Power and Politics in a University ERP Implementation

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ABSTRACT

ERPs are expensive and widely adopted approaches to systems integration. However in both the corporate sector and the public sector ERPs implementations have been very problematical, with reports of widespread failure or only partial success. Very little research has been carried out into ERPs in the higher education sector and most of these have primarily taken the ‘business’ perspective; the effects on the academic and service (student administration) domains have been overlooked. Furthermore, with the increasing corporatisation of universities and their expansion into the overseas student market, considerable tensions have arisen which make the implementation of an integrated system which meets the needs of all major stakeholders, particularly difficult. Since all large scale systems projects involve considerable change and information systems research shows that these changes are frequently met with resistance, it is proposed that a political perspective is useful to investigate the origins and effects of political behaviour.

Recent reviews have argued that there is a need for a detailed explanation of how power influences information systems implementations and to further refine power related concepts. To address these shortcomings a multidimensional conceptual model is utilised which situates power and politics at the interpersonal and group level within the context of influences created by social, structural and technological movements. The use of French and Raven’s (1959) theory of power bases and the Power/Interaction model developed by Raven (1992) allows the ‘influence’ attempt to analysed in detail, including the motivation, selection of power bases, preparation for the attempt and assessment of success. This clarifies the way that influence attempts are carried out within the context of information systems implementation and provides a model which would be useful for future research.

The focus of the study is on the experiences of the service oriented student administration staff in a large Australian university. This group has not been studied in relation to ERP implementation, even though they represent the point of tension between the academic and corporate domains. In order to understand the context of their experiences, a qualitative approach is taken, to obtain a rich description of the case. Because the implementation of
ERPs remains largely unchallenged, a critical stance is adopted which seeks to explore the dominant discourse.

In relation to existing research, this study has provided a more contextualised study of how resistance occurs; that resistance which may be considered successful, from a wider perspective can be seen as helping to reinforce the ‘taken for granted’ necessity for ERP implementation. The use of the Multiple Perspectives Framework showed how wider social trends (requirements for ‘seamless’ information systems and the corporatisation of higher education) influenced the university’s development; the rapid expansion (incorporation of several other institutions) and major restructuring of the university were important events which contributed to ‘change weariness’ even before the ERP implementation commenced. These factors provided the context for the style and tone of political interactions at the group level.

New findings included the following insights. Firstly, trends in higher education have caused a blurring of boundaries and roles which make it difficult to gather requirements and to understand the interests of the different groups of stakeholders. Secondly, the espoused values of universities are being undermined by these trends, especially in the areas of accountability, support for individual rights, and support for participatory decision making. This widening of the cultural rift has undermined ‘legitimate’ power in the university and increased covert political manoeuvring. Thirdly, the dissertation has explored ‘stage setting’ as a political tactic and suggests that understanding this important political behaviour can alert management and other stakeholders to imminent and significant political conflict. In particular, the use of personal coercion and ‘indirect’ information (gossip and hearsay) was found to result from confusion about what sort of power is most effective to use in negotiations about requirements gathering, resource allocation and prioritisation.

In conclusion, the dissertation provides a rich description of a previously unstudied group of university staff and shows that that universities are misguided in attempting the large scale changed involved in ERP implementation without addressing the above issues.
Statement of Originality

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except when due reference is made in the thesis itself.

___________________________ ___________________________
Matt Goodwin Date
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Chapter 1 – Introduction

1.1. Introduction

This study explores the relationship between system implementation and power and politics, more specifically what effect power and politics have on the implementation of the student administration module of an Enterprise Resource Planning System (ERPs) in an Australian university. ERPs are expensive and widely adopted approaches to systems integration. However in both corporate sector and the public sector ERPs implementations have been very problematical. A recent survey by Subramanian and Peslak (2010) proposed that 90% are delivered late, up to 75% are judged unsuccessful and over half of end in failure. What is deemed success or failure may however vary according to different perspectives. This dissertation focuses on the perceptions of a specific user group about the success and failure of the ERPs, while the views of other stakeholders are discussed in chapter 9 (section 9.3.2).

Most studies or ERPs implementation have been carried out in private sector organisations. There has been very little research into ERPs in the Australian higher education sector and most of these have primarily taken the ‘business’ perspective to identify factors affecting success (Rabaa’i, Bandara & Gable, 2009).

This study utilises a multidimensional conceptual model to study the operation of power and politics at different levels of the case, from the interactions of individuals and small groups to the influences created by social, structural and technological movements. While the political perspective is not new to Information Systems research (Keen, 1981; Markus, 1983), especially in terms of user resistance to information systems, still Silva (2007) indicates that detailed and rigorous applications of well-established frameworks are less common. Also, according to the review by Jasperson, Carte, Saunders, Butler, Croes, and Zheng (2002), the political perspective in information systems research is still complicated by ill-defined concepts and a reluctance to investigate the ‘darker’, less publicized, side of organisational life; that is political behaviour in organisations is often viewed as negative and is less often openly discussed than other types of organisational behaviour. This study aims to explore these concepts from the point of view of the subjects involved in the
implementation, and especially to examine more closely the nature of resistance to systems implementation.

The research therefore belongs to the Information Systems research tradition which views information systems as social systems technically implemented (Hirschheim, Klein & Lyytinen, 1995), and social reality as socially constructed (Berger & Luckman, 1971). A critical perspective is taken (discussed in chapter 4) and the case study method is adopted in order to compile a rich description of the implementation event and the experiences of the subjects involved in the implementation. The view taken of information systems research is that of “an applied discipline drawing upon other more fundamental disciplines” (Baskerville & Myers, 2002, p.2), specifically in this dissertation, power and politics as discussed in the fields of psychology and sociology. The use of theory, and the approach to data collection and analysis are based on a hermeneutic understanding (discussed in chapter 4 and demonstrated in chapter 6) of how to interpret subjects’ experiences and perceptions of information technology based events.

This chapter discusses the research aims and expected contribution of the study (section 2) and how the research questions and argument were developed. Because there are many ways of defining organisations, different perspectives on organisations are discussed in section 3 and the reasons for choosing the political perspective are explained. The consequences of this perspective for the definition of information systems, implementation and ERPs are discussed in section 4. Finally the layout of the dissertation and the contents of the chapters are given in section 5.

1.2. Research aims and contribution

ERP systems have been subject to considerable research and some of these studies have taken political perspectives. As discussed in chapter 2, most of these have taken a positivist or interpretivist perspectives whereas this study takes a critical stance. The question of why ERP solutions have been so widely adopted despite widespread failures has hardly been tackled. The dominant discourse of systems integration remains unchallenged. This question takes on special significance for the higher education sector, as it has been probably one of the most transformed industries of recent times. The move from a binary
system of higher education in the late 80s in Australia (Dawkins, 1988; Review of Higher Education, 2008) to a business model, competing nationally and internationally for customers (students) and contributing significant income to the national economy (Olds, 2008; Birrell, 2009) has thrown all attention on to the administrative and business strategy aspects of university life. Most research into ERPs implementation has also thus focused on the success of the administrative systems. The impact of ERPs on the academic domain has been hardly studied or subjected to critique. Although the corporatization of higher education has created strong tensions between academic and business values, the implications for ERP implementation have also been little studied (Pollock & Cornford, 2004).

This study looks at the experiences of a particular group of people who represent the nexus between the two domains – academic and corporate. This group has not been studied in relation to ERP implementation. Even though a large scale study by Hofstede (1980) showed that organisations tended to comprise three main cultures - a professional subculture, an administrative subculture, and a customer interface subculture, and these have been studied in other areas such as medicine (Boonstra & Govers, 2009). However, ERP implementation studies in higher education have examined the tensions and divisions between only the first two groups.

The student administration systems integrate the ‘business’ data of university operations with the ‘academic’ data of student progress. Just before the commencement of the study, a major restructure in the case university had split the student administration personnel and activities into two areas – centralized administration (corporate operations and systems) and academic administration (school based student administration officers), and created tensions between the two groups. Studying the student administration function supports the examination of the way that ERP systems create and support the distribution of power and change the notions of participants about the meaning and value of particular processes and activities; for example the relationship between student achievement, progress, and compliance with regulations, including the ability to pay.
This study therefore aims to critique the dominant discourse about ERPs, by studying the experiences of student administration (SA) officers during the first months of the ERP implementation at Griffith University. The outcomes of the study are as follows:

1. A rich description of the experiences of the SA groups during the implementation. This description although unable to generalized, can provide some insights into how organisational structure and power intersect with systems functionality, particularly in large integrated systems such as ERPs.

2. A case study of ERP implementation. As mentioned earlier, political perspectives on information systems still lack well defined concepts. A case study enables ‘analytic generalisation’ (Schwandt, 1997; Eisenhardt & Graebner, 2007) – the findings from the case will be used to clarify and refine concepts and to evaluate the multidimensional approach (discussed in chapters 4 and 6).

1.2.1 Development of the Research Questions
The initial research question can be stated simply as follows;

“How does power and politics affect the implementation of an ERP at a tertiary education institution?”

The focus on each aspect of the question came from previous studies, my experience as a student at the case university and feeling the impact which preparation for the ERP implementation had on my academic supervisors and the office staff in the school where I was studying. ERP systems were often covered in undergraduate IT studies and even a superficial understanding of the history of information systems development raised questions as to why the field had moved away from customized systems development, tailored to fit particular organisational needs, to a one version suits all approach. Despite my studies of the reasons for system failure, (including the difficulty of defining user requirements and the problems of estimating the size and cost of IT development projects), it still struck me as odd that the information systems field had returned to an approach where the user had to be fitted to the system rather than the system to the user. Although business and economic explanations were readily available, these did not seem to me be so applicable in the context of tertiary education sector where the quality of student education
and assessing student competence should be the main focus of attention. As Johns (2006) points out, the context in which an organisation operates is key to understanding organisational phenomena. In this dissertation, the focus is on the student administration experience and the relevant contextual factors are given in chapter 5, focusing on the historical context and systems implementation issues. Context is the key point in this situation. Johns (2006) points out that context is a key factor in the interpretation of research data, as it can often, as found in the Griffith Case, present findings that are controvertible to what was anticipated.

After the preliminary review of the literature, my initial research argument therefore developed as follows. The research papers referenced will be discussed in chapter 2.

1.2.2 Research Argument
1. ERPs are large scale, complex, widely adopted systems that integrate an organization’s functions, aiding the streamlining process and efficient sharing of data whilst removing unnecessary data entry (O’Leary, 2000). ERPs are therefore assumed to improve performance by eliminating wasteful replication and improving access to data. As mentioned earlier, the integration of two very different areas – administrative and academic – into one system became a focus of this study.

2. ERPs will therefore change the way that a business operates by altering business processes to pre-decided best practices. (O’Leary, 2000; Markus & Tanis, 2000; Davenport, 1998).

3. If information systems are viewed as social systems, it follows that the changes to business processes created by new systems will inevitably have an impact on the working lives of the users in the target organisation. It has been the subject of many studies (Markus, 1983; Keen, 1981; Sillince & Mouakket, 1997; Davenport, Eccles & Prusak, 1992; Harvey, 1998) that such organizational change will precipitate a reaction, particularly in the form of resistance, from the staff affected by that change.

4. Effects such as resistance seem eminently suited to a political perspective but could be viewed in several ways, according to the perspective taken on what is an ‘organisation’ (including the nature of the relationships between organisational members). As mentioned
above, social reality is viewed in this dissertation as socially constructed (Morgan, 1997). The reasons for taking the political perspective on organisations will be discussed in the next section.

5. To gain the greatest benefits from ERP (and other information systems) implementation and to avoid the worst effects, attention needs to be paid to the existing power structures and the strength of the culture. (Harvey, 1998; Warne & Hart, 1996; Markus, 1983; Keen, 1981)

Having looked more closely at the research taking a political perspective, a further research element was added to the argument.

6. Research using the political perspective suffers from certain problems (mentioned above). Therefore a multidimensional view of power and politics will capture more detail and may assist in refining concepts and models.

Finally, the early stages of data collection led to the concluding element of the argument.

7. Higher education institutions (and possibly other types of institutions with two dominant professional groups) are a special case in relation to large scale systems integration, but there are still few studies of this area with most ERP research focusing implementations in large corporations (Zhang, Cecez-Kecmanovic & Pangz, 2008). The transformation of universities in the last two decades has resulted in a shift of power from the academic to the administrative domain, but this has been neglected in information systems research. The integration of the two domains via an ERPs and the nexus between the two domains needs to be investigated. In this dissertation, this Student Administration Officers attached to the schools are taken as best representing this nexus. In contrast, most studies of ERPs implementations have focused on the perspective of ‘business managers’ and the IT development team (e.g., Rabaa’i, Bandara & Gable, 2009)

1.3. Perspectives on organisations
The decision to take a political perspective also resulted from my investigation of other possible perspectives on organisations. Information systems research is greatly concerned with the impact on individuals and organisations, but the idea of ‘organisation’ in information systems research has been poorly theorized (Checkland & Holwell, 1998). Even
in the reference disciplines of management science sociology, there are many and competing views of what an organisation ‘is’. Jary and Jary (1991) suggest that the main problem in defining organisation concerns the idea that an organisation is a collectivity that pursues specific goals, when in fact different groups within the same ‘organisation’ may be pursuing quite different goals and top management may not be successful in establishing and maintaining a single set of goals for the organisation. We can see this problem in terms of universities where business goals are starting to become more important than the previously held academic goals, but still many academics would not view the university as a business.

An organisation is not a tangible entity, and as such will be defined differently according to the ontological and epistemological assumptions of the researcher. These different assumptions were explored in the widely cited work on sociological paradigms for organisational analysis by Burrell and Morgan (1979) and will be referred to again in chapter 3. Their application in this dissertation can be summarised here by saying that whereas a positivist will tend to see an organisation as an objective reality, a set of facts, a subjective view will view an organisation as a notion that exists in the collective perceptions of stakeholders. Likewise, a critical perspective (as taken in this dissertation) will take the view that socially constructed notions of organisation may lead to a type of false consciousness – that the dominant discourse about organisations serves to perpetuate conditions which do not benefit all stakeholders. This idea of dominant discourse will be discussed further in chapter 3.

Whichever way ‘organisation’ is defined, all research into organisations suffers from the problem of how to experience the organisation. As Sandelands and Srivatsan (1993) point out, “organizations cannot be perceived” (p. 1). Morgan (1997) tackled this problem by taking a different approach to that taken in his earlier work with Burrell (Burrell & Morgan, 1979). ‘Images’ of organisations are proposed emphasizing the point that ‘organisation’ is a metaphor, standing for something intangible in the same way that ‘head’ of the family stands for the intangible authority that one person has over the rest of the family (Lakoff & Johnson, 1980). These authors discuss the idea of metaphorical concepts which help us structure what we are trying to think about. A metaphor (such as construction in relation to
knowledge building) gives us a detailed way to discuss ideas which are otherwise hard to put into words.

Morgan (1997) suggested several ways to ‘imagine’ organisations which overcame some of the limitations of the earlier approach. As in the earlier work, he refers to theories which he argues adopt these images. In that way, his 1986 work is not at odds with the work by Burrell and Morgan (1979) but rather than categorizing theories of organisation by paradigm (ontological and epistemological assumptions), Morgan categorises theories by what metaphor of organisation is implied by the theory. The metaphor approach gets over the problem of incommensurability of paradigms which has discouraged researchers from taking multiple views of a research topic. The problem of incommensurability and multi-paradigmatic research continues to be debated (Jackson & Carter, 1993; Willmott, 1993; Mingers, 2001).

Morgan’s (1997) ‘images’ were reviewed early in this study in order to see which image might best be used to understand what was happening to the student administration groups during the ERP implementation. An interesting aspect of the metaphor approach is that not only are theories consistent with these different metaphors; these metaphors also underlie the implicit ideas which organisational actors use in their everyday lives. The metaphor is therefore an explanation of theory, a way to account for everyday behaviour and a tool for the researcher/analyst to understand what happens in organisations. As will be seen in the brief summary below of the four most relevant metaphors, none of the metaphors is entirely exclusive of the others and unlike paradigmatic commensurability this is not important.

1.3.1 Structural perspectives – Machine and Organism
The first ‘image’ discussed by Morgan is the ‘machine’ metaphor. It emphasizes routine, efficiency, and predictability. The organisation should operate like a well-oiled machine, consisting of replaceable parts. This approach, according to Morgan has definitely supported productivity and this is clearly visible in the manufacturing industries. The metaphorical concept of the organisation as machine has also influenced everyday life and thought processes, evident in the routine and clockwork nature of processes that many organizations and people adopt. Efficiency is gained from following strict schedules and
timelines, ordered thought processes and adherence to structure. The bureaucracy is a prime example of the organization as machine due to its rigid structure, firm boundaries of authority and communication and the requirement of conformity/obedience from its employees. The parts of the machine must perfectly interconnect and cooperate via precise rules and well defined lines of control. Large companies with comprehensive policies regulating staff and outcomes, and military organizations are good examples of ‘machine’ organizations.

The second image views organisations as organisms. The perspective sees every employee having an integral role which adds to the construction of the organization, that there is fluidity between actions and reactions and that this provides a creative source of evolutionary change, as people impact on the organization and allow it to grow. Each employee contributes to decision making, is valued as an individual and has their needs taken into consideration.

Organizational theory developed in this direction within the context of a scarcity of well educated human resources and because of the acceptance that employees have complex needs that must be satisfied if maximum performance is expected. This is vastly different to the machine approach that views individualism as secondary to the smooth operation of the organisation. The organism metaphor includes theories which acknowledge that humans seek to fulfill their own needs. This is relevant to the understanding of human interaction in the political perspective as well, as motivations form the basis of influence attempts (Raven 1992).

Another essential component to the organism perspective is taking into consideration the environment that the ‘organism’ exists in is an open system, the ecology of the market and industry within which the organization attempts to survive and prosper, as well as how the organisation’s actions change and influence its environment.

Open systems means that the system is ‘open’ to influence from its environment and must find a balance with it to survive (Morgan, 1997). This metaphor looks at the relationships between the organization and its environment as a system that requires balance, the relationships between staff and work and staff and their interests as also requiring balance.
This is an analogy with organisms in nature, as they both influence and are influenced by the environment; a marketplace is like an ecosystem. As in nature, there is a cause and effect relationship, an organization’s ability to perform will be directly influenced, and influence, the other organizations in the ecosystem. Organizations influence others in their ecosystem in a variety of ways, by differentiation, leadership or establishing their presence in niches, responding to competitors, location and distribution of retail outlets, service standards and range of products offered are all way in which organizations can be influenced.

Companies in an eco-system can change it as well as be changed by it; example, adoption of new technology such as selling via the internet influences other competitors and the early and late adopters take their place in the chain of cost versus benefit with following the market leader. It is also seen in cartels and trade groups, self-regulation and inter-cooperation that can allow the companies to survive and influence others to ensure mutual survival and mutual profit.

The organism view ignores, or at least plays down the idea that individuals may not see their own interests as being the same as the company’s and may put their own interests first; or would see this as similar to the idea of disease. Corporate ‘health’ is therefore the overriding metaphor, requiring all cells to operate in cooperation.

This view is at odds with the focus of this thesis, which views conflict as endemic (discussed further in chapter 4); people have needs which they often put above other people’s needs as they see fit (Keen, 1981; Raven, 1992; Markus, 1983). When adopting the organism metaphor, power, politics and employee irrationality can be seen as a virus in an organism, an aberration. However, this dissertation views power as a tool by which individuals interact with each other, and resolve differences in competing interests.

1.3.2 Cultural and political perspectives
The images of machine and organism imply organisations as structures whereas the cultural and political metaphors are concerned with organisations as relationships.

