hierarchy. There was criticism that people who had high power trusted too much the people who had high status. On the other hand, people who had high status felt that expectations for their know-how were too high for them and it lead finally to the situation when Eta withdrew from the project. Using status to gain power or using ‘political’ power did not have positive consequences in this project.

In the field of psychology, Fast et al. [13] have highlighted that the ability to acquire power without negative consequences is intertwined how others see and feel about other peoples’ status. They have also highlighted that power and status can be mutually reinforcing: power can lead to greater status, and status can lead to more power. Going from power to status, actors can be respected, admired and regarded because of their control over resources, their formal position, their knowledge, or even because others may think that power-holders are more competent than powerless individuals [13].

Thus, in order to understand knowledge sharing issues in an IOIS project, we need to take into account social hierarchy and how it can affect learning-related processes and outcomes. However, recent studies e.g. [6] have also highlighted that there is a lack of studies of these phenomena. The complicated structures seen in this project also confirm Turner and Stets’s [39] study which highlighted that when individuals lose status, the dynamics in projects become more complicated. Nofco organization experienced more power and status in a previous project making it hard for them in this new project.
In this study the knowledge transfer issues that project members were struggling with were mainly about tacit knowledge, especially how things had been done in the previous project (PreViWo). The case shows that the cultivation of tacit knowledge in this kind of situation is demanding and it is a big challenge to the organization to be the creator of knowledge. The question can be asked whether it is at all possible to model knowledge in this kind of situation, where many workers from different organizations, with different social hierarchies have to socialize into a common project organization.

This study also supports the view that knowledge is not like other commodities [6], [40]. This study also found that there might be several reasons why project members are not interested in sharing all types of knowledge. For example, in this case the project manager excluded some people from being part of the project group in order to get more power for her to make decisions more effectively.

It has been highlighted in the field of psychology that power-holders may process information, approach different goals or even make decisions which serve them and help them to maintain or increase their control over resources. This study also shows that the experience of having power without status may produce behavior which is experienced negatively by co-workers [13].

In our case it was evident that in an IOIS project there was not any organization that had status derived from every organization. Maybe this was a natural consequence of the composition of the project. It varied between organizations and even within in one organization. For example, Ruth (Epsilon) highly valued the Eta organization but Thomas (Epsilon) questioned their expertise and know-how. This study also showed, like the study of Fast et al. [13] before it, that a formal position does not guarantee that someone is granted status. For example, the work of Ruth (project manager) was criticized in the project, because it was believed that some of her decisions were made for selfish reasons.

Our earlier studies e.g. [33] highlighted that organizational learning is mainly a political process and in many cases requires submission to authority, because there may not be freedom of choice of organizational and social norms. We argue like Bunderson and Raegan [6] that ‘higher-ranking’ actors who use their power and status in more ‘socialized’ ways can play critical roles in stimulating collective organizational learning behavior.

7. Conclusion

This qualitative study used power and status theory as a lens to analyze knowledge sharing and knowledge building issues in a three-year-long IOIS project to further the understanding of how the experience of power and status affect perceptions concerning knowledge sharing and building. The IOIS project spanned nine organizations altogether. The study makes a contribution to IS using a power and status theory as a lens to view knowledge sharing and building issues in an IOIS project. We have demonstrated how a power and status theory reveals that in order to generate new knowledge in an IOIS project, we first need to understand how social hierarchy can affect knowledge sharing, building and organizational learning processes and outcomes.

One of our key findings was the ways in which actors’ perceptions and experiences of a previous project (PreViWo) shaped power and status issues. This project may have unfolded in very different ways if they had started ViWo with a clean slate without the “tyranny of history”. We will explore this issue further in our future research.

8. References


