

9 VISIBILITY, SILENCING, AND SURVEILLANCE IN AN IT NEEDS ANALYSIS PROJECT

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Abstract

Needs analysis is a process for defining what kind of information or IT solution is appropriate to a particular organizational situation. It is a common practical approach to ensuring that effective IT solutions are adopted. The argument presented in this paper is that the process may appear rational, but it also takes place in a political context. In order to explore this area, an interpretive field study of a needs analysis project was conducted, concentrating on the political context. The interpretation applies Foucault's theory of power relations to the political context of a needs analysis project for a document control system. The project was carried out in an Australian rail organization. The field study looks at a period during which a decision was required on the most appropriate form of document control system for the organization's needs at that time. The negotiating processes are discussed in terms of the dominant discourses that appeared to be active in the organization.

Introduction

Developing any information system, computerized or manual, is a social process (Walsham 1993), often starting with the exploration of an organization's information and information technology (IT) needs (Kendall and Kendall 1995). Once needs appreciation has begun, potential solutions can be explored. Needs analysis, like many areas of requirements definition, is a social, cultural, and political activity (Urquhart 1997). It takes place when an organization is attempting to make sense of information technol-

ogy's potential benefits. Needs analysis is concerned with identifying what the organization's problems are and whether or not an IT solution is appropriate. In this paper, the political process of needs analysis is discussed, applying the theoretical work of Foucault as a framework for interpreting this particular needs analysis project. An interpretive field study of a needs analysis project for a document control system, conducted in an Australian rail organization is presented. The study is used to illustrate how Foucault's theoretical work can make sense of the practical problem of needs analysis as a means of evaluating IT solutions to organizational issues. In interpreting the study, I argue that the politics of discoursing shape the decision making in needs analysis.

Foucault's Theory of Power Relations

Foucault's theoretical contributions are adopted as they are suited to developing an appreciation of the political contexts of IT in organizations. The utility of this has been demonstrated elsewhere (e.g., see Davies and Mitchell 1994; Sayer and Harvey 1997). In particular, Foucault provides a theoretical means for understanding the relationship between discourse, politics, and context which is potentially of use in adopting an interpretive perspective on the study of IT decision making.

Foucault's work develops a social theory to explain the relationship between discourse and social change. It is important to clarify which period of Foucault's work I am concentrating on as his work has been described as passing through three qualitatively different phases (Davidson 1986; Fairclough 1992). The work presented here has concentrated on Foucault's concepts as developed during his genealogy phase.

Throughout his work Foucault was concerned with how contexts for discourses are first created and then constrain further discourse. He explored the relationship between texts (intertextuality) and types of discourse (interdiscursivity). His aim is to explain how situations determine language and, consequently, how language forms and maintains situations (Foucault 1972, 1973). This exploration of language and situations is developed further in relation to power relations in his genealogy period.

Foucault's Use of Genealogy

Building on his theory that discourses and texts are the formation of truth, Foucault further argues that truth is produced and sustained through systems of power. Truth is a regime which is induced and extended through power relations. Knowledge, as an explanation of truth, can only be created or sustained through power relations which are expressed through historically dependent discourses. Knowledge cannot be gained, shared, or accepted without involvement in the power relations. It is these power relations which transform knowledge, making discourse secondary to the systems of power. Of particular importance to the topic of this paper is the point that he makes regarding the social creation of the knowledge of objects. He argues that all objects are known through social discourses and that knowledge of the object is constrained by power relations. Discoursing objects renders them visible and so open for debate, with that debate occurring through disciplinary practices. Once they have been brought

forward into discourse as objects, judgement is passed upon them, refining the discipline's rules on what is correct and incorrect practice in relation to discoursing about that object. This creates social practices to survey the discourses about the object. The surveillance seeks to prevent the unacceptable text about that object entering into the discourse, thus forming a disciplinary discourse on what is acceptable and what is deniable about the object. The discipline then sets up, enforces and protects rules to prevent the deniable being discussed within specified contexts. Hence we have knowledge and counter-knowledge, defined through relationships of power. Foucault's genealogy provides theoretical and analytical potential for exploring how IT objects are discoursed as power/knowledge objects, brought forward in discursive practices and constrained by power relations, i.e., systems of power (Foucault 1977a, 1977b, 1979, 1980; Davies and Mitchell 1994; Harvey 1997; Harvey and Sayer 1997). This theory of knowledge as socio-political has the potential for exploring information systems as tools for knowledge management. It expands current thinking on knowledge management into an appreciation of the power-politics of knowledge and objects of knowledge.