The image of organisations as cultures focuses on ideas drawn from anthropology which show how people are ‘cultivated’ into particular configurations, representing shared
understanding of ideology, knowledge, values, laws and day-to-day ritual. This sharing of values and norms allow for a common understanding of community purpose and expectations. Within cultures, ‘subcultures’ also exist which are consistent with the dominant culture but which show variations in their values, behaviour and artifacts – for example subcultures exist through ethnic difference, age, occupation and gender.

Different cultural groups within the same organisation will perceive organisational success differently and as mentioned above, may support different organisational goals. As long as there is no disjunction in these differences, the organisation may be thought of as a ‘strong’ culture. However, as mentioned earlier, in the tertiary education sector, the administrative and academic domains have some differences in their goals and values and this dissertation looks at how these differences relate to the integrating effects of an ERP. Organisational members who rely on their employment for satisfactory work may repress these differences in the interest of organisational survival, and this is one of publicized features of an ERP – that it improves organisational performance and competitiveness. However, where the employees are not so dependent on their employer, conflicts of interest may occur, and such may be the case in the university sector where it is becoming difficult to compete with industry to attract staff to academic positions. In this way we can see how the cultural, organic and political images of an organisation may intersect. This is acknowledged throughout this dissertation even while the focus remains on the political metaphor.

The cultural metaphor also takes account of national differences because much in common can be found with people who have the same national history, and this may be important in a multicultural country such as Australia. National culture varies according to the history of the country. Hofstede’s (1980) survey shows that for example, the Japanese culture rewards loyalty to the company and above all else team work and ‘honor’, which leads to a dedicated team environment. On the other hand, U.S culture tends to reward individual performance, encouraging competition no matter the impact on the morale or team

Morgan (1997) describes culture as shared meaning and shared understanding, and repeated deviations from the ‘norm’, behaving in an unacceptable (even if legal) way in an
organization (such as wearing a garbage bag as a hat) will cause the order of the shared reality to break down.

Different situations will invoke certain sets of rules to construct the appropriate reality. Norms operating in different situations have to be invoked and defined in light of our understanding of the context. Many of these decisions about the appropriateness of an action will be determined by previous experience. Culture is an ongoing pro-active process of reality construction. In relation to politics, discussed below, culture provides the legitimation for the use of power. People occupying roles in one country will be given authority which they may not possess in another country because their authority is sanctioned by the culture. The cultural image of organisations considers how societies ‘stick together’ and focuses on cohesion, whereas the political metaphor looks at how societies and organisations manage conflict and resolve differences between competing interests. The critical stance (as taken in this dissertation) therefore is more consistent with the political perspective.

Several theories relevant to the political perspective will be discussed in chapter 4; here we will merely consider what the political ‘image’ entails.

The political view of organisation does not see stakeholders as elements of machines or organisms or members of a society. Instead they are actors with ulterior motives, pursuing three sets of interests. Firstly, task motives are based on the current task of an employee; the urgency to meet a deadline for example would be a motive. Secondly, career motives are based on longer term objectives, for example to be promoted, to reach the next pay grade. Finally, Extramural motives are those that come from outside of employment; personal wants, family and social obligations and wants.

The tension between interests inherently makes organisational life political, as each individual works to maximize their satisfaction. The negotiation of these interests forms the basis of social interaction and politics. The American political scientist Robert Dahl (1957) suggested that power involves the ability to get another person to do something that they would not have otherwise done. It comes from control of something that influences others; resources, information, old-boy networks, technology, (Morgan, 1997).
Morgan (1997) explained that for power to exist (or be successfully exercised), the person over whom the power is to be extended must acknowledge its existence and influences. Therefore considerable power may rest with those thought to be at the bottom of the power pyramid, for example through the withdrawal of essential labour.

Morgan (1997) discusses that the phenomenon of power is not yet understood in the sense that it is a resource or a relationship. It is not clear whether people possess and exercise power as individuals or are simply ‘carriers’ or transmitters of power relations generated from more fundamental forces. Although it is not the purpose of this study to debate this distinction, the multidimensional framework explained in chapter 4, does to some extent show how power between individuals and within groups may flow from and perhaps be conditional on wider social, economic and other conditions. However the focus of the research is on a specific group of users and how they exercise power or how power is exercised over them, with reference to the wider context as necessary. The work by French and Raven (1959) provides several concepts which enable the working of power to be seen at the group level.

Morgan (1997) also proposed that there are several views of power and politics; unitary, pluralist and radical. Although these may resemble the paradigms of his earlier work (Burrell & Morgan, 1979) they are not expected to be applied so precisely. This dissertation adopts elements each; as mentioned above – these views represent not only the perspective adopted by the analyst but also the implicit views taken by the actors as they manage their everyday lives. In other words, some personnel may take a unitary view – that there is one best way to do things and those different interests and conflicts between interests are deviant and need to be eliminated. Other personnel may take a pluralist view, seeing conflict as natural and fruitful and power is to be used to reach compromises to achieve the greatest consensus. Lastly, some personnel could take the radical view, that conflicts of interests derive from irreconcilable differences, resulting from class inequities and the only solution is the overthrow of the ruling class.

In conclusion, the above discussion in this section does not argue that the political ‘image’ of organisation is superior to other views, but that it is useful for the critical stance taken in
this dissertation. It is expected to provide a deeper view of the reactions of users to ERP implementation. It is not incompatible with other perspectives, particularly as cultural values and norms ‘legitimise’ political behaviour which are manifested in organisational and administrative structures and enacted by personnel in their daily work. This can be seen clearly in the forms of political rule (government) adopted by different countries which reflect core national values; also organisational structures such as bureaucracies reflect values such as tradition, respect for authority and conformity to rules and procedures.

1.4. Entailments of the organisational metaphors
According to Lakoff and Johnson (1980) metaphors have entailments – which means the “imparting of the source domain (the metaphorical image) to the target domain (the concept receiving the metaphorical treatment)” (p.90). This is most easily seen in our use of language – for example, if we discuss life as a journey we continue the metaphor by talking about paths and crossroads to represent complex concepts. Similarly an ‘image’ of an organisation entails that we think about other aspects of the organisation in the same way, including how information is valued and processed.

1.4.1 Understanding Information Systems
Earlier in this chapter, information systems were defined as social systems technically implemented. According to Hirschheim, Klein and Lyytinen (1995) more specific and detailed definitions of information systems focus either on the ‘structural’ aspects – the relationships between all the elements of an information system (people, processes, data, technology, models etc.), or, or the ‘functional’ aspects – recording, storing, processing etc. information. Both of these definitions allow for different interpretations of how information systems are involved in communication and sense-making through the acquisition and transformation of information.

However, the political perspective on information systems entails viewing IS as media by which a political resource (information) is accessed and controlled, and how this affects related areas such decision making, authority relations and the value given to different bits of information. This view is not at odds with more traditional definitions; it is similar to the
definition proposed by researchers taking a socio-political approach such as Goldkuhl and Lyytinen (1982) who defines information systems as formal communication systems that are socially constructed, whose purpose is to influence certain people and their actions (how work is carried out through specialization and standardization etc.). This dissertation takes a political view of influence. Information is not treated as neutral, nor information systems as objective, rational images of the reality about which the information is being collected. Instead information systems are viewed as resources which are utilised in the exercise of power. Control over what information is collected and who can access it will be subject to conflicts since it will affect the interests of all stakeholders.

1.4.2 Understanding ERPs

The features of ERPs have been widely discussed and are summarised briefly here. This is followed by a brief look at the implications for understanding ERPs entailed by the political view of organisation and information system as discussed above.

The term Enterprise Resource Planning is thought to have originated with the Gartner Group, who proposed that information systems planning was entering a new phase – to integrate information systems with the total business enterprise (Harwood, 2003).

According to Monk and Wagner (2006), ERPs were widely adopted by large corporations in the 1990s in response to the Y2K problem as companies decided to replace their fragmented and possibly risky legacy systems with a single integrated system. Moreover the fall in sales in the late 1990s may indicate why the higher education sector was the next market to be targeted.

Davenport (1998) describes the ERPs as “single comprehensive and integrated database which collects data from and feeds data into modular application supporting virtually all of a company’s business activities” (p. 123). This enables the ‘seamless’ use of information, superseding the need for specialised single systems.

One of the main advantages therefore is data integration between business units (Davenport, 1998; Lawnham, 2001; Markus & Tanis, 2000). This will resolve problems caused by duplicate data as well as data entry, may reduce inaccuracies and will provide greater management access to data (Davenport, 1998; Markus & Tanis, 2000). The integration of
data will also provide easy reporting and auditing (Markus & Tanis, 2000). The introduction of a new system into the company that will replace legacy systems, often two or more decades old, and will allow for added features to be included otherwise not possible (Holland & Light, 1999; Markus & Tanis, 2000). The comprehensive nature of ERP integration will allow for many tasks to be automatically performed leading to more efficient transactions and more automation (Davenport, 1998; Markus & Tanis, 2000).

The expansive ERP systems with their unified and off the shelf architecture have some disadvantages that need to be weighed against the benefits. These mainly come from the fact that ERPs is an off-the-shelf package. The consequence of implementing a system that is functionally similar to your competitors means that there is little difference from one installation to the next. The lack of customization forces companies into a fairly rigid software package that dictates how a business can be conducted (Davenport, 1998; Markus & Tanis, 2000). The software although embodying ‘best practice’ has not been designed for the specific business requirements of the client, meaning that special circumstances and procedures will most likely not be catered for (Davenport, 1998; Markus & Tanis, 2000). It has also been noted that the overall cost of the ERP system can outweigh benefits, i.e., it may rule out competing on cost leadership, carrying the cost of very expensive systems (Davenport, 1998) The diversity found in companies is also an issue as existing units that were once segregated and autonomous will be integrated even though they may have provided competitive advantage whilst they remained separate (Davenport, 1998).

Most of the above discussion reflects a machine view of an organisation (efficiency and integration of parts) or an organism view (cooperation and competitiveness), with differing opinions on whether the ERPs promote the running of the machine or the health of the organism and its survival in its competitive environment. The cultural view would question whether the ERPs aligns with the values and norms of the host organisation; in those terms, the installation of an ERPs could be seen as a type of invasion where individualism is lost to a new central authority or alternatively as a salvation for a bureaucratic style organisation which seeks to promote conformity.
The political view is not so concerned with questions of efficiency and competence although these are considered briefly in chapter 9 in relation to the Organisational Power perspective (discussed in chapter 4). It questions how the ERPs selection and implementation reflects, reinforces or changes the distribution of power in the organisation, and how the ‘need’ for an ERPs becomes the accepted view. The pervasiveness of IT and how it has become central to our daily lives is the subject of a great deal of research. This research belongs to that stream of enquiry. The centralizing effects of ERPs are especially interesting and will be discussed further in chapter 2. Most obviously ERPs centralise the control of information resources and may vastly change communication channels and decision making.

**1.4.3 Understanding implementation**

Implementation is concerned with processes “to obtain workable software and achieve real organizational change” (Hirschheim, Klein & Lyytinen, 1995, p. 25). Accordingly, software engineering disciplines (systems development methodologies etc.,) are required to implement the software changes while organisational strategies are needed to obtain user acceptance and proper use of the system. Implementation therefore involves taking into account both process (the systems development life cycle) and factors (technical, economic, business, human and social) required for success. Information Systems is concerned with the intersection of these two perspectives and this dissertation is focused on organisational implementation, while not overlooking the importance of the functionality of the system and problems in technical implementation. Processes are interpreted as political choices. ‘Factors’ are not thought of as ‘objective’ facts which cause success or failure; instead organisational implementation is seen as a complex and often ambiguous interaction of influences, but most of all as the process of exercising power.

**1.5. Outline of the dissertation**

This dissertation is organised on traditional lines, commencing with a review of the relevant existing research in chapter 2. An overview of how theories of power and politics have been applied in Information Systems research is given, focusing on themes emerging from the research (since the explanation of the theories is given in chapter 4). These themes primarily
relate to the interrelated topics of centralisation, resistance and ownership, since the centralising effects of information systems implementation tend to cause resistance, since they challenge and disrupt existing system ownership patterns. The importance of organisational context is discussed and specifically the significance of how systems are selected. A brief overview of multiple perspectives on power is then provided.

Chapter 2 continues by reviewing studies of the benefits and problems of ERPs, specifically critical success factors, organisational fit and the problem of user participation. Finally major studies of ERP implementation higher education are reviewed. The literature review focuses on examining some major studies in detail, which are politically oriented rather than providing an exhaustive review of ERP implementation which has been done elsewhere.

In chapter 3 the Research Approach and method are explained, focusing on the critical stance adopted for this dissertation. The choice of a case study method and the data collection and analysis strategies are discussed, since these are extremely important for qualitative research. Klein and Myers’ (1999) principles for conducting and evaluating research are briefly outline (and discussed again in chapter 10).

Chapter 4 explains the Multiple Perspective Framework adapted from the work by Sillince and Mouakket (1997), which enables several different views to be taken of the research case. This framework is justified by criticisms of earlier work which takes a single perspective, and also by its consistency with the hermeneutic approach to data collection and analysis explained in chapter 3. The theories associated with each of the perspectives are briefly explained. The dissertation focuses on small group interactions so the limitations to the processual power perspective are overcome by using French and Raven’s (1959) theory of power bases and the later work by Raven (1965) which expanded this and which introduced a power/interaction model (1992) which supports the analysis of political events.

The first part of chapter 5 describes the context of the study – taking the same approach as the Multiple Perspective framework – considering the wider social and industry perspectives in higher education, then discussing the case university, significant events relevant to the ERPs implementation and the changing role of the student administration officers (SAOs) who are the focus of this study, concluding with a description of how the
ERPs was implemented. (The project time line is given in Appendix A). The second part of this chapter discusses the selection of the research site and data collection.

In chapter 6, the application of the theoretical framework is provided with a detailed analysis of two ‘influence attempts’. This allows for further explanation of the theories and shows how the analysis was conducted so that the remainder of the dissertation may be more easily understood. The chapter also shows how interpretation of the data using one perspective may be contradicted or expanded by reference to the wider perspectives, which is consistent again with the hermeneutic approach.

Some of the themes which emerged from chapter 6 are taken up in chapter 7 which considers how resistance may be viewed as an attempt to influence rather than merely as an ‘obstacle’ to be overcome which is the view taken by most research. Motivations for resistance, how staff choose to resist and the notion of ‘stage setting’ are analysed in relation to a number of incidents. The use of ‘Indirect Information’ (gossip and rumour etc) and the effects of resistance are also discussed.

Chapter 8 returns to the theme of cultural conflicts and the changes which are occurring in the legitimation of power. The conflict between competing interests is analysed by considering how the espoused values of accountability, commitment to individual rights and participatory decision making (taken from the university’s website) are enacted in relation to the process of implementing the ERP. This raises the question of how to conceptualise the university as an organisation in such a way as to reconcile the interests of the different stakeholder groups and identifies the three distinct subcultures within the university.

Chapter 9 synthesises the analysis by viewing the ERPs implementation as a political process, focusing on the SAOs’ perceptions of system selection, project and change management, training and requirements elicitation. The four perspectives on power (adapted from Sillince & Mouakket, 1997) are reviewed to reconsider how ERPs implementation might be considered as a success or failure from the point of view of the various user groups, the organisation and the wider structural and social arenas.
In chapter 10 the research questions and anticipated outcomes are reviewed and the findings of the dissertation are related to existing research. Additional findings are summarised and finally the research project is evaluated using the criteria discussed in chapter 3.

1.6. Conclusion
This chapter has firstly specified the research traditions and assumptions underlying this dissertation and indicated that a critical stance has been adopted. Secondly the reasons for studying the student administration personnel in the university ERPs implementation have been outlined. Most research has focused on the ‘business’ success or failure of ERPs, or to a lesser extent the tension between the corporate and academic domains, but the third important group within a university – the service oriented student administration officers have been overlooked.

Thirdly the justification for taking a political perspective has been presented. Organisations may be conceptualized in many different ways and it is proposed that it is impossible to get a complete picture of what is going on in an organisation. However the political perspective (which includes considering how culture legitimates power) provides a different perspective to the ones taken by most ERP research which have been mostly concerned with ‘business’ success or failure.

Lastly, the ways that information systems, ERPs and implementation are conceptualized via the political perspective are also briefly explained. All of the above topics will be further explored in the dissertation. In the next chapter a review of existing research relevant to this dissertation is presented.
Chapter 2 – Literature Review

2.1. Introduction

This chapter provides an overview of existing research relevant to a political perspective on Enterprise Resource Planning package (ERP) implementation in the Higher Education sector, and provides the background and justification for the research questions discussed in chapter 1. As mentioned earlier there have been almost no studies taking a systematic view of ERP implementation as a political process, so consequently this chapter focuses on some of the key studies on information systems implementation that take a political perspective.

The review of power and information technology research published by Jasperson et al in 2002 provides an extensive discussion of this literature, and chapter 1 provided a brief discussion of how the current research relates to these authors’ conceptualizations of the field. Rather than repeating the major findings of this review, Chapter 2 focuses on discussing in detail the themes and issues which emerge from some significant studies. The intention is to provide a basis for comparing the results of the current study (discussed in chapters 7-10) with the results of studies conducted elsewhere. There has been a very wide variety of approaches taken to power in information systems research (Jasperson et al., 2002; Silva, 2007) and none of these approaches is excluded even though a specific perspective is taken in this current study (as discussed in chapter 4). More recent research papers not covered by Japserson et al’s 2002 review are also discussed.

Chapter 2 covers three general areas. It begins with a review of findings from general studies of power and politics in information systems research. Some studies which focus on very specific aspects of power are covered in chapter 4, where they relate to the theoretical framework adopted for this study. The second area to be covered is research into the effects, benefits and disadvantages of the topic of Enterprise Resource Planning packages (ERP). These studies do not necessarily take an explicit political perspective, but it is useful to establish issues arising from ERP implementation which may have political explanations. Lastly, the fairly small body of research which considers Information Systems
implementation and use in the Higher Education sector, including studies of ERP implementation, is reviewed. In the concluding section, the research argument will be reviewed in relation to the discussion of the literature; that is the organisational and information systems changes associated with or resulting from ERP implementation, the use of power and politics by the various groups of stakeholders and the political consequences of these changes.

2.2. Power and Politics in Information Systems research

The significance of the political perspective in information systems research has been asserted by a great many authors (Walsham, 1993) but as Jasperson et al (2002) state the study of power has been ‘peripheral’ and still is considered to be a “messy, elusive concept” (p. 398). More recently Silva (2007) also has suggested that politics may be disregarded because of its “negative connotation” (p. 183). Indeed many authors have referred to organisational politics as ‘illegitimate’ power, or the shadow organization (Keen, 1981; Morgan, 1997; Sillince & Mouakket, 1997; Clegg, Courpasson & Phillips, 2006; Raven, 2001).

This negative view of politics in information systems research possibly originates in the managerialist perspective (rather than the user perspective which is taken in the current study) and the focus on resistance to information systems deployment. The earliest work in this area (Kling, 1987; Markus, 1983) aimed to provide explanations and theoretical approaches to understand why resistance occurred and how it could be managed. Markus (1983) suggested three main categories of approaches or theories – people-determined, system-determined and interactionist, and identified politics as a variation of the interactionist explanation. She summed this up as follows “the interaction of system design features with the intra-organizational distribution of power.” (p. 432). Her research indicated that information systems will be opposed if they redistribute power in such a way that conflicts with existing organisational structures or existing individual interests.

Morgan’s (1997) work took up these themes and has been influential in information systems research. He suggested several images, or metaphors, for thinking about organisations, including the political metaphor. He points out that all actors in organisations have their
own interests which may not align with the ‘organisation’s’. This inevitably leads to conflict and political battles which political resources, influence and power are used to solve. Warne and Hart (1996) elaborated this idea by introducing the notion of the ‘information ward’ – the domain of information over which individuals or interest groups hold power. These authors emphasise the significance of information as a political resource and argue that organisational members will engage in political behavior (including resistance) to defend their power base, even if it this is against the overall interests of the organisation.

As mentioned in chapter 1, the idea of organisational power is closely related to organisational culture; Morgan (1983) suggests that culture legitimates power and is made visible through the organisational structure. In other words, the use of certain types of political resources and political behavior are enabled by the espoused and enacted values and beliefs of the culture. Officially sanctioned power (formal power) however is only one aspect of the political behavior in an organisation (Peabody, 1964; Clegg, 1989). Whereas formal power operates through prescribed lines of authority, informal power may be more significant, operating less visibly through relationships of influence. As Sharpanskykh (2008) recently noted there has been a lack of investigation into how formal power is changed or instituted via ERP systems. Similarly the way that ERP systems interact with informal systems of power (changing lines of influence) is still uncertain. This dissertation is concerned with the interplay between these changes to both formal and informal power relations.

The body of research literature on organisational culture and organisational structure in information systems research is far more substantial than that of power, possibly for the reasons mentioned above, so that “power remains a messy and elusive concept ... difficult to define and grasp” (Jasperson et al., 2002, p. 398). However, it is generally acknowledged that ignoring the potential for conflict and resistance and the influence of organisational power in information systems work is very unwise (Clegg, Courpasson & Phillips, 2006).
2.2.1 Centralisation
A number of power related concepts have been alluded to above; these and other concepts will be considered further in chapter 4. In this chapter I am concerned with issues arising from ERP implementation which are illuminated by the political perspective. One of the major themes emerging from research using the political perspective concerns the political consequences of centralization (Markus, 1983; Sillince & Mouakket, 1997). This issue is one of the earliest discussed in relation to management information systems (Ein-Dor, & Segev, 1978) and usually refers to the transfer of authority and control to the highest levels of management or a small group of people (including control over information, communication and decision making) that is facilitated or inadvertently caused by the implementation of new information systems.

Lowe and Locke (2008) assert that one of the key aspects of ERP implementation is “the centralised organisation of business processes, database structure and reporting” and that this centralising effect tends to “reduce autonomy and increase rigidity in the organization, which contrasts to the claimed intention of PBO to increase flexibility and local decision-making. “ (p. 384). In particular they found that ERPs are likely to produce “conflicting pressures” (p. 395) in relation to the balance between trust and control. They suggest that this is particularly the case in what they call ‘post bureaucratic’ organisations; in their case the presence of university graduates amongst the workforce created different expectations about work and autonomy (increased personal control and autonomy was desired and expected), and it is reasonable to suppose institutions in which a large percentage of the staff are highly qualified would create similar expectations. The authors suggest that more research is needed regarding ERP implementation in institutions with ‘complex environments’. As discussed below, universities are becoming increasingly complex because of significant changes in their roles and the growth of a dominant bureaucratic culture alongside the traditional academic culture.

Centralization is particularly significant in this dissertation; as discussed below the reorganization of the university’s administrative functions was a major feature of university life during the time of the study (Fussell, 1998). Groups which had functioned with some autonomy and independence in their control of information were gathered into a centralized
area controlling distribution of assets, information and personnel. This was the goal of the Griffith restructure in 1997 according to the analysis provided by Fussell (1998). The well known promises of ERP including elimination of multiple data entry and standardized levels of services across the organization (Davenport, 1998), are accompanied by centralized control that, which as evidenced in many studies, can reduce autonomy of remote business units substantially (Markus, 1983; Sillince & Mouakket, 1997). This reduction in autonomy has been observed to cause resistance and political activity (Markus, 1983; Warne & Hart, 1996; Sillince & Mouakket, 1997).

Across the literature on ERP there is a strong report of ERP’s providing standardized practices across departments, and aligning organizational structure and business routines (Davenport, 1998; Markus, Tanis & Fenema 2000; Hanseth & Braa 1998). It is difficult to determine whether an ERP is simply centralizing or decentralizing before it is applied to a specific organization, as by design ERPs are intended to promote cross departmental cooperation and sharing of information, but they also add control across the departments under the guise of best practice, system access and data warehousing (Davenport, 1998). Sia Tang, Soh, and Boh (2002) conclude from their study that ERP implementation primarily reinforces the power of managers and therefore management suppresses the potential of ERP to empower users, even though in principle ERPs could allow users increased access to information and flexibility in their work. This supports Markus’s (1983) interactionist view – that it is the interaction between systems and people which creates the consequences rather than these consequences being caused solely be systems factors or people factors alone.

Resistance to change was identified as one of the major ‘obstacles’ to ERP implementation in higher education institutions (Kvavik & Voloudakis, 2002). However few of these take a systematically political or social view of the process, with identified factors resembling a ‘shopping list’ of things that need to be attended to (Okunoye, Frolick & Crable, 2008). Two studies which consider resistance from a political stance are discussed in the next section as the perspectives taken underlie a lot of the discussion in this dissertation. The studies show that the act of centralization creates environments of change and change of ownership that are prime areas for political engagement and often result in strong resistance.
2.2.2 Resistance

Sillince and Mouakket (1997) described the implementation of a new residential system at a university. Prior to the system the individual residential houses would allocate rooms autonomously; under the new system the decisions would be made centrally and the decisions on room allocation would be handed down to the houses. The premise for this system was more efficient allocation of rooms and lighter workload for the individual houses. However the end-users perceived that they had lost power and responsibility and that the system that they were now required to use was for the benefit of the central office. They were also dissatisfied with the project design process which involved very limited consultation. At the end of the project they presented additional requirements even though they had been told that no more requirements would be met. Management realized that these new requirements were important enough to have the system modified; if they had been elicited earlier it may have saved time and money. The project team were thus perceived as having insufficient knowledge of the current structure of the University and needs of the staff; attempts to enable organizational change were not founded on understanding of the existing structure and values, and the project did not address the needs of the staff members who perceived they were losing power through the loss of control of existing systems.

A number of studies have shown that the most common response from a person who has had something taken away without prior consultation is some form of resistance. Sillince and Mouakket (1997) used multiple perspectives to understand the contextual factors for this resistance, and this has formed the basis for my theoretical framework, described in chapter 4. This enables several ‘cross sections’ of a situation to be taken to uncover the unfolding of the events and provide a richer analysis of a situation (Pfeffer & Salancick, 1978; Salaman, 1981). When viewed with a focus on centralization, the project team failed to account for the reactions of the remotely located staff. It is suggested that if the team had looked at the ownership and power structure of the areas to be changed more could have been done to create system success.

Markus (1983) discussed the implementation of a new financial system that centralized the information and removed authority from distributed finance departments. Previously the
finance units were able to summarize data before it was submitted to higher levels of authority, allowing them to control what the corporate office had access to. The new system removed this barrier which pleased corporate office but caused resistance in the remote departments to resist. The resistance in this case study stemmed from the perceived loss of autonomy of operations, and ownership and control of data as the centralized body gained direct access to the operations of the remote departments.

The compliance of the remote departments was achieved by offering no alternatives to the use of the system. An interesting point in this study was that when corporate staff were transferred to the distributed offices they made the same complaints, highlighting the value of understanding the perspective of an employee in context; changes in perspective can directly influence the motives and values of system users. The use of a system depends on perspective and changes in context create entirely different experiences and perceptions of systems. The corporate staff supported the local staff when they were placed in the same situation.

Resistance to change is a very important topic in the discussion of ERP, as fundamentally an ERP will change all computer interfaces and many business practices, to what has been determined to be ‘best practice.’ A review of research into resistance to IT implementation covering 20 IT and IT related journals over 25 years found more than 40 papers which “treated resistance as a key implementation issue” (Lapointe & Rivard, 2005, p. 462) and showed a wide range of ‘resistance behaviors’ during implementation. However, very few of these papers used any political theories to underpin their analysis, being more concerned with types of resistance behaviour, objects of resistance, perceived threats and initial conditions.

Information Technology was discussed in Kling’s (1987) paper as a medium to achieve social change. In his study of a government system however, the change that was hoped for was not achieved, at least the change that was publicly advertised. It was discovered during the research that the system had not provided the tangible benefits that were proposed but was being maintained because of the improved image that the system provided. “I learned that UMIS’s primary value was in enhancing the welfare agencies’ image when they dealt
with federal funders and auditors” (Kling, 1991, p. 348). It has been shown in ERP studies that the systems are not guaranteed to deliver on the expected benefits (Poston & Grabski, 2000).

The cost of project failure is usually substantial, in some cases hundreds of millions of dollars, in the case of an Australian University, 48 million dollars was spent on an ERP installation (Gray, 2003). The project has had extreme complications and it is being decided now as to whether re-tender the whole software of the organization or to try and fill the irreparable problems with other software. With the multitude of technical complications to overcome in the IT industry it is important to not underestimate the power of the people, as they are ultimately the ones who the system is dependent on to be used and employed correctly.

2.2.3 Ownership
Most discussion of resistance takes the perspective of how to overcome resistance, but the above studies show that resistance has more to do with perspective and position rather that the individual interests of the users. This conclusion is reinforced by the study carried out by Warne and Hart (1996). They describe a nine-year project to implement a large information system into a government department. The system was aimed at installing a large financial system to combine many features (HR & payroll functions) and to eliminate problems that the government department faced by continuing to use the multitude of systems that were in place. The Implementation infringed on workers ‘ownership’ or processes and as such they felt their power base was being infringed on, thus leading to political warfare. The project involved a significant investment of time, money and organizational resources and while it progressed over several years it ultimately met with enough resistance to justify shutting it down, wasting the time and money put into it by the organization.

This is a good example of total loss as a result of extensive political activity and as well as a striking example of the territoriality of employee’s and what they perceive as their property. Company employees were very much attached to what the authors term their ‘information wards’ (the set of processes and information that employees felt possessive of) and they were not willing to give them up. The system described in this case study, quite closely
resembles the type of functionality an ERP can have and the resistance that can be generated by an ERP installation. The proposed system crossed many previously separate boundaries within the department and changed many power bases (people’s possession over information is a form of power (Raven, 1992; Davenport, Eccles, Eccles & Prusak, 1992). This infringement caused massive amounts of conflict, as those who would gain power by the change fought to achieve it, while those who were at risk of losing fought to prevent that. This demonstrates the importance of information as a political resource (discussed in chapter 4) which includes not only the data collected but the power to access, change and distribute it.

This ownership issue was clearly not taken into account in the design and management of the project, for example, when a centralized system was selected, a full cultural analysis should have identified the needs of the individuals in the organization, and their likely defense of their information wards (Warne & Hart, 1996). This relates back to a common theme that information is power and people in this organization perceived that the loss of control over their domains was not adequately compensated for by the new system. With this example of staff engaging in political actions over encroachments on their ‘territory’ it is a practical implication that this example could easily apply to any system that changes the environment of an individual, in a way that they feel like they are losing out. The paper supports quite clearly that threatening an individual’s perceived domain, which can be a power base such as control over information, will promote resistance and this is not a good environment to conduct the installation of a system. It is interesting to note that in this case study it is made clear that a traditional project development approach was being used, i.e. top-level support was there, user participation was catered for; commercial development techniques were being used and conventional project management techniques were in place, as stated by Warne and Hart (1996). Despite all this effort being poured into the project, political warfare and the protection of what people defined as being ‘theirs’ prevented the project from being completed. Employees actively fought the change of ownership of ‘information wards’ and after a period of political conflict (approximately ten years), the project was abandoned.
From this chain of reasoning it is essential in the design and project planning phases that this fundamental shift in ownership of information, control over resources, and existing process be carefully mapped against a full study of the affected departments. As will be discussed later, in the case discussed in this dissertation a consultant from the implementation partner complained that the university did not provide a detailed cultural analysis to the implementation team.

### 2.2.4 Organisational Context

According to Sharpanskykh (2008) implementation is a key driver of organizational change and fundamentally a political process. As the studies in the ERP implementation field are still relatively new in terms of politics, the following discussion looks at studies of IS implementation more generally, and making connections where relevant.

Sillince and Mouakket’s (1997) study pointed to the difficulty of involving end users who are perceived as not computer literate; special approaches are needed to elicit requirements from these types of users or basic functionality may be neglected, or have to be added on later, causing increased expense and delays. This paper also highlights that staff interests may diverge strongly from management’s. As mentioned in chapter 1, the view that organisations are loose coalitions of staff with different interests will produce a more realistic approach to what is achievable with new system's design.

The case study by Warne and Hart (1996) described an implementation where ownership of information was a key issue. The multiple perspective framework by Sillince and Mouakket (1997) shows how information systems can ‘shape meaning’ within organisations; hence information systems development can become a competition for whose meaning will prevail. (Since the information system by the type of data it collects and the way it processes it will provide a representation of the organisation which may contradict previous ideas) This idea relates to the notion of organisational alignment – that a system should represent the views of the major stakeholders.

Keen’s (1981) paper on implementation focuses on resistance, tactics to perpetuate resistance, and ways to recognize these activities, but it also strongly supports the need to
recognize that resistance can come from a genuine need to avoid a particular change endeavor.

Harvey’s (1998) study concerned the implementation of a document version control standard, which although an apparently straight forward and non-complicated project, was hindered by cultural and political activity. Employee suggestions was deemed important or not depending on their ‘status’ and this lead to poor decisions being made; the project team (who were not culturally accepted) were sabotaged and spied upon in order for the dominant culture to achieve its ends. The project was designed to enable change in key organizational beliefs but the status of the project team undermined the credibility of their ideas.

The above discussion shows that the information system may be contrary to the interests of some employees and other stakeholders and that resistance may be ‘positive’ in that the actors are genuinely concerned about the changes which the system will cause. Harvey (1998) showed that different coalitions within the same organization entered into conflict because of perceived cultural differences, not because of the nature of the task win which they were involved. This cultural split caused communication between the two groups to break down and regardless of what each group suggested, the other group rejected it.

The choice of influence tactic chosen by individuals will almost certainly be influenced by the organizational context; the choice of tactics and resources for the exercise of power will be dependent on what is considered effective or legitimate within the specific context (as mentioned in chapter 1 and discussed more fully in chapter 7). Harvey’s (1998) study for example showed that the dominant culture used crude and discriminatory language in negotiations, but the project group was unable to retaliate in like manner. It appears that the project team was purposely selected for their lack of fit with the organization in order to undermine the project.

2.2.5 Multiple perspectives
Most of the authors reviewed agree that a single perspective will not capture all the factors relevant to a political analysis of information systems implementation. For this reason this dissertation takes a multiple perspective approach based on the work of Sillince and Mouakket (1997), which examined a university system from five different perspectives. In
particular, most studies do not take account of the wider context – the factors external to the organisation which influence, enable and constrain the behavior of the organisational members, even though such work has been called for, for some time. For example, Salaman (1981) discussed in his work that it was naïve to ignore the wider context and focus only on what occurs inside the organization. This is particularly relevant when we look at the competitive environment. The choices and opportunities that arise are often subject to outside stimuli, constraints, and ecology (Pfeffer & Salancik, 2002).

The implementation of an ERP inside the education sector for example has on some levels been a response to government funding as well as a response for universities to be more transparent during the government auditing process. ERP does provide a level of monitoring that is suitable for this demand and also has been promised, particularly in an industry that allows for streamlining of information and costs. When considering the demands now made on universities, it is not surprising that upwards of 86% of Australian universities are moving towards these large systems (Beekhuyzen, Goodwin & Nielsen, 2002). Even though high level committees would have to approve such a decision, the idea did not originate from inside the university; external influences paid a major role. The need to take multiple perspectives is discussed in chapter 4 and a description of some the external influences is given in Chapter 5.

2.2.6 The Power of Selection
Fincham (1992) defines system selection as “the formalization of the patronage powers of senior incumbents, crucially legitimized by bureaucratic rules of rationality” (p. 752). The ability to control selection allows for the preservation of the dominant group’s power base by preserving the overall existing power structures; perpetuation control over all facets of organisational life which are dependent on the information system.

The concept of dominant coalitions does not imply that there can only be one dominant coalition per organization. Fincham (1992) argues that several of these coalitions can exist, using forms of knowledge and strategic influence to have an impact on decision making. Their power is based on the legitimate power afforded to them by the organizational hierarchy “And means that the corporate groups perpetuate organizational power by
perpetuating themselves” (p 752). The decision to implement an ERPs and the implementation style are usually in the hands of senior management and most research has been concerned with perceptions of success and how to avoid resistance during the implementation process. This will be discussed further later in this chapter.

Selection was a fundamental aspect of Harvey’s (1998) case study. The management used their power over selection to assign staff to the project, to choose where the project meetings would be held, and the level of surveillance was dictated by these methods of selection. At the end of the project, the management had access to more information about the project because of their earlier decisions. The choice of office space for the project team allowed management to eavesdrop on what they were doing, the choice of user representatives for the project allowed bias because the representatives were not held in high esteem and this limited the effectiveness of the project team.

2.3. Enterprise Resource Planning

ERP implementations are now of long standing and the literature discussing the advantages and problems of ERPs is considerable. Work by Davenport (1998) spells out the features of ERPs and these will not be discussed further here; specific functionality and other features will be mentioned later in the dissertation as required. Overall ERPs are systems which provide integration of data across an enterprise, superseding earlier and often fragmented systems. ERPs impose standardized procedures on the operation and use of computer-based systems and ideally should provide the following benefits; reduce overall costs, speed up decision making and centralize control of business processes and operations. They incorporate best practices rather than accommodating specific practices of individual client organisations; these best practices resulted from input from experts who defined the best way to operate in the target industry (Frantz, Southerland & Johnson, 2002).

The introduction of unified system architecture offers many positives. One of the main advantages on offer for a company implementing an ERP is data integration between business units (Davenport, 1998; Lawnham, 2001; Markus & Tanis, 2000). This will resolve problems caused by duplicate data as well as data entry, and will provide greater management access to data (Davenport, 1998; Markus & Tanis, 2000). The integration of
data will also provide easy reporting and Auditing (Markus & Tanis, 2000). The introduction of a new system into the company that will replace legacy systems, sometimes 20 or more years old will allow for added features to be included otherwise not possible (Holland & Light, 1999; Markus & Tanis, 2000). The comprehensive nature of ERP integration will allow for many tasks to be automatically performed leading to more efficient transactions and more automation (Davenport, 1998; Markus & Tanis, 2000).

The expansive ERP systems with their unified and off the shelf architecture have some disadvantages that need to be weighed against the benefits. Some of the disadvantages of an ERP implementation lie in the fact that ERP software is an off-the-shelf package. The consequence of implementing a system that is functionally similar to your competitors means that there is little difference from one installation to the next. The lack of customization forces companies into a fairly rigid software package that dictates how a business can be conducted (Davenport, 1998; Markus & Tanis, 2000). The software has also not been designed for the specific business requirements of the client designed for the generic company meaning that special circumstances and procedures will most likely not be catered for (Davenport, 1998; Markus & Tanis, 2000). Another obvious disadvantage is expense and lost investment in legacy systems. As with most information systems development projects, most ERPs implementations appear to run well over the budget (Holland & Light, 1999). It has been noted that the overall cost of the ERP system can outweigh benefits, i.e., competing on cost is harder when a system costs 500 million, than putting up with a less elegant system. (Davenport, 1998) The diversity found in companies is also an issue as existing units that were once segregated and autonomous will be integrated even though they may have provided competitive advantage whilst they remained separate (Davenport, 1998).

For universities in Australia and elsewhere who are continuing to face funding problems and large-scale changes in the way they operate, the attractions of a system which will standardize processes are obvious – it will enable more efficient and faster reporting to funding organisations, reduce administrative costs and help standardize practices, enabling the universities to meet quality accounting requirements.
2.3.1 Critical success factors
These advantages are clearly those valued by top management so most of the research discussion has centred on critical success factors primarily from the point of view of top managers (e.g. Sung & Gibson, 1998; Frantz, Southerland & Johnson, 2002). Features which may be valued by academic staff and students are rarely discussed. For example Frantz, Southland and Johnson (2002) study surveyed 308 chief financial officers and chief information officers at 170 higher education institutions in the USA. Of the best practice statements elicited, only one concerned employees – and that related to training – not to participation in design or consultation about work practices.