Applying Foucault

In this paper, Foucault's concepts during his genealogy phase are applied to an interpretive study of an IT needs analysis project. The application looks at how discourses create and sustain power relations and, in doing so, create the interpretive filter by which information technology can emerge as an artifact. This shows how the emergence of IT artifacts is essentially a political process, occurring through the sense-making activities of discoursing the nature of IT as a potential enabler of desired change.

The creation of IT artifacts requires different views to be put forward. These views are explored in organizational discourses. Through discourse, opposition can be reified in power relations to heighten difference, forcing confrontation and inviting conflict. This can create situations where one disciplinary power relation seeks to enforce a particular discourse on acceptability. One notion of what is correct may be politically enforced as truth over another notion of what is correct. Such opposing power relations define knowledge, objects, and acceptability in discursive contexts. When objects are going through their initial definitions, they are bound to be ill-defined. This invites opposition in discourses that are likely to surface in sense-making discourses where power relations emerge. In needs analysis, information and related IT objects are usually initially poorly defined. They are then debated, dissected, scrutinized, and reconstructed through power relations expressed in discourses which use systems of power to redefine information and IT objects as power/knowledge objects, constructing and constraining them within legitimizing discourses. This is how IT objects are initially surfaced as potential organizational artifacts, reflecting cultural and political differences.

In this paper, I use Foucault's genealogy to interpret how the process of needs analysis for a document control system was constructed and constrained through power relations in discourses. In the next section, I shall describe the field study of the needs analysis project. After, I present my interpretation by applying Foucault's concepts of visibility, silencing discourses, and surveillance. Foucault's genealogy provides a broad filter for interpreting the relationship between IT as an emergent artifact and the discourses of emergence. The concepts of visibility, silence, and surveillance are more

refined themes which Foucault develops during his genealogy period. Finally, I conclude the paper with a brief discussion on the utility value of Foucault's concepts in relation to interpreting a needs analysis project.

The Field Study

During a three month period from June to September, 1996, I carried out an interpretive field study using ethnographic techniques (Myers 1994). The techniques I used were participant observation, documentation analysis, the ethnographic interview, contextual immersion, and the use of an informant. My role as participant observer was participatory and overt. My research was concerned with interpreting how the notion of a document control system developed as a possible object during the needs analysis project and how power relations shaped the discourses.

The Context

The field study is of a needs analysis project which was conducted by a team within Northern Australian Rail (NAR).¹ At the time of the project, NAR was a state-owned railway that was going through corporatization. This involved changing from a wholly public sector organization to a profit-making organization where concentration was on becoming commercially viable. The railway had never made a profit in its 120 years of operation, concentrating instead on the provision of service to the public. At that time, many state enterprises in Australia were going through the same corporatization process. There was a great deal of employee resistance to the changes in NAR.

The railway employed over 18,000 members of staff. This had been reduced over the previous 10 years from 42,000. Outsourcing of projects was becoming a regularly employed strategy. The staff were dispersed across the whole of the state; that is, some operations were up to 2,000 kilometers away from the head office, which was in the capital city of the state. The railway separated its service delivery according to geographical positioning. The service areas were city commuting travel, intra-state holiday travel and intra-state freight, including regionalized freight specialization for mining and agriculture. There was also an inter-state rail operation, as trains traveled across neighboring State railways. There was no Australia-wide management of rail and there was a history of a great deal of competition between states.

Structure and Status

The personnel were separated into operational and administrative personnel. The operational staff belonged to "gangs," the groups actually running the trains. They were

¹Pseudonyms are used throughout this paper as is common practice in an interpretive field study. The pseudonyms are used for the organization itself, organizational units and areas, role names, and individuals' names.

responsible for operating the trains and the stations and maintaining the trains and the rail infrastructure. The highest operational position of prestige was that of train driver. The chief executive officer (CEO) had once been a train driver and many people revered him because of this. He was known for his passion for heritage trains and was said to sometimes drive one of these on tourist trips through the city. Heritage trains always operated at a considerable loss and had to be financially supported by the earnings from more productive areas such as freight rail. The CEO was also an engineer and was renowned for his blunt manner and excessive swearing.