As Okunoye, Frolick and Crable (2008) note, there is a lack of research taking the perspective of other stakeholders, and where users are considered the emphasis has been on “how to control the users and not necessarily about empowerment through access to efficient information systems and increased productivity” (pp. 10-11). Several of the issues discussed in this chapter have alluded to or are applicable to ERP implementations. The following discussion will highlight other issues raised in the literature which focus on perspectives other than those of top management.

2.3.2 Organisational fit
ERPs have achieved great organizational fit in the industries that rely solely on large numbers of transactions that can be automated, such as mass manufacturing industries (Davenport, 1998). The successful centralization of an organization can create a good deal of efficiency. These benefits are gained from providing greater control over data, removing duplication and aiding in the efficiency of information processing, a clear beneficiary of such improvements are organizations that have a lot of inventory to track (Davenport, 1998); for example, manufacturing firms, as the system can automatically control inventory levels by knowing how much of what material goes into making a completed item, so when the end user tells the system that a product has been completed, it can automatically adjust all the inventory to subtract the completed products components, as well as provide automated ordering of parts to ensure that sufficient remain in inventory. Historically, the evolution of the integrated systems that are now called ERPs started as MRP (Manufacturing Resource Planning) and they were especially well suited to the inventory
based manufacturers. Over time the systems expanded into other business areas such as human resource management and financial management.

A corollary of this is that the ERP concept requires that people are once again fitted around ‘the machine’ (Frantz, Southland & Johnson, 2002), rather than having a system built to meet their specific needs. This may result in streamlining and ultimately gains in efficiencies but it may also cause deskilling and loss of expertise as staff are moved to new positions to fit the mandatory re-structuring. Access, security and many other functions of the ERP are based on ‘best practices’ embedded in the systems, but these might not suit every organisation.....

As mentioned earlier, one key result of ERP implementation is the centralization of key functions and information, allowing the organization to reel in remotely controlled and duplicated tasks and information, and providing (if the changes are successfully achieved) efficiencies and improvements in access and accuracy of these tasks/information. While providing defined job functions dictated by system access and best practice, the changes in roles and workload distribution require the ERP implementation team to be wary of issues of ownership as failure to do will reap disastrous consequences (Warne & Hart, 1996; Sillince & Mouakket, 1997). Research studies show that it is fundamental to the success of centralization that ownership of processes be identified and the risks involved with modifying perceived ownership assessed, otherwise change may be resisted (Markus, 1983; Keen, 1981; Sillince & Mouakket, 1997; Warne & Hart, 1996). As such it is essential to the success of any change project that involves centralization, that the existing culture and political setup be incorporated into the change design (Frantz, Southerland & Johnson, 2002).

A major consequence of many ERP implementations are changes to processes, often resulting massive job losses. One study of an accounting firm showed that 70% of jobs were lost through ‘new and improved’ processes leading to greater efficiency (Davenport, 1998). However, staff morale will be affected by ‘downsizing’ and in some cases work intensification (learning many new practices and taking on additional workload) and this may lead to the loss of expertise as key staff look for work elsewhere (Ezzamel, Willmott &
The integration of data that ERP provides can reduce the control of information, as multiple areas can access and edit, shift the power from one party to other, and this can be perceived as a threat to power bases and lead to political skirmishes if the parties feel inclined to battle for what they believe is theirs (Frantz, Southerland & Johnson, 2002; Taylor & Virgili, 2008).

To sum up, the research literature on ERPs falls into three general areas – factors required for ERP success, often referred to as critical success factors (e.g. Nah, Lau & Kuang, 2001; Wenrich, 2009), models for clarifying ERP implementation (such as Sharpanskykh, 2008) and the problems and benefits of ERP implementation. Because this dissertation is concerned with the experiences and perceptions of employees in the student administration section of the university, I have focused in this chapter on the latter area; most of the research in the first two areas takes a managerialist approach, measuring ERP implementation success by such factors as reduction in employees (Kamhawi, 2007), which is hardly compatible with success from an employee perspective.

### 2.3.3 User Participation

One exception to the above categorisation is the literature on ERP success which considers user participation, as essential for success (e.g. Kawalek & Wood-Harper, 2002).

However Pries-Heje (2008) argues that getting genuine participation in ERP design and implementation may be very difficult. She summarises approaches to participatory design according to the arenas suggested by Gartner and Wagner (cited by Pries-Heje, 2008); these are firstly the “individual project arena where specific systems are designed and new organizational forms are created (p. 49), secondly the “company arena” (p. 49) where how the organisation functions and where breakdowns occur are analysed by staff and new designs are suggested and implemented. Lastly the “national arena” (p. 49) concerns the legal and government framework. Pries Heje (2008) is concerned only with the first two areas but all three have implications for this dissertation, as will be discussed in chapter 10. This author found that even though the case organisation was genuine disposed to involving staff in the implementation of the ERP, a number of factors led to what she calls ‘pseudo
participation’; “a situation where users are asked to participate but not given the possibility to influence the design” (p. 62). This situation was not intention but was caused by several factors. These included allowing the ERP software to dictate the ultimate design of work practices and IT use, lack of understanding about how much the users understood and the best ways to enable them to become familiar with the ERP, including lack of support for helping users understand their options for how to use the ERP, and not taking into account or resolving conflicts of interests between groups of users which meant that some user groups “felt dominated by others” (p. 62). Other important factors included time constraints. In Pries Heje’s study this related to the end of the financial year; in tertiary institutions there are many important deadlines which must be met, such as cut offs for enrolment and graduation processing), as well as budget problems (and many other studies indicate that it is difficult to cost the ultimate expenditure for ERP implementation).

Overall, the research focus for ERPs has also been on implementations in large organisations and although many higher education institutions may be regarded a larger enterprises there are some indications that treating them the same way may not be productive, as will be discussed in the next section.

2.4. ERPs in the Higher Education sector

The Higher Education sector has been arguably subject to more restructuring and rethinking than any other sector in the 21st century. Furthermore in countries like Australia, higher education has become a major earner of export income (Olds, 2008). In this regard many authors challenge the notion that ERP type systems can in any way accommodate the strategic challenges facing universities and other tertiary education institutions (Moore, Fowler, Jessiek, Moore & Watson, 2008). In particular these authors point to the need to blend administrative and academic interests to a degree never before required, since the delivery of courses is increasingly dependent on information technology support and the recruitment and retention of students is very reliant on student support services. This dissertation explores the conflicts between the administrative and academic functions which some authors refer to as a cultural split; the student administration (support function) which
is the focus of this dissertation provides a striking example of how an ERP system could support or hinder the effort to blend previously separate functions.

To discuss in a wider context, the global trend of lowered government funding and government reporting and auditing requirements (Allen & Kern, 2001) has lead to widespread reactions of streamlining business processes and adopting new technologies to attempt to achieve these goals. The widespread adoption of ERP in the private sector, with the majority of fortune 500 companies having implemented ERPs (McGinnis & Huang, 2007) have given ERP vendors a good launching platform into the higher education market where efficiency is a primary objective of prospective buyers (Frantz, Southerland & Johnson, 2002; Siau, & Messersmith 2003).

With the motivation to replace existing systems with more efficient and integrated systems promising substantial savings, the adoption of at least one module of ERP in the education sector has been understandably high, exceeding 86% (according to Beekhuyzen, Goodwin & Nielsen, 2002). However there has been much less research into ERP usage in higher education and the question asked by Allen and Kern (2001) remains relevant; “why has there been limited research into phenomenon that directly affects academics and researchers in ways that few information technology initiatives have in the past”. These authors focus on implementation of an ERP at four universities, each with distinct differences between them and distinct differences in the style of the implementation, in terms of organisational structure, values, values espoused in different areas of the university, varying methods of communication and management of the change process. A distinctive feature of their study is the ‘split’ between the values of the academic and the corporate areas which led to different interpretations of the purpose of the university; the selection of software was based on the corporate view of necessity, not the academics’ view. This difference between academic and corporate arenas was associated with two completely different experiences of the implementation; more so than one might expect of different ‘departments’ within a single institution. However, many companies comprise a variety of different ‘subcultures’ (engineering, accounting, marketing etc) whose values are different, whereas the university comprises primarily two strong subcultures, one of which (the academic culture) is very old and adheres to specialized values distinct from the business values of most enterprises. The
Allen and Kern (2001) study is one of the very few to make clear this distinction, which will be explored further in this dissertation.

Allen and Kern’s (2001) study investigated the ERP experience within four universities, each of which exhibit different characteristics and implementation fundamentals. Of particular interest to this discussion are those universities labeled ‘A’ and ‘D’. ‘University A’ had an objective to limit the communications with the aim to reduce resistance, whereas ‘University D’ used open communication as its means of reducing resistance.

‘University A’ management proposed that by reducing the direct communication to all staff the affected staff would be more inclined to sit back and wait for things to unfold rather than actively inhibit the project before its completion. ‘University A’ did acknowledge that this approach also led to the spreading of half-truths and that staff used these to fill the gaps in their understanding of the implementation and its likely impact on their work and personal interests.

It is interesting that a project team would actively seek to reduce the information being circulated in its attempt to smoothly install a new system, considering that numerous authors on change posit that communication and strong team building are essential to smooth transitions (Kotter, 1996). It is also worthwhile noting that other authors overlook communication or view it as less important when considering critical success factors (for example, Sarker and Lee’s (2003) ERP implementation matrix).

While University D stated they had a relatively smooth transition to the new system due to their open communication policy there was still a large amount of unease and fear among staff, concerning possible loss of control, diminished autonomy and even loss of employment. One of the key aspects in the heavily cited Kotter’s (1996) change model is that of building successful coalitions and communicating shared goals and visions. It may be clear why University A suffered from their lack of communication, focusing only on involving those who were deemed necessary to enact the change and not to those who would be ultimately affected by the change, who were not invited to participate until the project was completed. However, in both cases, of open as well as closed communication, the common result was that staff experience feelings of increased centralization and
surveillance, as well as fear of losing control over their individual domains once the system was completed. This relates to the problem of how to achieve genuine participation discussed by Pries-Heje (2008) as mentioned above. It is evident that ERP implementation was problematical at both of these universities at both the individual project and company levels. As the project team has the potential to influence the organizational wide context and alter values and culture, the selection of the software and the setting of the overall constraints on the project have a large impact on the outcome and change that the organization will ultimately face.

As mentioned earlier Pries-Heje’s (2008) study was not concerned with the national arena – where the political and legal systems are negotiated. However, this dissertation will take the national context into account because of the pressure exerted by government both in terms of funding arrangements (and reductions), restrictions on student numbers and the pressure to attract overseas students to fund Australian university operations. Increased requirements for accountability in all areas also contributed to the pressure on universities to integrate their information systems. Allen and Kern’s (2001) study showed that the four universities varied from very traditional academic institutions to those with a more commercial mindset; they exhibited different styles of operation, seeking different outcomes from the ERP project and therefore handled the implementation very differently in terms of communication and control. This leads to the question of what university managements hold as their core values and how they view the future direction of the university. Hence we can see cultural (value) and economic differences may be exhibited in conflicts of interest, requiring power and political behaviour to achieve a resolution.

Allen and Kern’s (2001) study shows similarities to those discussed earlier, even though the types of institutions studied are quite different. Markus’s (1983) paper on politics and MIS implementations examined the installation of a financial system that centralized a company’s accounting reporting practices. This resulted in opposition from staff who once had the power to filter data to higher levels of management, but support from the staff who no longer had to receive filtered information. Harvey (1998) presented research showing that the design and implementation of a corporate wide system of document version control met with considerable resistance as it was out of alignment with the culture of the
organization. This is a recurring theme in the literature; that indifference to staff interests and organisational culture will create opposition even if management attempt to use open communication during the implementation process.

2.5. Conclusion
The review in this chapter has been carried out to support the research argument presented in chapter 1. It has focused on studies which either explicitly use political analysis or where the political implementations of information systems are significant. It confirms that the use of political perspectives in information systems research is still fragmented and this dissertation attempts to address this by applying a framework which uses multiple perspectives and dimensions.

It has been shown that power and politics can have a large impact on the daily operation of an organization (Davenport, 1998; Frantz, Southerland & Johnson, 2002; Taylor & Virgili, 2008). None of the papers reviewed take an explicit view of power (as proposed by Morgan, 1997) but most of them do embody a view that organisations are socially constructed or at least are heavily dependent on the perceptions of their members. (Morgan, 1997; Keen, 1981; Markus, 1983). Changes should be carefully thought out as negative reactions to change and perceptions of injustice that can cause inefficiency and undermine the positive intent of the system (Keen, 1981; Walsham, 1993; Knights & Murray, 1994; Morgan, 1997).

The major impact of ERPs on organisations is clearly shown in all papers reviewed, not only in terms of potential benefits, but also and more importantly for this study, in the transformation of work practices and organisational structures (Frantz, Southerland & Johnson, 2002). This inevitably affects the distribution of power and the social order within an organization. Most studies which examine user resistance or the effects of the ERPs on users are limited in their investigation of wider contextual influences and there is little evidence of a critical approach, which provides justification for the topic and approach taken in this dissertation.

The research on power and politics in ERPs implementation is still in its early stages and the use of a broad framework to capture detail at a number of levels or dimensions would be
useful. Concepts of power as they relate to information systems research also need to be clarified. Lastly there has been little research on ERPs implementation in higher education which focuses on the impact on the academic or student arenas. This dissertation will attempt to addresses these gaps. The following chapter reviews the literature of power and politics to define the theoretical framework used in this study.
Chapter 3 – Research Approach and Method

3.1. Introduction

This chapter explains the research approach and methods used in the research study. It discusses the reasons for choosing specific methods, while the application of these methods is covered in chapter 5, where details of the research site are also described. The theoretical frameworks for this study including the perspective on organisations are discussed in chapter 4. The research approach adopted belongs to the critical tradition (Kvasny, 2006) while the method adopted is that of case study (Yin, 1994). The qualitative techniques for data collection and analysis are also discussed and provide a basis for the explanation in chapter 6 of how data analysis was performed.

The ‘critical’ spirit of this research is consistent with Giddens (1984, 1996) view that all social research is ‘critical’; in other words, unlike the natural sciences, research in social science cannot be insulated from its subjects. The results of research, in building theories or rethinking basic concepts may have a transforming effect on society; in this case on perceptions of information systems implementation and the benefits of ERPs Giddens (1984) further emphasises that social science unlike natural science cannot be ‘held back’, to stimulate change when desired or thought appropriate. Once research is published it is ‘thrust back’ into the world which it has examined. What is more, this effect can occur during the research process during the interaction between the researcher and subjects, so that the research questions and objectives may also be transformed by these interactions. This aspect of the research process will be discussed in the section dealing with the evaluation of research.

The chapter firstly considers the research tradition in information systems research which this study belongs to (section 2.) The research assumptions are discussed in section 3 along with the research approach and the choice of critical theory as the underlying basis for the approach. The discussion of the case study method in section 4 includes an explanation of
the interview strategy and the approach to data analysis. The criteria for evaluating the research are outlined in section 5 and the ethical considerations in section 6.

3.2. Information Systems Research Traditions

Information Systems research is similar to other disciplines in its interest in the research approaches considered suitable as well as the use of reference disciplines (Mingers, 2001). The study by Orlikowski and Baroudi (1991) identified three main approaches to information systems research – positivist, interpretivist and critical and found that around 97% of research publications appearing between 1983 and 1988, used a positivist framework. However Mingers (2001) points out that since then there has been a growing interest in and use of other research approaches so that by the late 1990s around 16% of research papers had adopted an interpretive approach. Around the same time research which took a critical perspective was “establishing legitimacy” (Kvasny, 2006, p. 196) and there has been continuing interest in this view, particularly for “uncovering systems of institutional repression and human resistance [drawing] attention to power relations in human contexts” (Kvasny, 2006, p. 197).

There has been a long standing debate over the incommensurability of paradigms and the traps of the ‘paradigm mentality’. (Jackson & Carter 1993; Willmott, 1993). It is not the purpose of this dissertation to examine the validity of the paradigm categorization that was originally presented by Burrell and Morgan (1979), and later related specifically to information systems by Hirschheim and Klein (1989). However, since it is a strong tradition in information systems research to examine and justify the research approach, the next two sections will explain why the critical approach was adopted in this dissertation and how it has been used in information systems research.

3.3. Research Assumptions

In brief, the question of research traditions involves the assumptions about epistemology and ontology which the researcher brings to his work. Burrell and Morgan’s (1979) seminal work analysed assumptions in social science research about the nature of social reality (ontological assumptions) and the nature of knowledge (epistemological assumptions about
how valid knowledge may be discovered). If the subjectivist approach and the objectivist approach are seen as two extremes, the differences between them are incommensurable (Iivari, 1991) in terms of human nature (deterministic versus voluntaristic), information technology (deterministic versus human choice) and the nature of the social world (realist versus nominalist). The view taken in this dissertation is critical which sees social reality as historically constructed (Chua, 1986). As will be discussed below, the critical perspective takes into account the social practices which are contextual to the study rather than taking a ‘snap shot’ of a specific situation. The critical view is also seen by some authors (such as Guba, 1990) as combining a realist ontology with a subjectivist epistemology; in other words the social world is concrete in its effects on the individual while knowledge of that social world can only be obtained through the firsthand accounts of participants. This interpretivist stance posits understanding actors’ views of their social world and their role in it. The researcher can never achieve a neutral stance because prior beliefs, experience, values, assumptions and interests will intervene and shape the investigation. Individuals act towards situations on the basis of the meaning that it has for them; meanings arise out of social interaction and are developed and modified through an interpretive process (Orlikowski & Baroudi, 1989). Critical studies are not regarded as incommensurable with interpretive approaches (Guba & Lincoln, 2005; Denzin, 1992; Clough, 1992) which seek to understand reality from the subjects’ perspectives.

3.3.1 Choice of research approach
As discussed in chapter 1 ERP implementations continue to dominate the information systems sector even though the results have not been uniformly beneficial (Pozzebon &Titah, 2006). Therefore it is worthwhile to attempt to uncover firsthand accounts, as mentioned above, of how ERP systems are viewed by the users. The approach taken by this dissertation is that information systems communicate meanings, rather than reflect ‘objective’ reality. So it is appropriate to use a qualitative approach which allows the researcher to understand the meaning of ETPs to participants. Maxwell (2005) also states that qualitative research can help focus on the context and perhaps most importantly can enable identification of “unanticipated phenomena and influences” (p. 22). As mentioned earlier, it was not the intention of this study to measure or test what had already been
established by other studies, since the Student Administration area – the service oriented SAOs have not been studied in relation to ERP implementation. Hence although a general research question has been posed, no particular results were anticipated at the beginning of the study. Some of the findings which were not expected and seem not have been discussed in previous research are explained in chapter 10.

The qualitative approach is also necessary for uncovering and critiquing the ‘dominant discourse’ (Deetz, 1996) of ERP implementation. In reviewing Burrell and Morgan’s (1979) approach to paradigms, Deetz (1996) categorized research approaches along two dimensions. Firstly he was concerned with the status of the concepts used by the researcher. (Concepts in this regard can be thought of as ‘theoretical ideas’ (Schwandt, 1997), such as variables, relationships or classes of objects). At one extreme, concepts are local (highly dependent on context), specific and emerge/are clarified and defined during the interactions between researchers and subjects. At the other extreme, concepts are ‘elite’ or ‘a priori’; they are brought to the study by the researcher and remain unchanged or ‘controlled’ throughout the study. The former approach is to build theory and is basic to the interpretive view while the latter approach enables theory testing and reflects the normative or functionalist view.

Relations to dominant social discourse

![Diagram](image)

*Figure 1  Contrasting dimensions in research* (adapted from Deetz, 1996)
In the current study, I have adopted specific notions of power and politics as ‘sensitising concepts’ (Blumer, 1954) and these concepts are explained in chapter 4. However I had no intention of maintaining a rigid stance on these ideas and I also remained open to the interpretations which the subjects expressed about how power operated in their environment. This is shown most clearly in my discussion of how the subjects viewed ‘resistance’, about which there has been considering information systems research, primarily from the management perspective. My approach therefore aligns with the emergent approach to concepts.

Deetz’ (1996) second dimension is similar to that of Burrell and Morgan’s (1979) dimension of social order and social conflict, except that Deetz expresses it as the relationship of the research to the dominant social discourse. At one extreme the researcher works within the ‘consensus’, the dominant set of ideas about social activities and products (such as information systems) and treats existing situations as natural and harmonic. Whereas at the other extreme the researcher dissents from these conventional ideas and seeks to disrupt the dominant discourse, uncovering tensions and inequities in the existing systems. According to Deetz (1996) interpretive studies belong to the ‘consensus’ tradition whereas critical studies belong to the ‘dissensus’ tradition. As mentioned above, researchers such as Pozzebon and Titah (2006) have challenged the discourse which allows ERP systems to be seen as uniformly beneficial and effective. In this dissertation I attempt to give voice to information systems users who might be viewed as victims of the dominant practices and contrast their views with the ‘official’ and accepted views of ERP.

3.3.2 Critical Social Theory
In his discussion on perspectives on organisations (which I take up again in chapter 4) Leflaive (1996) suggested that the key components of Critical Social Theory (CST) are that it opposes positivism, distinguishes between past and present, argues that domination is structural (i.e. gender, politics, culture and so on are institutions/structure that impose domination), that these structures of domination are reproduced and reinforced through peoples’ false consciousness (that is promoted by their ideology). Structure and agency are dialectical, meaning that although structure conditions everyday experiences, knowledge of the structure aids in changing the social conditions and allowing for emancipation.
The primary objective of CST is the improvement of the human condition. Unlike traditional social theory which takes ‘what is’ for granted and reinforces the status quo, CST looks for better solutions to the current situation and is intimately concerned with emancipation (Ngwenyama, 1991). This aspect of CST is considered a significant weakness, but since this dissertation is not concerned with taking action, the emancipatory aspect will not be discussed further.

In the information systems field Ngwenyama and Lee (1997) suggest five basic fundamental assumptions for CST. The first point, people have the power to change their social world, implies that while people are fundamentally autonomous, people are also bound by their situations. We all may be ‘free’ to quit our jobs or break our contracts, but the flow on effect to the rest of our lives (supporting children or a spouse, etc.) will limit what realistic choices people have available. This acceptance that rational choices are bound by circumstance will bring into focus what are realistic courses of action for those in any given situation.

The second point - that reason and critique are inseparable makes reference to particular definitions about reason, namely Marcuse’s explanation and the Hegelian sense of reason (Ngwenyama, 1991). Marcuse stated that reason is understanding, critiquing and searching for alternatives to the present social situation. The Hegelian sense is described as the “critical faculty which reconciles knowledge with change towards the goal of human freedom” (Ngwenyama, 1991). Reason in these senses allows for otherwise distorted social situations to be understood.

Ngwenyama and Lee (1997) discussed distorted communication and how seeing through the distortion can liberate, which is similar to Agger’s (1998) discussion on false consciousness (discussed further below). It would seem that CST is focused on a covert force that is oppressive in nature, be it poor communication or a misconception on the behalf of the participants in the reality, something is fundamentally wrong with this world and a CST researcher aims to uncover it.
3.3.2.1 Habermas on Rational Discourse and False Consciousness

Emancipation from distorted communication comes from realizing that the discourse that one is presented with is not complete or clear but distorted (intentionally or otherwise) by the speaker (Ngwenyama & Lee, 1997). CST owes a great deal to Habermas’ (1979, 1984) notion of rational discourse, which proposed that undistorted communication must be intelligible, truthful, adequate and appropriate. These involve both the intentions of the speaker (or writer) for example to be truthful and the understanding of the listener (or reader) for whom the communication must be understandable, sufficient and take into account social norms (what can be said appropriately in different circumstances). The emancipatory effects on consciousness can be realized by questioning the accuracy, completeness, validity and also the capabilities of the actor to make statements offered in discourse. So when questioning the communication (and finding that it is distorted) the receiver of the communication will discover that the meaning that is meant to be transferred from speaker to actor is not necessarily accurate or sincere, but what the speaker wants the listener to believe. Political power and activity can be concealed by ‘irrational’ discourse (Keen, 1981); participants who take what is said literally and at face value will remain ignorant of the use of power, which may be to their disadvantage and to the benefit of those engaged in politicking (Markus, 1983; Jasperson et al., 2002; Keen, 1981).

The notion of ‘false consciousnesses and rational discourse also brings into focus the place of the CST researcher and their relationship with the study’s subjects. This is similar to the trap of the political metaphor which Morgan identifies (1997), discussed further in chapter 4. That is, the researcher adopts a critical view and may assume that subjects are victims of false consciousness whereas they may have great insight but feel powerless to make changes to their situation. This can result in a form of arrogance identified by Agger (1998): “when in all fairness to the theory the researcher is a part of too, having the false belief that he/she can see what is really happening and no-one else can”. In other words, false consciousness can be viewed as elitist, implying that the analyst/researcher ‘knows better’ than the subjects studied. This can be seen as problem for all research; that the researcher has special knowledge or insight denied to the subjects but false consciousness takes this one step further; it implies that the subjects are in a state of delusion or servitude to
particular ideas which they cannot unravel and that they require to have their ‘consciousness raised’. I discuss this problem as an aspect of the evaluation of the research, later in this chapter.

The ‘false consciousness’ of Habermas is similar to that of Marxism, in that it analyses how ideology may distort consciousness and sustain that distortion, and aims to achieve a transformation of consciousness. However the Marxist view is deterministic, that the transformation will lead to a form of action which can be predicted (such as the abolition of private ownership of intellectual property) whereas Habermas asserts that the results of achieving the ideal speech situation (mentioned above) cannot be predicted. This assumes a voluntarist view of human nature in contrast to the deterministic view of Marxism (Mezirow, 1981).

3.4. Research Design

The problem of power in ERP implementation could be tackled through a number of different methods. Quantitative methods were rejected since it was the aim of the research to explore the concepts and issues and what they might mean to the subjects, rather than to measure well defined variables. The critical view also does not support a deterministic approach where specific factors are expected to have a causal relationship with events and phenomena. Action research was not feasible since the project was already underway and the researcher did not hold a position in which he could carry out change. Other methods such as experiments are also not applicable as they require a controlled environment.

The research method used for this project was a single case study. Background information about the case and the conduct of the study is presented in Chapter 5. The discussion below will focus on the choice of methods and techniques.

3.4.1 Case Study

Case studies are most suited to the investigation of a specific instance of a phenomenon (ERP implementation), in contrast to the ‘variable’ study, where focus is on the variables rather than on the specific concrete case. The object of a case study is a real life situation in all its complexity and the objective is to describe and interpret the meaning of the case, rather than to make associations between variables which can be measured and controlled
for the study. A case cannot be controlled by the researcher and this will of course affect the choice of data collection methods which may be used, as well as the analytical strategy.

Ragan (1992) suggests that a case may be a person or group, an event, or an organisation or institution or a combination of these elements. In this dissertation the case comprises the groups of people using or affected by the Student Administration module of a new ERP system in an Australian university. A case is of practical interest as well as of potentially theoretical significance. As discussed in chapter 1, the practical interest of this case is the usability of the system and the reactions of the users, whereas the theoretical significance is what the case can tell us about how power operates amongst such a group within a particular context, in relation to information systems implementation. The case is therefore both ‘real’ (able to be independently identified as existing in the real world’) and a theoretical idea in the mind of the researcher. The case study should provide knowledge of a particular instance as well as extending knowledge of more general issues and ideas.

Yin (1994) argues that this general knowledge is in the form of “analytic generalization” (p. 30). This is in contrast to “statistical generalization … [in which] an inference is made about a population (or universe) on the basis of empirical data collected about a sample”. Instead individual cases are chosen in a similar way to the way that laboratory experiments are chosen. Analytic generalization uses a previously developed theory as a “template with which to compare the empirical results of the case study.” In this dissertation the ‘template’ is provided by the concepts and theories relating to power, discussed in chapter 4. However, ‘template’ suggests a rather rigid application whereas these ideas are used more as ‘sensitising’ concepts, as was first suggested by Blumer (1954) who argued that while “definitive concepts provide prescriptions of what to see, sensitizing concepts merely suggest directions along which to look (Blumer, 1954, p. 3). Walsham (2006) explains this as using concepts as an initial guide to design and data collection.

Walsham (1995) also proposes that four types of generalizations can be drawn from interpretive case studies. Firstly new concepts may be developed. In this dissertation, the concepts of power and the exercise of power are further explored. Secondly, new theories may be generated. Thirdly, specific implications may be drawn and finally the case may
contribute rich insights. In chapter 10, implications for ERP implementation are discussed and the additional findings may be viewed as rich insights.

Yin (1994) favors the use of case studies when the literature about a subject is lacking and Winegardner (1999) labels this kind of research as ‘exploratory’ and ‘exploratory’ and able to provide new insights into a topic. Although when this case was started over 85% of tertiary education institutions had adopted at least 1 module of an ERP package (Beekhuyzen, Goodwin & Nielsen, 2002), most of the implementations were in the early stage and very little research had been carried out in this sector. As mentioned in chapter 1, political analysis of ERP implementations is still lacking and so a case study approach was deemed most suitable; enabling investigation into the relationships in an organization, to analyze the social constructs that underlie these interactions (Darke, Shanks & Broadbent, 1998).

Case study research is well documented in information systems research. As discussed in Benbasat, Goldstein & Mead (1987) there is no standard definition of a case study or approach, but they do agree that a case study consists of multiple methods to gather information and data about the subject, researching, researching the case in its natural setting.

Typically research for case studies consists of a number of sources of evidence; documentation, interviews, observations, participant-observations and artifacts (such as information systems). In combination these provide the basis for a rich description of the research site and subjects (Darke, Shanks & Broadbent, 1998). The details of data collection for this study are provided in chapter 5.

### 3.4.1.1 Sampling for interviews

The interviewees were selected by purposeful sampling, based on their position in the University, or by their recommendation by other interviewees (referred to as snowballing). In line with Patton’s (2002) notion of choosing information-rich cases, the interviewees were also experienced, having mostly been with the University for over 10 years, having a considerable historical knowledge and understanding of the internal processes.
Criterion sampling, which filters interviewees as they relate to the research objective was also used (Patton, 2002), as the researcher sought information from different aspects of the University to form an understanding of how the implementation was viewed from all sides (Patton, 2002). The first group of staff identified were the School Administrative Officers (SAOs) who are located in individual academic departments/schools and provided direct support to the academic and general staff and students of that specific school). The second group (SAs) was selected from the Student Administration division, the, the centralized department that looked after the student enrolments, degree, degree requirements and other administrative tasks involving students. In the SA area, both Front Desk staff (who had direct contact on a daily basis with students and other inquirers) and management were interviewed. Staff from the Information Technology Division and project team members concerned directly with ERP implementation or support were also interviewed.

### 3.4.1.2 Interview strategy

Schwandt (1997) suggests that there are three ways to think about interviewing for qualitative studies. Firstly, they may be seen as a “set of techniques for generating and analyzing data”; secondly as a particular type of human encounter where the needs of the interviewee and the relationship with the interviewer need to be taken into account. Lastly, the interview can be regarded as “a linguistic event unfolding in a particular … context”. Each of these ideas was taken into account with the conduct of the interviews. The researcher was aware that the interview could be regarded as a performance rather than a straightforward provision/elicitation of information which could be taken at face value. The very theoretical framework which is used in this research must alert the researcher to the political nuances of the interview situation where the interviewee may see the interview as a chance to represent a particular viewpoint, or to have a particular effect.

For qualitative research there are three basic approaches to interviewing (de Laine 1997). Structured interviews are most appropriate for positivist research in that they seek to elicit consistent answers to the same questions across a range of interviewees, with the assumption that there are a set of facts ‘out there’ which may be uncovered via the interviews; that the questions have well defined language which will be understood similarly by all the interviewees. Semi structured interviews involve a list of topics to be
covered but the interviewer must improvise the questions since it is not assumed that the interviewee will readily interpret the question in the same way that the interviewer intended it. The strategy taken in this dissertation was to use a combination of semi structured interviews and informal interviews.

Only a limited number of staff were appropriate to be interviewed, as outlined above and this is consistent with the theoretical framework being used - focusing on processual power (whose target is a small group of staff working with a system) and seeking out staff (such as managers) from the wider organisational contexts to elicit contextual information and perspectives.

Therefore the researcher chose to conduct long (up to 90 minutes) interviews using the approach mentioned above. This is contrast to the ‘stimulus-response’ model of interviewing consistent with the positivist paradigm (Foddy, 1993). Instead the researcher was interested in how the interviewees experienced the ERP implementation and allowed time for reflection since the researcher needs to continually take into account the context within which the interviewee has been working; in other words, must try to understand the interviewee’s world and how that will affect what the interviewee is prepared to say (Fontana & Frey, 1994). Sections of the interviews therefore often resembled what Patton (2002) calls informal conversational interviews. Views on general topic areas were sought, including perceptions of the information system, how the information systems related tasks were perceived, ideas about status and importance of positions, relationships and interactions with other staff, the interviewee’s sense of ownership, and how they perceived the ‘dominant’ culture, power bases and political roles. When interviewees raised topics which they presented as interesting or significant, these were pursued as far as possible. This flexibility also aimed to overcome some of the difficulties of interviewing outline by Myers and Newman (2007) – shyness, lack of trust in the interviewer and caution about mentioning controversial issues.

3.4.1.3 Documentation

Yin (1994) emphasizes the importance of documentation as source of information about formal policies and procedures, which should not be taken literally but used to corroborate
or question the representations made by interviewees. The documentation if consulted before interviews will often allow the researcher a better understanding of the technical aspects of the case, saving time in the interview as the interviewee does not have to spend time defining and explaining work practices, procedures etc.

The documentation that is used in this dissertation is taken from the university’s website, particularly the web pages concerned with the student administration division and ERP systems, as well as formal reports written on university matters (such as the management restructure), annual reports and formal communiqués from the ERP project.

3.4.1.4 Triangulation

The idea of triangulation comes from navigation, where taking your bearings from more than one landmark will enable you to more precisely identify your location. In research terms this means that using more than one perspective will likely stop you from misreading the situation or being influenced too greatly by the appearance of one ‘landmark’ or source of information. Denzin (1992) identified four kinds of triangulation – investigator, theory, method and data. Although triangulation as a research technique is widely approved of in information systems research (Orlikowski and Baroudi 1991), other authors such as Lincoln and Guba (1985) are more doubtful of its value; that an interpretation validated by more than one theory etc., indicates more about the similarities of the theories than the validity of the interpretation. However, they do concede that data triangulation is the least problematical and that is most applicable to this research.

Data Triangulation is the means of assessing the integrity of inferred meanings by checking information from several sources (Schwandt, 2001). By combining several sources of data or research information, bias in social research can be minimized, as one interviewee could have had a very different experience than the majority; by mapping several sources of data to an event a more accurate picture will be presented. My study utilizes triangulation of data, by comparing several sets of interview and documentation data, investigating those discrepancies where they occur.

The multi-dimension nature of the theoretical framework also provides some theoretical triangulation as data is viewed through several theoretical lens. This will be explained in
chapter 6 where the process of data analysis is shown. Triangulation utilizing multiple theories (as the theoretical chapter will detail) provides a richer perspective on the data collected.

3.4.1.5 Data analysis

In qualitative research data analysis is an ‘iterative process’ (deLaine, 1997) and theorizing about what the data means is carried out from the first days of data collection. (As mentioned above, this also influences the selection of subsequent interviewees and leads the researcher to look for documentation which may help to explain puzzling practices etc.)

Furthermore, Schwandt (1997) contrasts traditional approaches to qualitative data analysis where “inquirers place a premium on analysis as a science” (p. 4), systematic and methodical, with other approaches such as hermeneutics. The latter approach is taken in this dissertation, consistent with the hermeneutic perspective discussed below; that is interplay or “dialogue between the analyst (interpreter) and the ‘object’ of analysis …data in the form of various texts like field notes, transcriptions and so on” (p. 5). Rather than breaking the texts (interviews etc.) into elements, categorizing and coding, and then reassembling the parts to establish patterns, the analyst relates each part of the text to the immediate and wider context., “The interpretation of each part depends on the interpretation of the whole and vice-versa” (Schwandt, 1997, p. 63). In other words the meaning of the whole text (interview) is sought as well as the meaning of specific elements of the text. Again, this is consistent with the representation of the theoretical framework in chapter 4 where each of the theories is concerned with a broader context. Analysing a section of an interview against each of these theories allows the development of understanding “from the ‘whole’ to the part and back to the whole” (Myers, 1997).

The process of data analysis is informed (but not constrained) by relevant theories and concepts which are used as ‘sensitising’ concepts. The notion of sensitizing concepts has been extensively used in information systems research (e.g. Walsham & Han, 1993; Barrett & Walsham, 1995) where the researcher attempts to explore the sense making of the subjects rather than imposing a theoretical schema on the data through the rigorous application of definitive theories. The idea was first suggested by Blumer (1954) who
argued that “whereas definitive concepts provide prescriptions of what to see, sensitizing concepts merely suggest directions along which to look (Blumer, 1954, p. 3). Walsham (2006) explains is as using concepts as an initial guide to design and data collection.

In this way, the analysis aims to produce a ‘thick description’ (Geertz, 1973), and this takes the form of interpretations of other people’s interpretations rather than a set of facts (Walsham, 2006). The account of the case and the researcher’s experiences in the field work provides both an intense focus on the object of study and puts the object into context (Holloway, 1997). The notion of thick description has been taken up in several areas of information systems research and is described by Lincoln and Guba (1985) as a way of achieving a kind of external validity. As will be discussed later, the description of a case in sufficient detail enables the author to evaluate the extent to which the conclusions drawn are transferable to other times, settings, situations, and people.

### 3.5 Principles for Evaluating Research

The conduct and outcome of the research reported in this dissertation will be evaluated in the final chapter, using the principles proposed by Klein and Myers (1999) which have been widely used in information systems research. Although these are designed for interpretive field studies, the authors acknowledge that they are applicable to critical research which takes a more subjective approach (which as discussed above, this research does take). The principles are discussed more fully in the conclusion to this dissertation but it is worth while mentioning a few points which will help support the arguments given so far in this chapter about the reasons for choosing research approach and method.

1. The Hermeneutic Circle

“This principle is foundational to all interpretive work of a hermeneutic nature and is in effect a meta-principle upon which the following six principles expand. The idea of the hermeneutic circle suggests that we come to understand a complex whole from preconceptions about the meanings of its parts and their interrelationship” (Klein & Myers, 1999, p. 71).

This principle focuses on specific phenomena (events, images, phrases) and reflects on their meaning within the context of surrounding events (the immediate context) and wider
influences. The interpretation moves from a narrow focus to a wider view and back again and this iteration of reflection and understanding gives the researcher a more complete picture of context and understanding than detailed attention to any single element could achieve.

This idea of context, iteration and reflection on events fits well with the multiple perspective framework described in chapter 4. It is expressed as a series of concentric circles like ripples on water, except that the movement of influence is potentially in both directions. Focus moves from the person and their relationships within a group to ‘higher’ level activities across an organisation, industry or social group. This understanding on a person to person level can offer understanding of group to group relations; conversely group to group relations can also offer insight on behaviour at the individual level.