Geographical Structure

The majority of administrative personnel were situated in the capital city. This was where the executive management were housed. The administration was dispersed across three buildings, two of which were old and linked directly to the main rail terminal of the railway. The facilities in the two old buildings (Buildings 1 and 2) were cramped and constantly in need of repair. This was where most of the executive management chose to be and to have their management entourage with them. The third building (Building 3) was across the road from the other two, it was new with modern facilities and was where the less prestigious management units were placed.² The IT areas were dispersed across the management structures. Telecommunications and the IT infrastructure areas were in Buildings 1 and 2. IT strategy and large application areas were in Building 3. The CEO and deputy CEO were in Building 2, as were the majority of the executive managers. The needs analysis project team was part of a systems and processes management group which was in “temporary” residence in Building 2; it was constantly shuffled around, losing space on an ongoing basis, and then offered the option of moving to Building 3. The systems and processes management group leader, a senior manager called Bill, constantly declined offers to move to Building 3.

The Participants

The needs analysis project team consisted of Bill, his middle manager, Jack, a consultant, James, an administrator, Sylvia, and myself as participant observer. My participant observer role was overt in that everyone was informed of what I was doing and that I would share my interpretations with the team and other organizational members as required. The needs analysis project, including the field study, officially started in June, 1996, but had been discussed for at least two years prior to this. From June to September, 1996, the needs analysis project was carried out. As I was conducting a field study on the project, my study ran for the same time.

During June, James and I worked together on a desk-based analysis of the corporate documents that were considered relevant to the needs analysis project. We also became involved in the everyday context of the organization by regularly going to morning and afternoon tea sessions in a café which was frequented by members of the organization.

²The buildings were actually named as Buildings 1, 2, and 3, as discussed here.

Bill told me that this was where the “*real decision-making*” and negotiating went on. Jack was nominated by Bill as our guide and informant during the study and we were given a cubicle and desk next to Jack’s. Jack was not over-enthusiastic about such a role saying:

“Bill is just a wanker. All of this is just a wank.”

Surprisingly, Jack seemed to support James. I had expected James’ youth to be rejected by all of management, including Jack.³ NAR’s management consisted of middle-aged men and Bill had warned James:

“Being so fresh faced and good looking is going to be a problem for you in this context. This is a place where everybody believes that they are real men. They are engineers here. Jack is an engineer. You won’t get on with him. You won’t be butch enough for here.”

It seemed that both James’ youth and his non-engineering background were considered detrimental to his acceptance. Yet Jack did provide support and guidance to James throughout the project as he recognized and valued his knowledge in quality assurance (QA), which was also Jack’s area of specialization. With Jack and similar others in the organization who valued QA, James’ political weakness of his youth was overridden by his political strength in his QA knowledge. However, this only partially overrode the perceived unacceptability of his youth. Throughout the project, comments were continually made about his youth, including one individual’s comment to him:

“When you grow up, you might like to try doing that as a job.”

James’ perceived political weakness of youth was played against him in the project’s final presentation session to the executive board. This is discussed in the section on interpretation of power relations below.

Gathering Impressions

James and I had conducted the initial corporate documentation analysis in which he concentrated on analyzing the business and I concentrated on corporate discourses and images to interpret the history and culture. We then met with the rest of the team and drew up a list of individuals to interview. These were all people from areas that seemed relevant to the needs analysis for the document control system. The relevance was judged from my initial interpretations and queries, James’ business analysis, and other team members’ knowledge of the politics and functionality of the organization. The aim was to cover a broad representative group of people who were known as influencers of corporate decision making and who would be likely to have a vested interest in a document control system. At least three members of the team, including myself, attended each interview. During July and August, interviews were conducted across all the functional areas, including teleconference interviews with regional operational areas. Over 30 interviews were conducted. I was allocated time in each interview to ask questions relating to the organizational culture.