2. Contextualization

“The principle of contextualization is based on Gadamer's insight that there is an inevitable difference in understanding between the interpreter and the author of a text that is created by the historical distance between them. The hermeneutic task consists, not in covering up the tension between the text and the present, but in consciously bringing it out” (Klein & Myers, 1999, p. 73)

The history of an organization is of interest to my research. Analysis of existing documentation offers insight into what is officially stated, compared to what is actually occurring, lending itself to often interesting contrasts of management designs versus organizational reality then be contrasted against what is actually happening. The university’s mission and vision statement will be analyzed and presented in Chapter 8. These contradictions can highlight failures in the organizational processes or shortfalls in power structures that are intended to see things work as planned.

Trends and movements in higher education as well as movements within the university also provide important context for the understanding of the details of ERP implementation.

3. Interaction between subjects and the researcher
“Whereas the principle of contextualization places the object of study in context, this principle requires the researcher to place himself or herself and the subjects into a historical perspective” (Klein & Myers, 1999, p. 74). This means that the data collected by the researcher are not seen as existing objectively “like rocks on the seashore” (p. 74). Instead what we think of as ‘facts’ are produced by the interaction between the researcher and the subjects and this needs to be made clear to the reader.

This principle is aimed ensuring that areas such as the subjects’ perceptions of expertise and any relationships between the researcher and subjects are made clear and taken into account. Thus the researcher understands that perceptions elicited through interviews, etc are bound to be mediated through his own experience. Providing details about the motivation for the research and letting the subjects to ‘speak’ through inclusion of the actual words, can allow the reader to take into account the researcher’s participation in the project and how that is bound to influence the interpretation. This may be viewed as a weakness of interpretive and critical research but making these relationships clear provides more integrity than a semblance of ‘objectivity’ which treats the researcher as if he is not at all implicated in the study.

4. Principle of Abstraction and Generalization

Klein and Myers (1999) point out that the two principles just outlined show that the focus is on features which are unique to the specific case being studied. This brings up the question of what can be learned from such studies. Can anything be generalized from such specific accounts? The question of generalisability has already been discussed in section 3.4.1. The authors point out that theory is important in interpretive research (and I suggest all types of research) and the use of generation of theory shows that such research is not some form of anecdote or weak explanation.

This is something that I attempting to represent with this research. I am not proposing that all situations can be treated the same, the very nature of people and their free will defeats that statement. What I am proposing is: given the right tools (theoretical frameworks and perspectives), selected on their capacity to deal with traits believed to be common among people, a consistent application of the theory is possible and plausible. This is the
generalization that I am hoping to achieve in my research, to strengthen the “tools” that I use in conducting research (see Chapter 4) thus allowing them to be used at more than one research site and more particularly used away from the research site at which it was developed. Thus the outcome of this research is more to do with *phronesis* (Schwandt, 1997) – the development of the capacity for analysis and understanding – than *episteme* – the development of general laws and principles. This is consistent with the view expressed earlier that the concepts involved in this research need clarification, but their application is local and specific.

5. Principle of Dialogical Reasoning

“This principle requires the researcher to confront his or her preconceptions (prejudices) that guided the original research design” (Klein & Myers, 1999, p. 76) It is important to make clear the research traditions within which the researcher is working and this has been discussed in chapter 1. The weaknesses of the theoretical framework are also considered in chapter 10.

Prejudices are not ‘negative’. The hermeneutic perspective views the as inevitable and Klein and Myers (1999) cite Gadamer’s distinction between ‘true’ prejudices which help us understand and ‘false’ prejudices which cause us to misunderstand. Honesty about opinions is the most important point and in this dissertation the explanation of the theoretical framework and identification of the critical perspective allow the reader to understand how the author may view the case. Also, it is hoped that the multiple approaches used in the theoretical framework will enable checks on the interpretations of the research data. If there are differences between interpretations, a reexamination via the different perspectives (as carried out in chapters 7-9) may prove corrective. Several theories are utilised and they provide different views.

6. Principle of Multiple Interpretations

“Whereas it is possible to apply the previous principles to texts from only one source, this would ignore that human actions are conditioned by a social context involving multiple agents.” (Klein & Myers, 1999, p. 77) Although this study does focus on the SAO group, staff from other areas were interviewed and documentation analysed. It is made clear
throughout the dissertation that the SAO perspective is being taken. However, for example, in chapter 6 the perceived success or failure of an ‘influence attempt’ is considered again by reference to the wider perspectives and reinterpretation of success and failure is offered. Klein and Myers (1999) suggest that “conflicts related to power, economics, or values” (p. 77) may be taken into account. Also the conflicts between different accounts are considered in chapters 8 and 9. Overall, the use of the multiple perspectives framework ensures that other views are taken on the interpretation of a specific event. The shortcomings of any one theory or perspective are at least partly compensated for by the other perspectives (guided by the work of Sillince and Mouakket (1997), Knights and Murray (1994) and French and Raven (1959).

7. Principle of Suspicion

The discussion of the previous six principles indicates why these principles are also largely applicable to research which takes a critical (but not functional) perspective, even though as Klein and Myers (1999, p. 78) point out, these principles have more to do with “various forms of critical thinking, [and] on the whole they are more concerned with the interpretation of meanings than with the discovery of "false preconceptions."” They adapt the work of Ricoeur on ‘the hermeneutics of suspicion’; “that it is possible in certain circumstances to see consciousness as "false" consciousness” (p.78) and remind us that Critical Social Theory has pursued this idea more vigorously than interpretivism. In this dissertation the ‘taken for granted’ ideas about ERPs and higher education are critically viewed as potentially contributing to circumstances not beneficial to most of the participants (chapters 9 and 10).

Also, as discussed in chapter 1, ‘organisation’ is intangible and may be viewed various ways. Conventional wisdom about organisations is challenged by this principle – the researcher assumes that things could be otherwise and that the accepted views are not necessarily the ones which promote the best interests of all stakeholders. These can include appropriate organisation structure, reward systems, work practices and in the case of this dissertation, approaches to information systems implementation and the selection of appropriate software.
A common example is the social distortions created by one party to manipulate another party, “Social constructions of reality can favor certain interests and alternative constructions can be obscured and misrecognized” (Deetz, 1996, p.202). To illustrate, if an individual wishes to influence another, they could manipulate the environment to make certain behavior seem undesirable, encouraging the target to behave in a way that is acceptable to the initiating individual, such as propagating rumors or misinformation that the intended target is bound to intercept and evaluate as truth (Cult leaders influence over members is a prime example of this creation of such a rich and controlling reality). This is also ties into the power interaction framework (Raven 1993) as the initiating party can “set the stage” to tip the scales in their favor.

The seven principles are reviewed in chapter 10, to consider the achievements and limitations of the research presented in this dissertation. They are discussed here because they formed the guiding principles for conducting the research.

3.6 Ethical Considerations

Modern social research requires care and consideration to ethical standards and clearances that are expected to be imposed on published research. Since this project commenced Griffith University has set up detailed procedures for identifying and dealing with ethical issues in research which collects data from human subjects. Although I was not required to undergo this process the principles were clearly outlined and have been adhered to. Among these expectations is the privacy and anonymity of all research participants and the protection of the welfare of the research participant. In fulfillment of these obligations I clearly outlined the topic area, detailed the purpose of the interview, and provided background information. All research participants completed a basic form to outline that they understood the usage of the research data that was gathered and it was to be used in my research into the social phenomena of IT Implementations. They were made aware at the outset that they were not under any obligation to participate and could end the interview at any time they wished to and that they would not be identified by name or detailed description in any way. None of the data has been shown to anyone other than my supervisors and the names and job titles of all participants have been changed. Since the
case university has undergone substantial reorganization since the study was completed, none of the positions or section names remain the same. With the outlining of the limits of the research usage and their acceptance of the limits of the use of the research I have every confidence that any ethical issues will have been addressed by the conduct of this study. With the research participants being a part of the university they were well accustomed to assisting with student research and were sympathetic to the reasons I was seeking their time.

3.7. Conclusion

In this chapter the research assumptions and methods which underlie the research project are discussed and it is shown how the project relates to information systems research traditions. In chapters 1 and 2 it was argued that there is insufficient knowledge of the political context of ERP implementation and that this has been insufficiently studied from the point of view of the user.

Therefore a critical approach is appropriate, which, which seeks to uncover covert meanings and behavior, to disrupt the ‘dominant’ discourse of ERP implementation and to clarify concepts which are still considered messy and ill-defined. Critical studies and qualitative research are now well established in information systems research but have not been widely applied to ERP research.

The research method was chosen after consultation with academic supervisors and managers at the research site. The case study was chosen rather than action research or ethnography for practical reasons of access and position; the researcher was not in a position to influence the implementation and intensive access to the research site to enable an ethnography was not feasible during the period when data could be collected (as staff were very occupied with adapting to a new system).

The case is viewed as of both practical and theoretical interest and the notion of the case as a theoretical construct was discussed as relevant to the political perspective. In a similar vein, the approach to data collection and analysis seeks to understand the political context of ERP implementation from the point of view of the subjects, not to impose preconceived
ideas upon the field of research, but to tie the interpretation to well established theories of power and political behavior. Interpretation is based on critical hermeneutics which seeks to understand each element of the data in relation to the whole. This is contrasted to traditional approaches to data analysis and interpretation where the data is dissected, assigned to categories and reorganized, abstracting it from the original context and not allowing for the richness of meaning to be understood.

Finally the criteria for evaluating the research were briefly outlined to help support the choice of perspective and method. The evaluation will carried out in the final chapter of this dissertation.
Chapter 4 – Theoretical Framework

4.1. Introduction

This chapter discusses the theoretical framework which provides the political perspective in this dissertation. In the Introduction chapter, the problem of how to grapple with the idea of an organisation was discussed; how does one conceptualise ‘organisation’ when the researcher has access only to limited aspects of the total organisation? Morgan’s (1997) images of organisation were reviewed and the political view of organisation was identified as most relevant to this current research. Morgan (1997) discussed a number of theories and views associated with the metaphor and this chapter extends this discussion by explaining in detail the set of ideas, concepts and theories which will be used to illuminate the political behavior in the target organisation.

Walsham (2006) suggests three uses of theory in case study research: theory guiding the design and collection of data; theory as an iterative process of data collection and analysis; theory as an outcome of a case study. The concepts and the theories discussed in this chapter provided a general guide for focusing the case study and selection of interviewees. However theory was also used iteratively during data collection and analysis so that the discussion presented here is the outcome of the researcher’s developing understanding of the political context of the student administration work at the university.

As mentioned in chapters 1 and 2, Jasperson et al (2002) carried out an extensive study of information systems research which used political perspectives. They concluded that the complexity of social research, especially when trying to understand power and political process lends itself well to using multiple frameworks to analyze power at different levels of abstraction. Sillince and Mouakket (1997) had reached the same conclusion in their earlier work expressing the assumption that “power is multidimensional and therefore any attempt to understand the operation of power in systems development must simultaneously use several complementary perspectives” (p. 369). As operational models are generally suited to certain situations and conditions, they will not necessarily be able to capture the meanings behind situations beyond their boundaries. During the initial investigations of this project a
number of theories and approaches to power and politics were examined and the multiple perspective approach of Sillince and Mouakket (1997) was adopted to enable a rich understanding of the contextual issues while allowing the focus to remain on the experiences of the smaller group of people interacting with the ERP system.

This chapter therefore is structured around these multiple perspectives, discussing in detail the various theories which Sillince and Mouakket (1997) utilised. The framework had practical utility also in that it allowed for a detailed analysis of power on one dimension (processual power) with reference to higher levels (wider contexts) as time permitted. The end result of this study, in terms of theory, shows that each view of power illuminates different areas that are important to the overall picture.

4.2. The Multiple Perspective Framework

Sillince and Mouakket (1997) summarised the five perspectives on power as “increasingly sophisticated treatments of power” (p. 373), with the most sophisticated – the socially shaped view of power to some extent subsuming the other perspectives. However, the theories allocated to each of these perspectives also focus on a different locus of power; interpersonal interactions and small groups (Zero-sum Power and Processual Power), organisations (organizational Power) power at the super-organisational level (Structurally Constrained Power) and the wider social context (Socially Shaped Power). This aligns with my approach to interpretation as a hermeneutic circle and so I would represent these five perspectives as a series of concentric circles, which allow the focus of the analyst to move from the narrow perspective (individuals and small groups) to the wider perspectives (organisational, industrial and social contexts).

These wider perspectives may also be viewed as system boundaries of the system. Indeed the various theories do assume different boundaries for analysis so taking into account different widening contexts requires considering also appropriate theories. Theoretical pluralism is a long standing tradition in social research and systems thinking (Midgley, 2000) and provides to some extent triangulation via theory as mentioned in chapter 3.
Figure 2 The Multiple Perspectives Framework (adapted from Sillince and Mouakket, 1997)
There are several other authors who have proposed a multiple perspective approach to power so a short explanation of the reasons for choosing the approach used by Sillince and Mouakket (1997) is needed. The discussion below is not a detailed explanation of all of the perspectives; some of these will be raised again in later chapters which discuss the findings of this dissertation.

The review by Jasperson et al (2002) has already been mentioned. However their approach aims to summarise the conceptualisations of power rather than to provide an operational framework which may be used for analysis. They suggest that studies of power in management and information systems research have conceptualised power in five different ways; studies which focus on levels of authority, studies concerned with centralisation, decision rights and participation in decision making, influence, politics and power. Each of these is covered by the perspectives provided by Sillince and Mouakket (1997). Jasperson et al (2002) also categorised relevant research studies according to three views of technology - deterministic (technological determinism), organisational (managerial or strategic choice) and emergent (technology as a catalyst, most often found in studies using some version of structuration theory). They proposed that the technology ‘lens’ “lack the ability to address power in the deeper societal structures” (p. 402). The framework which Jasperson et al (2002) choose for their final categorisation is adapted from Burrell and Morgan (1979) and views power from four perspectives; rational (which assumes an objective reality in which conflict is irrational), pluralist (which also assumes an objective reality, but one in which conflict is the norm), interpretive (which assumes a subjective reality in which power is socially constructed and perceived) and lastly, the radical view, in which power is implicit in social structures and institutions and the exercise of power results in the reinforcement or overthrowing of existing power structures. This last perspective also takes an objective view – of social structures and political resources as concrete ‘facts’.

The perspective taken in this dissertation has some elements of both the interpretive and radical views. As discussed in Chapter 3, the critical view taken in this dissertation is not strictly speaking objective or subjective, but indeed takes a more objective view of reality but a more subjective view of epistemology. This will become clearer in my discussion of
Sillince and Mouakket’s (1997) final perspective – socially shaped power and the theories which underlie this perspective (such as structuration theory).

A much cited work on power and politics by Knights and Murray (1994) also categorized views of power by their interpretive and functionalist stances. They developed a matrix also showing power operating at three levels, ranging from localized to globalised. The micro, or localized view is bounded and constrained by the specific details that individual examples provide but it does offer a vivid description of the process of change on a localized level. The macro view or globalised view relies more on the systematic or structural factors for explanation of change and influence. Studies taking a high level view often suffered from abstraction and could not account for the detail of social interactions. The lower level views tended to lack analytic power. The theories discussed included pluralist, processual theory, Constructivism, actor-network theory, Social-technical systems theory, technological determinism, social shaping, functionalism, Marxism, and feminism. Thus it can be seen that the work by Sillince and Mouakket (1997) and Jasperson et al (2002) has much in common with this earlier work. What is more, like the latter authors, Knights and Murray (1994) separated views on politics into two – politics as disruptive and politics as inescapable.

It appears that Sillince and Mouakket (1997) have corrected the problem of high level abstraction and low level specificity by proposing the multiple perspectives framework which covers the spectrum of operations of power from the small group to the societal context. For example, processual power does not deal with the complexity of roles very well, but organizational power enables these to be taken into account.

After reviewing the perspectives, Knights and Murray (1994) proposed an analytical framework placing organizational politics at its center. This framework consists of four sets of conditions which constrain and enable political activity. These conditions are Organizational/Inter-organizational conditions, Technology conditions, Security conditions, and Socio-political/economic conditions. The authors assert that these conditions are not as discrete as their model’s graphic representation might lead us to believe. They point out
that these conditions are not objective realities or facts; rather they argue that they are socially constructed in the same way that the ‘market’ is a social construct.

Similarities between the three works discussed above are also shown in the way that they use multiple views to try to capture power relations. Each set of authors arrived at different frameworks for the analysis of power and politics and it is arguable which is more comprehensive. In the early stages of this research project, it was decided that the Sillince and Mouakket (1997) framework allowed for easier movement between perspectives in line with the critical hermeneutic approach to analysis adopted for this study, than did the framework proposed by Knights and Murray (1994). Furthermore the JASperson et al (2002) work is more of a framework for the analysis of the research literature than for the analysis of research data. Their conceptualizations are helpful in uncovering the explicit or implicit assumptions in the research literature and will be referred to again in later chapters.

4.2.1 The Zero-Sum Power Perspective
Before looking at the various perspectives in detail, it is necessary to indicate why the ‘zero-sum’ view of power has not been used in this dissertation. This perspective was considered less relevant because it focuses on the struggle over the possession of an object, in which one party wins and the other party loses (e.g. Fincham 1992, 2002). Although the ERP module could be viewed as an object over which there was dispute, nothing in the early stages of this investigation allowed this analysis to be played out. None of the stakeholders who are the focus of this dissertation possessed sufficient power to take control over the system or any controlling device or resource which would have allowed them to ‘win’. The zero-sum view is positivist in spirit (Sillince & Mouakket, 1997); it also does not make a distinction between positive (constructive, consensus seeking) power, and negative (power hungry, destructive) power. Sillince and Mouakket (1997) conclude that “real cases rarely fit into a zero-sum framework since participants’ interests not only compete but also complement each other” (p. 369).

4.2.2. The Processual Power Perspective
The primary focus of this view is the micro-politics occurring between individuals and power is seen as interactive rather than belonging to or characteristic of any individual. This relationship involves exchange of something wanted by each party (such as resources) and
can be seen most clearly in the exchange of labour for payment. The theoretical basis for this section of the model is the work of French and Raven (1959) and since this work has been further developed by Raven (1992, 1993, 2001) it will be discussed in more detail later in this chapter. As mentioned earlier this dissertation focuses on processual power with reference to the other perspectives primarily for contextual support and illumination.

Interaction is based on “resource-dependency” where dependency is proportional to the emotional, time or other sort of investment that either of the actors has invested in the goals which require the resource. Resources are characterised by scarcity and significance. The relationship is also affected by the types of power and balance of power which individuals have (for example seniority in an organisation, quantity of irreplaceable resources). This perspective takes a process, historical view of the relationships. Dependencies do not emerge over night but are based on long term relationships where power has been used and exchanged.

This perspective differs sharply from the first perspective (Zero Sum) in that it views political behavior as potentially positive; all parties may gain and solutions may be found which are quite satisfactory to all concerned. In Information Systems research the processual power perspective uses technology as a focus for negotiation and this view is represented by the systems analyst as negotiator (Hirschheim & Klein, 1989). In this dissertation the project team was involved in liaising with the student administration staff and the types of relationships involved which may be illuminated by the Processual Power perspective will be discussed in chapter 6. This perspective can also be linked to the notion of Habermas’ ideal speech situation discussed in chapter 3. If the ideal conditions exist for a fair exchange then actors are emancipated from false relations.

However, since the Processual Power does not account for organisational circumstances which may limit interactions and prevent rational communication, this perspective is limited and the organisational perspective must be considered to understand the influence of the wider context. The strength of this perspective is that it fully explores the most basic levels of influence, the motivations, the selection of power and the after effects of that attempt, as the use of power shapes peoples actions and opinions; especially if the influence attempt
fails, the motivations of the actor can become known to the target, thus changing the target's view of the actor.

In brief, success in this perspective is defined as user satisfaction (Sillince & Mouakket, 1997) and power is manifested in individual influence. This view also makes reference to conflict management as being important to the exchange of power. The shortcomings of the view are the following; actors are seen as equals, there is a failure to identify inequalities that underlie interest, and there is a simplistic view of roles (Sillince & Mouakket, 1997). This last point about roles is compensated for by the organizational power perspective.