³James was 24 years old at the time of the project. This is not a notably young age for consultants involved in management consultancy. Many references were made to his youth, creating an appearance that this context is viewed as more of an issue than would have been likely in other contexts.

Contextual Tensions

During the time of the needs analysis project, a safety audit was also being conducted by an outside auditor, a senior executive from British Rail. His role was to decide whether or not the railway was safe to continue operating and he, ostensibly, had the power to close the railway down. He stated that failing a major safety audit would mean that the railway's operating licence would not be renewed. Understandably, people were very tense about this.

Emerging Contrasts

Constantly in the interviews, people expressed that things happened that way "*because the organization was about [some form of technology view],*" with this statement often explained as "because the organization is about engineering." Also expressed was that strategy and planning were considered weak and unimportant because they were all about conceptualizing and the organization did not value reflective thinking. As the railway engineers were more concerned with building bridges, maintaining tracks, and servicing railway engines, their values were more with handling dirty, oily machines of heavy iron than with working through organizational planning issues. Also, 30% of the personnel were illiterate and the average reading age was that of a 13 year old, so a lack of concern with conceptualizing was commonplace. Physical work was revered over mental work. Documents were meant to be a practical means of supporting physical work with strategic documents considered superfluous.

As the project evolved, the concept of a document control system seemed to take on two forms. One espoused form was a technological solution. This was perceived as a type of intranet with the potential to support common storage and group development of documents and distribution control. Another opposing solution was to hold back on technology acquisition until there was corporate-wide control of the manual documents. This was seen as the immediate need. The one view of a document control system was that of implementing an intranet with expectations that this alone would solve the problems. In contrast, the manual image was viewed as more concerned with monitoring and controlling documentation practice. A combined image of staging the introduction of an intranet by first putting in document management and control procedures to improve practices and then introducing IT as a means of supporting the new practices was favored by the team.

Diagrams and Manuals as Artifacts

The safety auditor stressed that document control was a major issue that had to be addressed. He talked of engineering diagrams being hoarded at local sites and no version control practiced. He graphically described how he had made people on remote sites show him where they were

"hiding the old versions of diagrams they really used. They hadn't even moved to metric. They used these diagrams to fix the rail and then corporate office had no idea what the rail was really like. The

latest diagrams were useless when the rail just kept being changed because people were using their favorite old engineering diagrams. Old blueprints were hidden in drawers. I was going around offices and stations out bush and throwing old blueprints out of the windows. No version control, no updating, just old timers doing it their way. It was a disaster just waiting to happen. And it's still going on, I know that."

Rail maintenance relied on corporate-wide use of the latest version of diagrams. Because version control was poor, the organization had learned to rely on people just knowing which version to use. As operational staff were usually employed for life, this was not considered an issue at local sites but was considered a managerial issue with safety auditing. But employment practice were changing due to corporatization. A job for life could no longer be guaranteed or even expected, and so reliance on local and implicit knowledge to interpret the current infrastructure of the railways was no longer feasible. Similar poor practice were occurring with train driving manuals, rail maintenance manuals, and even safety manuals. The needs analysis project team was convinced that document control practice had to be implemented across the organization. The team perceived the priority as being the need for a management system, and not just a computer system, for document control. The safety audit provided a lever for introducing this. However, there was still a frequently voiced issue both within the team and across the corporation concerning whether the initial system was to be manual or IT driven.

The Symbolism of IT Failure

The telecommunications manager pointed out that an IT solution would be costly as it would mean introducing a new communications infrastructure across the whole of the state, a state which consisted of many hundreds of kilometers of bushland. The telecommunications manager told the team about an incident that occurred when one enthusiastic unit had started developing its own intranet, which was local to the functional area but used systems dispersed across the whole of the state. Apparently, they had tested out the intranet by sending a large document to a remote site. This had brought down the whole city rail signaling system. The reason was that all the communications areas shared the same cable infrastructure and the document had run into bandwidth issues that had caused the signaling control system in the city to crash. All city trains were halted for a number of hours, which brought chaos to the city. The CEO was extremely irate as he was rebuked by his minister, who had been obliged to go to the media to explain the situation to the people of the city. The safety auditor was very concerned about this incident, particularly as many other functional areas were developing their own local intranets.

Considering IT

By taking the issues presented in this situation as meaningful, the needs analysis team decided to recommend to the executive board that a manual document control system be

introduced first as part of a staged process to later include the introduction of an appropriate corporate-wide intranet. This seemed rational and logical as the safety audit demanded something be done corporate-wide and quickly and a management system was needed. As there were many issues with IT and bandwidth, a strictly IT solution was expected to be a problem due to the high costs. This recommendation emerged because the team was considering all of the interacting technological needs of an IT solution, including infrastructure upgrading. They were not just looking at putting in a corporate intranet in the existing infrastructure. The entire team knew that putting forward a management solution rather than just recommending an intranet was going to be a major confrontation because of political allegiances among engineers and against strategists and the cultural preferences for ownership of more technology. These issues are discussed in the next section.

Territories

The team worked on the development of a position paper that detailed both the staged approach and the management procedures for a manual document control system. This included managing the transfer to a common approach to document development, the separation of master documents from working documents, the allocation of roles and responsibilities for document storage, retrieval and disposal, and document version control. When the needs analysis team presented their recommendation back to the executive board, it was at a specially called board meeting. The board membership was split on its decision. A long, noisy, and volatile fight occurred. One group cursed and swore, arguing that the proposed managerial solution would be useless, demanding that an intranet solution be brought in immediately. The other group argued for a more planned approach so that the immediate issues could be dealt with and any IT impact changes could be managed. The CEO was not present but the deputy CEO made the final decision that an intranet would be purchased immediately. The planners and strategists were grudgingly allowed to carry on planning the change management needs, but he stated that this was not to interfere with the introduction of the intranet. Any attempts to discuss the bandwidth issues were silenced. The needs analysis project was considered closed as a specific solution had been chosen. The intranet image of what was a document control system dominated, even though that image had little to do with full document control within the technological and managerial context of the organization.

In the next section, Foucault's notion of power relations is used to interpret what seems to have gone on during the project. The Foucaultian concepts of visibility, silence, and surveillance are introduced and applied to an interpretation of the project.

An Interpretation of Power Relations

In this section, I concentrate on how discourses appeared to be constrained by power relations and how this seemed to legitimize one image of a document control system at the expense of any other. This is an attempt to describe the emergence of the proposed system as an organizational artifact. Adopting Foucauldian concepts from his genealogical work, I address visibility, silencing of discourses, and surveillance.

Visibility

According to Foucault, visibility is central to the creation of reality. Discourses create and sustain the contextual filters through which some objects are sustainable and meaningful and others are denied. In order to become a sustainable cultural object, that is, an artifact, visibility is required. This demands that discourses reify the object as acceptable and meaningful. This reification is essentially political. That political process is described in this section in relation to the creation of privileged discourses, allowing visibility for a particular artifactual form of a document control system.

At the start of the project, a number of events indicated what power relations were dominating discourses and how they created visibility for one image while denying the visibility of another. The most obvious seemed to be the visibility of machismo⁴ values which, in contrast, rendered less macho values as irrelevant. The machismo values were aligned to their expressed image of engineers:

"We're real men here. We're engineers."

These macho engineers valued strength, iron, dirt, machines, and being able to deal immediately with any threatening situation. They were civil, mechanical, and electrical engineers. They did not have time for individuals who pondered and reflected. Such people were considered "whimps," "soft bastards," "a bunch of women." The strategists and planners were taunted with belonging to the whimp category. They were often silenced in informal meetings in the café with these taunts. They had developed an interest group, which they called "*the softies group*," whose meetings were never publicized nor recorded. They described their purpose as to reflect on issues. In one interest group meeting, they said that they knew their ideas would be unacceptable as their "*intellectual subversions*" would be denied in contrast to the macho image of the engineers. They were discussed sometimes by engineers as "*a bunch of intellectuals*," which only served to denigrate them, particularly as this was often associated with sexual categorizing as "girls," "the ladies," "got no balls," "a bunch of wankers." As an intellectual female, I was easily associated with them and rejected by the macho cultural values. By denigrating the "softies" so much, the "machos" could strengthen their visibility and discursive power.