4.2.3 The Organizational Power Perspective
As the name suggests this perspective focuses on the power relations in an organization. The power relations that this view uncovers and explains are those that surround the interaction between groups or departments in an organization. Whereas the processual power view focuses on the one-on-one or one-on-few interaction, this view focuses on many-on-many. Segregation between staff groups, class differences and the centralization versus decentralization debate are key examples of what organizational power is likely to uncover.

This perspective provides context to the processual perspective by allowing the analyst to see what is happening in the bigger picture which provides the context to the actions of individuals. This perspective has as its operational theory Kling’s Web model (1987). The web model approach views a computer system as a composite of equipment, applications, and techniques and that these systems and their support organizations are also social objects that may be highly charged with meaning (Kling, 1987). Web models take into account the importance of social issues surrounding the use of technology.

This level of power is often seen in the creation of policy and procedure and the selection of software, which this perspective views as forms of “social organization” (Sillince and Mouakket, 1997, p.370). The authors cite Kling’s (1987) case study which showed the reliance of computer systems on aspects of social organisation such as the need for cooperation from staff. Once again this provides a contrast to the zero-sum perspective, with conflict resolution being important to show stakeholders how to use influence during the
software development process. This is particularly so where participation is encouraged, knowing that participation can lead to conflict between stakeholders who may not have previously been involved in a project. The study by Curtis, Krasner and Iscoe (1988) showed that power shifts in a user organisation were associated with changing requirements.

This perspective also treats roles differently, with position, status and the possession of resources as important factors and a recognition that when important roles are ignored (for example who possesses crucial information), and then system development efforts are often hindered. Responsibility is another key aspect of roles; Walsham in his 1993 study showed the consequences of a “responsibility vacuum between senior management and systems staff” (p. 371) which contributed to an implementation failure. Similarly when project team members such as systems analysts give insufficient time to users of lower status, system requirements are often not adequately specified.

The importance of organisational context is a feature of much recent work in information systems research and includes the significance of organisational culture; culture forms the expectations of work practices and routine, and can be inherited from the market place/industry which the organization belongs to (Hatch & Schultz, 1997). Alternatively it can derive from the history of that organization. For example, when considering the higher than average turnover of staff in the IT industry (Thatcher, Stepina & Boyle, 2002), it would not be unexpected if special considerations in organizational design were implemented to help capture the organizational knowledge before it is lost when staff depart (Moore & Burke, 2002). This collection and storage of information will create a resource of considerable political worth and is sure to attract the interest of different parties.

The practical way to carry out this analysis on a research site is to establish the key actors, what they do at the research site, what incentives are available to them and what constraints are their upon them (Kling, 1987). This will allow the drawing of boundaries that are important to the study of the research site. Boundaries should be drawn to include people, infrastructure and organizations that are a part of a chain of resource dependencies, who are taken account of by participants or who constrain the actions of the key actors (Kling, 1991).
An important aspect of this perspective of power related to the role of the system analyst is that it is their responsibility to mediate between management’s interest in the success of the system and the users’ interests, particularly if the users have no intrinsic interest in system success.

This perspective’s view of success is the extent to which computer and social networks aid corporate survival (Sillince & Mouakket, 1997). An important point to note here is that the determinant for success in processual power is user satisfaction but this does not necessarily have to be present for the system to aid in corporate survival. This presents a possible conflict, particularly where the users are invited to participate in specifying the requirements but are not interested in or aware of the implications that the system has for corporate success or failure.

The shortcomings of this view are the following: it does not indicate likely occasions where political activity will occur, it assumes a simple and rational view of political interests, it treats organizations in isolation of cultural context (beyond organisational culture which is usually defined as ‘corporate culture’) and structural constraints. Lastly, despite the insights provided by Kling’s web model (1987) it does not define the boundary between technical aspects and social aspects of technological systems (Sillince & Mouakket, 1997).

4.2.4 Structurally Constrained Power Perspective
The next dimension which Sillince and Mouakket (1997) identify is the Structurally Constrained view of power. This perspective deals with the ‘super-organisational level’ and focuses on events that occur outside of the organization but which directly influence the organisations behavior. It considers how organizations interact and how they view themselves within the market. This is important to discuss, as while individuals and indeed groups can exert influences on those inside the organization, the marketplace and competitors also require the organisation to respond to competitive pressures, sometimes at the global level. There has been for example a market trend inside the tertiary education industry to adopt large scale systems such as ERPs to help improve efficiency and performance in the highly competitive global market (Allen & Kern, 2001). Another example comes from the early adopter versus late adopter of technology phenomenon, the
company that adopts early does so for strategic advantage (or perceived advantage) and companies that adopt the technology later usually do so because it becomes a requirement for them to conduct business on the same playing field as their competitors. Cost and access to technology can spread out the adoption of key technologies, but the influence of the market leaders can clearly be seen on their competitors and close rivals. Consequences of super-organisational influences may include downsizing, outsourcing and offshoring.

There are potential contradictions within this view with authors such as Braverman (cited in Sillince and Mouakket, 1997, p. 372) claiming that capitalism leads to fragmentation of labour, while others claim that management is not omniscient and all controlling and challenge the deskilling hypothesis (Sillince & Mouakket, 1997). This is particularly the case in relation to technology which many authors do not see as having a deterministic role.

Foucault (cited in Sillince & Mouakket, 1997, p. 374) is a significant theorist contributing to this perspective, particularly his work on the use of technology for surveillance and control. Success is viewed as the exercise of control or the establishment of resistance. Sillince and Mouakket (1997) deal quite briefly with this perspective in their explanation and application to the case study. The shortcoming of this view is that technology is not implicated in power shifts, it portrays management as omniscient, and it reifies the distinction between social and technical. The reification shortcoming is compensated for, by the socially shaped power. This perspective at its core provides a level of context for decisions that might otherwise lack a clear or precise motive, or power bases that are not clearly based in local structure.

4.2.5 Socially Shaped Power Perspective
Socially Shaped power is the broadest of the views as it encompasses society’s influence on the power relations accounted for by the other dimensions. It explains the impacts that society as a whole can make on an organization, and on the individuals within the organization. This level of detail provides a broader context for understanding political behaviour at the micro and organisational level. Social influences can range from government regulation, increased costs through taxation (such as taxes on fuel), promotion
of IT services and practices (such as the Internet) and the construction of new technology and infrastructures such as broadband networks.

This perspective of power encompasses the influences that are exerted on the marketplace (analysed by structurally constrained power). In the same way that an organization can be influenced by the competitors in the marketplace; the marketplace can be influenced by the wider community and ruling bodies. For example, the impact of fuel pricing and taxes on airlines, which are then required to take different approaches to marketing and pricing their customer services in order to remain competitive. These create competitive differences which ripple down to employees – hence we can see how processual power is limited by social events and the operation of processual and organisational power must be viewed within the context of wider social influences. In a similar way, as will be discussed in chapter 5, Australian universities have responded to social pressures such as reduced government funding, which limits the influence which individual employees may exercise over their work and their use of information systems, as well as their interactions with colleagues.

With regard to information systems this perspective also tries to look at how and why technologies have emerged and have been adopted. A social construction view of technology is adopted (Berger and Luckman 1971) and a number of theories such as Actor Network Theory (Latour, 1987) are utilised to understand how technical implementations may be use as a means for social control. This perspective is concerned with the taken for granted aspects of human life and how particular ideas (such as competition) take hold and are given the status of ‘true’, (especially with the often unquestioning acceptance of the need for large-scale, expensive information systems).

This perspective uses structural constraints, technical trajectories and IT emergence and acceptance as ideas to develop understanding. This perspective also makes reference to Actor Network Theory to aid understanding. The criterion for success for this view is the ability to shape meanings, with knowledge potentially having an emancipatory effect. The major shortcoming of this perspective is that it raises questions only.
An overview of the four perspectives is given below. The metaphors’ applied to each perspective derive from the scope of the likely influence. Individuals attempting to influence other people will select an appropriate basis for their influence attempt. As discussed in chapter 1, metaphors allow us to represent intangible concepts – in this case, the ‘base’ is what supports the attempt. Processual power is concerned with one to one relationships but as these power attempts multiply they form what we can think of as a web of organisational power. At a wider level, infrastructure, rules and norms constrain our operations and enable power to be used for control, rather like the design of a machine controls its operation. Lastly Socially Shaped power considers how social influences support the formation of beliefs – power– power to be effective needs to be in the ‘eye of the beholder’. Power which is not acknowledged cannot be effectively used. The locus of power for this perspective is that which is taken for granted – which is much more powerful than ideas which must be continuously reinforced. For example, normalized ideas such as age, beauty and merit are much more powerful (and less likely to be challenged) than for example ideas such as smoking is bad for you, which must be continuously reinforced. What is of interest in this dissertation is the way that computers and information systems have become ‘taken-for-granted’.

<table>
<thead>
<tr>
<th>Metaphor</th>
<th>Processual Power</th>
<th>Organizational Power</th>
<th>Structurally Constrained Power</th>
<th>Socially Shaped Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locus of Power</td>
<td>Relations between individuals</td>
<td>Relations between groups</td>
<td>Ability to control</td>
<td>The taken-for-granted</td>
</tr>
<tr>
<td>Evidence of Power</td>
<td>Individual influence</td>
<td>Organizational influence</td>
<td>Ideological influence</td>
<td>‘Closure’</td>
</tr>
<tr>
<td>Definition of Information Systems Success</td>
<td>Satisfaction for all users</td>
<td>Support for Corporate survival</td>
<td>Success of control or of resistance</td>
<td>Ability to shape meanings</td>
</tr>
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</table>

Table 1 Four perspectives on power (adapted from Sillince & Mouakket, 1997, p. 374)
The definition of information system success will be reviewed again in chapter 9 and applied to the ERPs implementation investigated for this dissertation.

4.3. Kernel Theories

This framework provides the focus for this dissertation and as mentioned in chapter 3 allows interpretation to move from a narrow perspective to a wider one, enabling the operation of power between individuals and groups to be understood within the shaping influences of social movements and technological developments. It is evident that not all the theories referred to by Sillince and Mouakket have direct political import but are rather used as a way of expressing the social or cultural context (for example, Actor Network Theory) which influences political behavior. Since this dissertation is concerned specifically with political behavior, it will focus on those theories which provide more precise concepts and ideas for political analysis, and these are discussed in more detail below. These theories concerning power and politics utilised in the above framework are ‘kernel’ theories; that is, well accepted theories from the referent social science disciplines (Iivari, 2007).

4.3.1 French and Raven: The Bases of Social power

As indicated in above, the Sillince and Mouakket’s (1997) model uses the work by French and Raven (1959) to explain how processual power operates within the wider context and detailing five types of social power bases.. This article work has been very widely cited and used as the basis for many studies in a wide range of fields (Elias, 2008). It has been reviewed several times, further developed by Raven and is “undoubtedly, among the most popular and widely accepted conceptualizations of social power” (Podsakoff & Schriesheim, 1985, p. 387). Despite its acceptance in the social sciences However, it has been rarely used in Information Systems research and no IS research has been found (Lin & Silva, 2005) which uses the later work by Raven (1965, 1992, 1993, 1998 and 2001), in which he refined the power bases and introduced a model to explain how power is exercised.

The original theory proposed by French & Raven in 1959 posited that there are five main types of social power bases; referent, expert, reward, coercive, and legitimate. In brief
referent power is similar to the concept of copying an admired person; the target complies with a request because s/he identifies with the person exercising power. Expert power is exercised over someone who recognizes and accepts the superior knowledge and information of the wielder. Reward power is a form of exchange, where the influence target is promised some reward in exchange for complying with request. Coercive power comes from threatening punishment, such as demotion or firing if demands are not met and these threats have valence for the target. Legitimate power comes from a formal rank or position which the target accepts as justifiable, for example the power exercised by government authorities (French & Raven, 1959).

Podsakoff and Schriesheim (1985) presented a widely researched critique of the way that the original French and Raven (1959) theory has been used for various areas of study. They argued that many of the authors using the theory failed to apply it consistently and often would only use a fragment of the theory. They also criticized the framework at a conceptual level in relation to its capability to support measurement, which Raven addressed in 1998 (Raven, Schwarzvald and Koslowsky 1998). Since the work carried out in this dissertation is qualitative and views reality as socially constructed, the problem which Podsakoff and Schriesheim (1985) identified re measurement is not relevant. However, the usefulness of the concepts will be reviewed in relation to their use for guiding data analysis.

Criticisms were acknowledged in the subsequent work on of the framework by Raven (1965, 1992, 1993, 1998 and 2001) acknowledged the criticisms and reviewed the framework, expanding on the original. Firstly the framework was expanded into six power bases by separating information from expertise (Raven 1965). The six power bases were further defined as follows. Reward and coercive power were determined to personal or impersonal. Personal reward relies on interpersonal factors (factors such as approval) whereas impersonal reward relies on ‘objective’ forms such as pay increases. Legitimate power was expanded to consider different forms – position, and reciprocity (the legitimate return of a favour such as working late). Legitimate equity power refers to how much the power holder has already done for the target of influence. Finally legitimate dependence power refers to social cooperation, such as the dependence of a new member of staff unfamiliar with routines on a more experience member of staff.
A distinction is also made between \textit{negative} and \textit{positive} referent and expert power. In the positive cases the target complies because they identify with the influencer (referent power) or feel that the influencer knows best (expert power). However, in negative cases the target may feel that the influencer is using expertise not in the best interests of the situation. Similarly, the attempt to use referent power may fail if the influencer is disliked. This reveals how influence attempts may not always be successful – as illustrated in chapter 6.

The sixth power base – informational power is categorized as \textit{direct} or \textit{indirect}. In other words, information may be presented in a roundabout way, as is often the case with the way that female employees make suggestions, in order to not offend the target by showing off superior understanding.

As Elias (2008) point out, most studies using the French and Raven (1959) taxonomy do not utilise the later work by Raven and this is the case with the work by Sillince and Mouakket (1997). This dissertation therefore contributes to the understanding of social power by using the expanded conceptualization.

Further detail has been added to the 1965 revision and the most recent version (1992) is explained below. These types of power comprise the operational definitions for the Power/Interaction model proposed by Raven (1993), and discussed in detail in the following section (4.3.1.1).

\textit{Reward Power} is defined as the ability of an actor to reward. The strength of this power is dependent of the types of rewards able to be given and on the perceived likelihood that the reward will take place. It is also dependent on the administering of positive valences and reduction of negative valences by the actor attempting to wield the power. Similar to the impersonal form of coercive power, impersonal reward power is based on a tangible reward being offered for compliance to a request. This type of reward power depends on the acceptance or approval from someone that the target likes. This approval forms the motivation for compliance to the request.

\textit{Coercive Power} is similar to reward power except power is usually derived by the ability of an actor to punish, or to administer negative valences to the target. This power’s strength is dependent on the type of punishment proposed for non-conformance. It is also dependent
on the perceived likelihood of the punishment occurring. Reward power can become coercive power, i.e. a piece-rate pay scheme. The *impersonal form* of coercive power is involved with the coercion of a target using a more tangible reward, removal of a scarce resource for example as motivation for complying with the request. The *personal form* of coercion moves beyond a tangible punishment, it is the disapproval from someone that the target likes that motivates him or her to perform the request.

*Legitimate Power* is defined as an actor’s ability to influence others due to internalized values that the others feel, like an obligation to accept this influence. This type of influence only exists if the ones being influence regard the influence as valid. There are several bases for this type of power, some of these are cultural values, social structure, and office held.

*Legitimacy of reciprocity* of power is based on a feeling of owing someone something, “I did this for you, and you owe me”. The *Legitimacy of equity* is similar to reciprocity except the difference lies the extent to which the actor claims to have been put out, and asks the target for “compensation” in the form of compliance to a request. The *Legitimacy of dependence* (power of the powerless) comes from the responsibility or obligation that the target feels to help the actor making the request. The power is derived from the dependence that the actor has on the target and the willingness of the target to help others.

*Expert Power* is defined as peoples’ perceptions that an actor has expert knowledge about a given area. This type of power is only effective if the expert knowledge is recognized, people believe it exists or it is in demand. The *positive* form of this power comes from the target acknowledging the expertise of the actor, and acknowledging that they are looking out for the target’s best interests. The *negative* form of this power comes from the target mistrusting the actor’s intentions, the target recognizes the expertise of the actor, but does not believe the actor is making the request for the benefit of the target and will act in a contradictory fashion to the request.

*Referent Power* is similar to the concept of charisma, someone who others wish to be like and hence copy or internalize features that the desired actor portrays. In general, the stronger the desire to be like this actor the stronger the referent power that this actor has over the target. The distinguishing characteristic about this type of power, that separates it
from coercive and reward based power, is the perception of punishment. There is no direct
punishment when dealing with referent power. The positive referent power comes from the
target wishing to identify with the actor. The negative referent power comes from the target
not liking the actor and wishing to disassociate themselves from the actor.

*Information power is* a form of persuasion or expert power; that an individual has
information regarding a particular event or fact that is recognized (or not if the attempt fails)
by the target of the influence attempt (Raven, 1992). There are no rewards of punishments
attached to *Informational* power although it is easy to contaminate this power source with
others such as coercive power. A actor may attempt to use informational power to gain
compliance, as it is a rational power base, but the actor may have access to resources the
target may fear losing if the request is not heeded and hence compliance is gained through
coercive power rather than the persuasiveness of the request. This *Direct form* of
informational power is based in the persuasiveness or logic of an argument presented to the
target. *Indirect* informational power is effective in situations where it is not appropriate to
front the target and attempt to influence them as it may damage interpersonal relations.
Indirect information can take the forms of overheard conversation, gossip, and rumors.
Manipulation involves no volition (acknowledgement) by of the target as the actor
influences the environment of the target as to produce or inhibit certain behaviors. For
example if a travelling companion’s whistling is bothersome, one can engage them in a
conversation and hence they are unable to continue whistling. The power from ‘invoking’
or reducing power of third parties comes from the actor invoking or reducing the power that
a third party has over the target, for example appealing to an accepted authority, denigrating
the authority’s status or threatening a dependent third party.

The bases of power are summarised in Table 2 below, adapted from Raven’s (1992 and
1993) revisions.
### Table 2 Bases of Power

<table>
<thead>
<tr>
<th>Basis of Power</th>
<th>Differentiation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coercion</td>
<td>Impersonal Coercion</td>
<td>Target believes that the social agent can cause harm. Invoking the power of third parties is often used.</td>
</tr>
<tr>
<td></td>
<td>Personal Coercion</td>
<td>Personal threat.</td>
</tr>
<tr>
<td>Reward</td>
<td>Impersonal Reward</td>
<td>Target acknowledges that the reward offered is valued and the agent can provide it.</td>
</tr>
<tr>
<td></td>
<td>Personal Reward</td>
<td>Personal approval is desired by target.</td>
</tr>
<tr>
<td>Legitimacy</td>
<td>Formal Legitimacy (position power)</td>
<td>Target acknowledges that the actor’s role gives authority to determine what the target should do. The most important power base in a bureaucracy</td>
</tr>
<tr>
<td></td>
<td>Legitimacy of Reciprocity</td>
<td>Target acknowledges obligation for favours granted by actor. Target is willing to return the favours.</td>
</tr>
<tr>
<td></td>
<td>Legitimacy of Equity</td>
<td>Target acknowledges that the actor’s situation is inequitable. Target is willing to contribute to restore equity.</td>
</tr>
<tr>
<td></td>
<td>Legitimacy of Dependence (Powerlessness)</td>
<td>Target acknowledges a norm which has the actor in a depended position (e.g. newness to position, lack of expertise, disability).</td>
</tr>
<tr>
<td>Expert</td>
<td>Positive Expert</td>
<td>Target acknowledges that the actor has superior knowledge in a specific area. Target defers to superior expertise.</td>
</tr>
<tr>
<td></td>
<td>Negative Expert</td>
<td>Target mistrusts actor’s intentions for using expertise.</td>
</tr>
<tr>
<td>Reference</td>
<td>Positive Referent</td>
<td>Target identifies with the actor and is willing to behave in a similar way. Acknowledges personal attributes or norms which make the actor admirable (persistence, integrity etc).</td>
</tr>
<tr>
<td></td>
<td>Negative Referent</td>
<td>Target dislikes the actor’s personal attributes or the norms associated with behaviour.</td>
</tr>
<tr>
<td>Informational</td>
<td>Direct Information</td>
<td>Target is willing to be persuaded by the information provided.</td>
</tr>
<tr>
<td></td>
<td>Indirect Information</td>
<td>Actor does not explicitly use information. Expects target to be persuaded by rumours, gossip or hearsay.</td>
</tr>
</tbody>
</table>
4.3.1.1 Raven’s Power/Interaction model
Along with the increasing detail in the explanation of the six power bases, Raven’s research strongly suggested that the exercise of social power was more complex than the mere utilization of a power base to gain compliance from a target. The Power/Interaction published in 1992 shows the processes that a person might use in order to choose which power base to select in an attempt to influence other people.