Silencing Discourses

Visibility is closely aligned to silencing through the denial of certain discourses. While one artifactual form is rendered visible through discourses, this prevents other forms from taking a dominant place in the sense-making exchanges. If there are opposing groups seeking to introduce fundamentally different artifactual forms as solutions to information technology problems, one is likely to be silenced as the other is rendered visible. To ensure effective silencing, the discourses for the opposing artifact need to be

⁴Machismo refers to the image of the macho male as heroic figure. This is the image of the courageous and strong male who shows no fear and is capable of dominating in any threatening situation.

denied. This may be through outright denial, but that political ploy is rare. Instead, the denial is usually subtle, using ridicule and other forms of political game-playing.

In the study, the project team constantly had discourses silenced. In particular, the discourse on managing change holistically was silenced. This was associated with the “waffle” of the strategists, referred to as “*those strategy dickheads.*” This silencing was strengthened symbolically through the spatial placing of strategists. They were most prevalent in Building 3. When I first visited this new building, it seemed that this building was more prestigious as it had far better facilities than Buildings 1 and 2. The IT strategy manager, a relative newcomer who appeared to be in his mid-thirties, laughed when I stated this, noting the symbolic confusion that his group created through being both strategic and technological:

“Haven’t you figured yet that it is only old things that are important here? We’re just in this building because they don’t want us in the main building where we could know what’s going on a bit more. All the strategy rebels are over here. But we’re different ’cause we’re technologists as well. I guess we just confuse them.”

The main building he was referring to is Building 2. This building was situated directly on top of the main rail terminal of the city. The trains continually ran under the building. This building housed most of the senior executives and the long-serving senior engineers. Building 1 was to the side of this building and was second in status, housing both engineers and long-serving strategists. It was also the home of the telecommunications manager, who was an electrical engineer and who was often denigrated as he also constantly argued for a more planned approach to the use of technology. Trains did not run under Building 1 but only to the side of it. Buildings 1 and 2 were old Victorian stone buildings, obviously falling into decay. Building 3 was new and across the street, looking far more like other buildings in the central business district, which placed it in stark contrast to Buildings 1 and 2. It was also removed from the rail terminal by a road, unlike Buildings 1 and 2.⁵ This symbolic power of spatiality was directly played into discourses which separated those who had the power to speak from those who did not. Spatiality separated strategists from engineers, intellectuals from real men, and newcomers from time-servers. It effectively silenced the voices of strategy and planning in power relations discourses. It seemed strange that the needs analysis project was in Building 2. This apparent paradox is interpreted using the Foucauldian concept of surveillance, below.

⁵The state Department of Road Transport (DRT) and NAR both reported to the same minister. DRT was often discussed as directly competing with NAR for funding and status. DRT was discussed by NAR employees as successful, but this was always treated begrudgingly. As one individual stated, “*It’s the rail that built [name of the state] not the road. The rail opened up this state and the road just followed.*” The implication was that, due to history, road was inferior to rail no matter what that department achieved. To be physically separated from the rail by a road, when both of the other buildings had direct walk-in access to the rail, was a significant slight on status. Hence being “*over the road*” was a major spatial separation.

Surveillance

Foucault argues that knowledge is dominated by rules which enforce power relations. One key concept in which he discusses this is surveillance. In order to make sure that subversive discourses do not get the opportunity to strengthen and threaten power relations, systems of surveillance are implemented. These surveillance systems are means of monitoring the process whereby truth can be rendered visible or silenced. It is through surveillance that the continuation of dominance in discourses can be assured. By surveillance, the strategies of discourses can be rendered visible and denial ploys developed. Surveillance is prevalent in many forms, both obvious and less so. Surveillance may be such an obvious form as memo tracking or a much more subtle form such as using proximity for unobtrusive information gathering.

At the time of the needs analysis project, two systems of surveillance appeared to prevail. One system of surveillance was project monitoring. I discuss this in the next section, below.

Project Monitoring as Surveillance

It seemed strange that the project team was housed in Building 2 when the project was considered to be strategic. Like all cultural control systems, the reasoning seemed complex. The first explanation given was that the executive manager in charge of strategy was in that building. However, he was physically remote from the project group, three floors higher in a far corner of the building. He never visited the project team throughout the project, although he was interviewed once by the team. His concerns were mainly with strategic issues,⁶ which took him away from the organization's headquarters on a regular basis. Although he was in charge of the group, he allowed the board to nominate someone else to be in charge of the project. This was the executive manager, Don, who was in charge of corporate services which included networking and telecommunications.

Don constantly swore at the team members at each review meeting and throughout his interview with them. He was also the individual who opened the fight in the final meeting, declaring his antagonism to the project's recommendations and demanding the implementation of an intranet. This had great impact on the team's presentation. They were effectively silenced by shock as they were not prepared for Don's direct and immediate attack. Don had been informed of how the project was progressing on a continuing basis and had given no indication that he would reject the recommendations so virulently. Don's office was next to the project team and the team was constantly surveyed by himself and his group members throughout the project. He was kept fully informed from a number of sources as to the ideas being discussed by the team and so

⁶Although he was a strategist, he was also a board member, which allowed him space in Building 2. He was, however, tucked away in a corner along a corridor that separated him from the main flow of traffic on his floor. This was in stark contrast with the engineers on the board, who were also in Building 2 but had offices placed more centrally, near reception areas, allowing them more access to the everyday activities in the building.

was highly knowledgeable on the team's intent prior to the final meeting. This surveillance system had meant that Don was politically well prepared for a counterattack. His aggression and swearing during project meetings had made it very difficult to interact with him. It closed down discourses and turned the situations into highly confrontational meetings but also ones where he was fed information while returning little by way of judgement or guidance. It was surveillance by bullying and proximity, two of the tactics that were very much a part of this macho culture. His toughness in taking an aggressive stance also linked him closely to the image of the revered CEO. Counter-persuasion had little effect against such symbolically dominant tactics.

Gender, Youth, Discourse and Counter-Discourse

At the opening of the final meeting, Don set the tone. He jokingly described some trees as:

“palm trees without nuts, you know, the ones without balls,”

turning to look at me, the only woman present, and grinning at this joke. The meeting then formally commenced with a presentation of the findings of the needs analysis project team. The presentation was led by James. After only a few minutes, Don interjected, constantly saying “*fuck*” or a derivative of this. James was caught off guard as on previous occasions this executive had made a point of encouraging him, although often in a paternalistic and patronizing manner. It was during James' presentation that the subject of his youth was brought into the discourse, through implication and insinuation. Don attacked the emerging argument every time James tried to speak and then offered personal advice on how to improve his presentation. James was treated as a novice and a child instead of as a knowledgeable consultant. During the final meeting, the IT strategy manager tried to interject on the issue regarding telecommunications. Don simply opened a counter-discourse, saying that he was in charge of that area so it was his problem and he would deal with it. He silenced the debate on the telecommunications issue by dismissing it as irrelevant and intimating that it was in his jurisdiction and so not open to discussion. There was no opening at all for counter-discourse in the situation. Surveillance had made sure that Don had been kept fully informed without the necessity for him to provide information in return. The macho, aggressive culture had allowed bullying tactics to dominate in this final discourse and to close down any attempts at counter-play. The power relations of the “real men” had dominated over the discourses of a seemingly more reflective solution.

Denial of Surveillance

Another form of surveillance that was ongoing throughout the project was enacted through the safety audit that was conducted as a surveillance over the organization as a whole. The issues exposed by the safety audit should have had a positive impact on the acceptance of the strategy argument into the discourse. The problem was with the known history of audits and their limited impact as well as with the political status of the individual conducting the audit. Although authoritatively powerful, the auditor was of necessity an outsider, rendering him external to the power relations of internal

discourses, that is, only allowed into internal discourses selectively by invitation. We were told that he was not invited to the final executive meeting of the project because of being a recognized outsider and so “not really relevant to [this] issue.” He was also an Englishman and this state railway was proudly Australian. In the executive meeting, the safety concerns were brought forward and the audit as a whole was immediately dismissed by the deputy CEO:

“Oh, forget that. Just ignore it. He knows he has to pass us. That’s just a red herring.”

The safety auditor’s surveillance was not considered a critical part of the power relations discourse even though, ostensibly, he had great authoritative power. His input was readily and easily dismissed and the audit process was treated as merely rhetorical. Through the discursing political structures, the safety audit was denied as a meaningful surveillance in the decision making context of the final meeting.

Decision Effects

At the conclusion of this final meeting, the project team expressed that they felt demoralized and deflated. The general feeling was that the overall project had been worthless. However, other members of the board, the strategists, stated informally that the recommendations were worthy and that they would be taken up. These immediate decision effects were the result of the discourses and power relations that had been at play during the process of the project. However, the longer term conflict between the engineers and the strategists indicated that the project would not just die. There was also the reification of the issues that demanded a viable solution to the document control problem that had occurred during the process of the project. The strategists expressed their determination to ensure that the needs surfaced were monitored and managed, even if this had to occur in a covert manner. This was the message I received at the conclusion of my part in the project in September, 1996.

In February, 1997, I made contact with the senior manager, Bill, who told me that everything that the position paper had predicted would go wrong, if an intranet was just brought in, had gone wrong. He was somewhat ecstatic as he declared,

“We were right. It just a pity that we had to be crucified in order to be believed that we could walk on water!”

The proposed management procedures using the manual document control system had still not been implemented, nor had they been transferred to the management of documents through the intranet. However, many sections of the position paper had been included in NAR’s current IT strategy report. It seems that the strategists had allowed their silenced discourse to go underground, managing the effects of the engineers’ solutions as a form of damage control. They had been able to use the material from the project to indicate what issues were likely to occur and to apply this knowledge to their damage control. At a later date, they were then able to turn their version of the required IT artifact into a reality by introducing and supporting it in their own discursive document, the IT strategy report.

Discussion

The needs analysis team had attempted to define what a document control system could be for the railway. However, they had underestimated the strength of the power relations discourse of the engineering culture. It seemed that the introduction of a computing tool, without full consideration of what it would need to do or of its impact on existing operations, was a *fait accompli*. The team had understood that image but had treated it as irrational if not preceded by improved practices. They had chosen to attempt to introduce another image of a document control system which put managerial improvements into place prior to introducing new technology. The power relations already had a preset solution; they simply needed a process to legitimate its enforcement. The needs analysis project had been used to provide that legitimation in that they had allowed the discourse about the new technology to be reified, a counter-discourse to be developed and that counter-discourse to be refused status, linking it to the “softie” strategists, in direct contrast to the “macho” technology solution. By making sure that the project was reportable to Don, the monitoring of the project could be surveyed and counter-discourses, in the macho language of the “real men,” developed. By decrying the strategy people as “whimps,” the dominant discourse had allowed for a “*real men*” object to be introduced. As one individual said, it had to be a choice for an intranet because all they wanted was more technology. This was put succinctly as

“It’s just boys with toys.”

In this political context, the macho boys with their technological toys would dominate the decision making on possible solutions. The needs analysis project was just a rhetorical device to deny the strategic view while letting the project process reify the technology solution as a potential object. By making sure that the team consisted of females, a youth, and a known “softie” strategist, the members’ personal legitimacy was denied, while the process allowed for a discourse on new technology to take place organization-wide. The only engineer on the project, Jack, was elderly, of low status, and discussed by others as a bit of an old plodder. He was also placed on other projects at the same time as this project, which was given as the reason why he did not take part in any of the interviews. His actual impact was marginalized while his name on the team’s documents gave the impression of the project as being legitimized by having an engineer on board.

Conclusion

The argument in this paper is that the needs analysis part of a project is where an information or IT object is formulated and that this is a political process in which power relations shape the legitimizing of discourses in which the object can be conceptualized and formulated. In discussing the field study, Foucault’s concepts have been applied. The study gives an example of power relations in discourses as they shape and form differences and allegiances, denoting what is and is not legitimate knowledge to be used in decision making on information and IT needs. What the study demonstrates is that the history of power relations in an IT decision context dominates discourses regarding the acceptability of solutions. Through controlling visibility, the silencing of discourses, and surveillance, historical dominance can be demonstrated. The work presented here shows

how the current issues on defining IT needs are likely to continue as future issues until the political analyses of work contexts are more commonplace and the learning from these inform future needs analysis projects. The work presented here also contributes to the growing area of the more general socio-political appreciation of information systems as knowledge objects in organizational contexts.

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