![Power/Interaction model](image)

**Figure 3 Power/Interaction model** adapted from Raven (1992)

Motivation is seen as either *intrinsic* (a strong personal desire to influence others) or *instrumental* (the use of power to achieve specific goals). In the former case a greater variety of power bases are likely to be used, whereas instrumental motivation is more likely to rely on legitimate or expert power. Assessment of power bases takes into account both the type of power the influencer has available and their assessment of likely outcomes. For example, the use of expert power may require more effort that an employee considers worthwhile and therefore the use of position power may be judged as more efficient. On the
other hand, reward power might be assessed as having a greater chance of success in some situations.

Preparing for the influence attempt involves thinking about how to go about the exercise of power. For example, the influencer might store up ‘favours’ over a period of time in order to get a job done more quickly at a later date. Expertise power could be reinforced by the display of qualifications or by reminders of recent achievements. ‘Power dressing is another example of stage setting.’ Choice of power bases and the influence attempt identifies the point at which action commences and the influence event. Lastly the effects of the attempt should be recognized and provide feedback for future attempts, so that experience is accumulated by a reflective person.

The way that this model can be used to understand the experiences of stakeholders during ERPs implementation is illustrated in chapter 4. As mentioned above, although this framework can be used in a quantitative fashion and attempts have been made to establish measures, this research uses the framework only as a guide for interpretation – the concepts and components are used as ‘sensitising’ concepts (Walsham, 1993) and the interpretation is not forced to fit the framework.

4.3.2 Kling’s Web Model

The second kernel theory is the web model, as proposed by Kling (1987) which enables the analysis of power relations at an organizational level. Important questions that the web analyst needs to ask are who the key actors are, what do they do, and what incentives influence their activities. The organizational power perspective uses Kling’s Web models to understand power relations at an organizational level.

Web models analyze relationships of groups at a higher level than processual power can accomplish. This is achieved by looking at the *social contexts* in which a computer based system is developed and used, the *infrastructure* of support for the system (including the social organizational of access), and the *history of social arrangements* within which the computer based system is developed (Kling, 1987). In this dissertation this is detailed in the history of the software development for the higher education sector and in the social and economic, etc events within Griffith University. The web model approach views a computer
system as a composite of equipment, applications, and techniques and that these systems and their support organizations are also social objects that may be highly charged with meaning (Kling, 1987).

Kling (1987) posits that employees select computing arrangements according to the leverage that these arrangements provide for their negotiations inside the social order of the organization. This point is very relevant to the social aspects of information technology as web models see IT as a tool for social purposes as well as a tool for the tasks at hand.

Boundaries are drawn to help understand choices made by staff inside the organization and choices made in negotiations with parties outside the organization. The boundaries cannot be defined “before the participants of the larger negotiating contexts are identified” (Kling, 1987, p. 359)

The main criteria for drawing boundaries for analysis are based around people, equipment, and organizations that are a part of a chain of resource dependencies, who are taken account of by participants or who constrain the actions of the focal actors (Kling, 1987).

This is important to acknowledge as it shows that the systems are not separate from their contexts and that technology is able to influence its environment. Goldkuhl and Lyytinen (1982), Sillince and Mouakket (1997) have also supported this point.

4.3.3 Theories for Structurally Constrained & Socially Shaped Power
The third set of theories relate to the outer circles on the framework. As Structurally Constrained and Socially Shaped Power are the wider perspectives of this framework they fulfill the Metaperspective of the power analysis provided and round out the levels of abstraction when combined with the other operational theories. Structuration theory (Giddens, 1984) and its capacity to explain the reinforcement and change of structure and agent action will be discussed as a means to understand the wider context, which is a key to understanding how they apply to the actions of the ‘agents’ inside Griffith University.

Structuration theory was proposed by Giddens (1984) in his seminal work, “The Constitution of Society.” The main focus of this discussion was on the idea of agency versus structure, or the micro versus the macro perspective. The theory proposes that all agent actions are conducted in relation to a set of pre-existing structures (socially
constructed) that are regulated by social norms. It is important to distinguish that the structures are separate from the norms as it is also proposed by the theory that the agents while constrained by the structures, also have the capacity to make changes.

The theory holds that the repetition of actions create a set of social norms that strengthen the social structure, so others are also constrained by the structures’ social norms; thus once in place the structure influences the behavior of individuals (agents).

The theory aims to balance the importance of both structure and agency, referred to as the ‘duality of structure’. This is to say that structure enables agent actions, while simultaneously the agent’s actions create the structure. The theory does not ascribe to extremes of determinism from either agent or social structure, so agents will always have free will even when under structures of domination (Giddens, 1984).

In Gidden’s work, structures are defined as rules and resources that form social systems. Patterns in social life are considered rules; resources are related to agent action and what is created during that action (Giddens, 1984). The theory has a cyclic nature of actions, than are controlled (both enabled and constrained) by social structures, that are themselves affected and propagated by those actions.

In essence, the way Structuration theory defines a social system is with three main ideas: Structure, Modality and Interaction (Giddens, 1984). Rules and resources are what constitutes and defines structure. These resources are available to agents and are referred to as either Authoritative or Allocative; authoritative being the resources used to control people while allocative resources are the means to deploy resources such control material objects (such as technology). As Authoritative resources are used to control people, they are essentially the power based resources or methods that will be of interest in this study as power is the main focus of this dissertation.

Modality is the way in which rules/resources are converted into actions (structures in use) and Interactions are defined as the activity of actors operating inside the social structures that are being analyzed.

Giddens defines agency as action, and agents understanding of their social structure defines their actions; it forms the basic rules and provides a level of security and routine in behavior.
that also reinforces the structure, providing stability. Agents are able to behave in ways not
defined by the social structure and they may also affect the structure and change it as being
an agent allows the creation and reinforcement of traditions in the social structure.

The basic concepts of Structuration Theory relate to my theoretical framework in the
following way. They enable the explanation of how the outer circles (broader dimensions)
of the framework have the power to influence the actions of those individuals who operate
within their domain of influence. While Structuration theory is not being used in detailed
application to the study, it does have provide a meta-perspective which shows the
relationships between the different dimensions and is consistent with the critical
perspective. (As mentioned earlier, Giddens (1984) viewed all social science research as
‘critical’).

As Jones and Karsten (2008) state, Structuration Theory “deals with social phenomena at a
high level of abstraction rather than their particular instantiation in a specific context;
offering a way of seeing the world rather than an explanation of its mechanisms” (p. 7). It is
appropriate and useful for this framework, as it coincides with the critical view, that while
people are in principle free to create their own reality, they are likely to conform to (and
may have problems deviating from) the social norms and thus they also contribute to the
creation and perpetuation of those norms (or rules) (Giddens, 1984). This application is
consistent with Giddens’ view that aspects of his theory may be applied as required without
the need to apply the theory in totality.

The interaction of people and technology in their everyday routines creates structures that
further shape their use of technology, including the use of future technology. Orlikowski
(2000) and others specified the relationship of technology more specifically to structure and
agency, but that research is ongoing and complicated by ontological contradictions.
Furthermore, the role of technology is discussed in this dissertation in relation to power and
politics; it is not the major focus. However it should be noted that Structuration Theory is
equally useful with the discussion of technology based cultural changes; for example,
Stillman (2006) discussed it can highlight the differences in the method of technology
governance.
Jones and Karsten (2008) also discuss that more attention should be paid “in the IS literature is its linkage of individual micro-level action and macro-level institutional processes” (p. 41). In a similar way, Orlikowski and Barley (2001) also argue that that IS research should broaden its scope to include and address institutional and social developments, which is the focus taken by this dissertation, focusing on both individual adoption and use of technology, the effects of wider circles of influence and their impacts on technology use as well as the changes in the social structure of an organization.

4.4. Using the Framework

In chapter 6, the use of the framework to analyse the data is demonstrated, while in chapters 7 to 9, themes emerging from this analysis are interpreted in relation to existing research.

Mohr (1982) distinguishes two main approaches to theory in IS research; firstly variance which focuses on the relationships (associative or causal) between things, and secondly process (not to be confused with processual) which focuses on events and their inputs and outputs (or antecedents and consequences). Variance theories take a positivist, deterministic view, and until the 1980s dominated IS research. This dissertation takes the process approach which is more in the interpretive spirit and therefore examines the ERP implementation as an event. Rather than looking for associations between factors, the process approach considers sequences of events and assumes that the meaning of the event can change over time – that the participants review their ideas of what an event means (Abbott, 2001). The person or group studied will undergo different experiences and be subject to different influences and therefore will rethink the event.

In this way, ‘ERP implementation’ does not have a fixed, unchanging meaning which is the same for all participants for the duration of the study. In this dissertation, how this meaning is formed and changed is investigated via the framework of political process. When beginning investigations into an ‘incident’, we start with the processual view, applying Raven’s Power/interaction model and mapping the motivations, means and outcomes of the influence attempt (as shown in chapter 6). Importantly, this also takes into account the after-effects of the attempt, as successful or not, there will always be changes. The analysis then
reconsiders the event from the perspective of organizational power, where the focus is on the group level interactions and influences. After an attempt to change (including to exert influence) is made at the individual level, the effects or influences at the group and organisational level need to be consider: was the attempt successful because of the groups’ relationships? Will there be repercussions from the failure of the influence attempt at a group level?

What is more, we must widen our focus to consider what social and structural factors influenced the organisation before and during this event and how will this change the organisations position at the super-organisational level? Theory at the social shaping level enables analysis of how social norms, values and laws are reflected in the actions of the market place, the organization, the group and at the individual level. Structuration theory as mentioned above provides the clearest guide for how to make the link between the various levels – from agent to structure. How was the influence attempt at the processual level impacted by social values and norms? The utilization of this framework provides a far richer understanding of an event than if a single theory was selected as the sole tool for analysis.

4.5. Conclusion

This chapter has described the theoretical framework based on the work of Sillince and Mouakket (1997), giving details of the various theories which comprise the framework. The reasons for excluding the Zero Sum Power perspective are outlined and then the other four dimensions of the framework are discussed in detail.

Given the time and access restrictions in this study and the characteristics of the group studied, processual and organizational power have been applied in the greatest detail, while Giddens (1984) provides a metatheory to enable links to be made between the different dimensions or levels.

In chapters 1 and 2 it was pointed out that the study of power in information systems research still has the problem of ill defined concepts and so it was decided that multiple views on the topic were appropriate. This chapter has also considered the idea of theoretical pluralism and why the framework suggested by Sillince and Mouakket (1997) was chosen from those available.
The next chapter will discuss the research site and provide details of the actors, events, and relevant historical and contextual information.
Chapter 5 – Research Site

5.1. Introduction
This chapter’s goal is to describe the research site, providing sufficient background and contextual information to enable understanding of the following chapters. The description starts with the widest context – the Australian higher education sector in the global education market (section 2) followed by a discussion of systems development and integration for Australian universities (section 2.1) Much of this work is based on investigations carried out by the author and two colleagues (Beekhuyzen, Goodwin & Nielsen 2002; Nielsen, Beekhuyzen & Goodwin, 2005). More specific information is then provided about the case university (section 3), particularly its administration and governance and the major organisational restructuring which took place prior to the commencement of this study. Section 4 discusses the details of the PeopleSoft implementation, especially in relation to the student administration group which this study focuses on. Therefore this chapter is structured in a similar way to chapter 4 (the theoretical framework), from the general, socially shaping conditions, through the organisational context, to the specific situations in which small groups and individuals found themselves working.

Finally, in sections 5 and 6 the selection of the research site, details of data collection and the conduct of the study are given. The description in this chapter makes reference to publicly available documents about the university, but many of the sources used are no longer publicly available or are internal documents, not available for publication and only accessible to the author for note taking, not copying. Recordings and transcripts have been subject to the security and confidentiality conditions outlined in chapter 3 regarding ethical considerations.

5.2. Universities in Australia.
In the early 1980’s the Australian government reviewed the performance of the higher education sector. Globally, governments were starting to think about the investment in
higher education in connection with economic performance. Similar to several other countries the Australian government decided to unify the binary system of universities and colleges of advanced education, which had overtaken universities in total student enrollments (Dawkins, 1988). The proposals also indicated that access to higher education must increase and the government would take greater control over university funding and operations (Hore & Barwood, 1989). Despite opposition from many universities and colleges the unification went ahead and the 45 colleges were amalgamated either with other colleges or with the 19 universities.

Although this process occurred several years before the current study began, its effects were still being felt across the sector. In particular, Griffith University experienced greater growth through amalgamations and increase in new student numbers than any other institution (Harding, Scott, Laske & Burtscher, 2007 p. 178). The uncertainty and unease caused by these developments, as the smaller universities and colleges faced forced amalgamations or closure, has persisted. According to Allen and Kern (2001) all Australian universities quite quickly moved towards a business model, viewing themselves in competition with other tertiary institutions. (Amalgamations were often based on a bidding system in which the client institution agreed to join whoever guaranteed the highest level of funding; this obviously put pressure on the host institution which had to cut back funding to existing faculties). This approach is at odds with many cultural values espoused particularly by academics, who viewed themselves as education providers with students, not as employees of commercial enterprises aggressively pursuing mergers and acquisitions and treating their students primarily as sources of income.

The move to operating more like a business also encouraged the Australian education sector to promote them in the global market and generate funds to compensate for reduced government funding through industry based research and the recruitment of overseas students (Hoare, 1995). Until the mid-1980s overseas students came to Australia primarily via overseas aid programmes. Now income from overseas students fees makes up around 15-20% of total revenues for universities which are publicly funded (Olds, 2008) – the great majority of Australian tertiary institutions. However there is increasing competition from private institutions to enter the higher education market, particularly to provide foundation
Another obvious response to the new market direction and funding system was to look for ways to reduce costs, especially to. It was aimed to achieve this by streamlining the administrative functions of the University. The adoption of centralized systems aimed at reducing repetition throughout the University, but also providing a locus of control and visibility for all information contained in the system. It has been argued that the trend of ERP adoption amongst Universities worldwide reflects the almost global corporatization of Universities and the complex and competitive marketplace in which they now operate. Also, software vendors recognized around the same that the higher education market was lucrative and expanding rapidly and moved quickly to supply it (Wagner & Scott, 2001).

As Australian Universities responded to the change of environment, the increase in student numbers, the decline in government funding and increases in pressure to operate in a more business like way, they were also being pressured to achieve greater efficiency and lower operating costs (Hoare, 1996; Sarros & Winter, 2001; Coaldrake, 2001; Guthrie & Neumann, 2001). This promoted the adoption of integrated information systems and at the same time centralisation of management functions, often reducing the independence of individual academic schools (Sarros & Winter 2001; Siracusa, 2002).

5.2.1 Software integration in Australian Universities

In response to the changes outlined above, the committee of Australian Vice Chancellors (AVCC) created a steering committee in 1991 to identify the need for streamlined and integrated systems in the university sector which would also allow students to transfer between universities with minimum fuss (Vitale, 2000). The Core Australian Specification for Management and Administrative Computing (CASMAC) committee quite quickly met with difficulties, and conflicting views on hardware platforms led to the systems development work being shared across the participating universities. According to Vitale (2000) the costs of development quickly reached $9 million. The CASMAC consortium then split into several groups. The major grouping ‘Unipower’ consisted of 19 universities but was disbanded in 1997 when no useful systems had been agreed upon or developed.
One of the smaller groupings developed a student administration system – Callista, to which the case university committed several years of time and resources. Callista’s main selling point was that it was a Student Administration Module designed for Australian universities, rather than an international system which did not take account of the specific elements of the Australian university education system. Callista commenced with six participants in the joint venture, but at the commencement of this research project, four universities, including Griffith had abandoned Callista to pursue ERP implementations which would allow integration of student administration data with other university data.

By 2002 around 38% of Australian universities had adopted ERP solutions, and although SAP held around 60% of the global corporate ERP market, in Australia, it held only 35% of the higher education market, while PeopleSoft held almost 55%. As mentioned in chapter 3, the critical stance means asking questions, such as why particular technical systems are adopted and continue to dominate the market even when they cause substantial problems or even outright failure. These ideas will be discussed in chapters 7-9, but at this point it is useful to review some of the problems associated with ERP implementation in universities.

The reports of failure are numerous and easy to find. The University of New South Wales reportedly paid twice its original estimate (totalling AUD$40million) to replace its key administration software with an ERP system (Lawnham, 2001).

Complications are not unique to Australian implementations of the software. In the U.S. a college that implemented the system ran into problems with staff shortages, workweeks being allocated at 50-70 hours, and limitations of the PeopleSoft version prevented the staff from reaching deadlines leaving many unfilled requirements in the Student Administration Module (Sturdevant, 1999). Network performance has also been raised as an issue in the US College as “few factors can demoralize staff and doom a project to failure more quickly than when the performance of the new system is worse than the one replaced” (Sturdevant, 1999).

Another U.S. college implementing the system also reported that the student administration module failed to support the vital financial aid requirements that students have attached to their records; consequently queues of up to 200 students were regularly reported waiting
outside the Financial Aid office (Stedman, 1999). While PeopleSoft endeavoured to fix issues the college was having, it was speculated that the corrective actions would exceed the assigned budget by US$11 million (Stedman, 1999).

RMIT is probably the best known disaster in ERP implementation in an Australian University (Madden, 2002; Royall, 2002). Based in Melbourne with more than 60,000 students spread across national and international campuses, RMIT is typical of one of the larger and higher ranking universities in Australia. The software project AMS (Academic Management System) involved extensive customization and cost over $47million AUD. The director of IT services stated that the go-live date was unrealistic; the planning, preparation, training, and communication aspects of the project were compromised as a result of a rushed timeline. The project also had troubles with its IT staffing, included the loss of many experienced consultants, leaving inexperienced University staff and first-project consultants to bridge the gaps.

The result was that many students were unable to enroll via the internet, the primary method of doing so, and with the old system decommissioned it was impossible to revert back to it, as the enrolment processes and course information had also been changed to suit the new system. The system was also unable to bill the international students which are a major source of income for any university. The University invested another $15million into the software in an attempt to get it operational but this proved fruitless. The Vice Chancellor of RMIT resigned over the debacle, as did other high ranking staff involved with the project. It took RMIT 6 years to recover from the financial and operational mess (Madden, 2002).

Despite the long record of failures, ERP implementations have continued to increase in the higher education sector, driven primarily by the belief that ultimately ERPs will provide competitive advantage and “…institutions, which are unlikely to switch to integrated information solutions, will find it difficult to retain their market share of students,” (Swartz, cited in Murphy, 2004). At Swartz’s Cleveland University, implementation had gone far enough to enable the relatively low cost development of add-ons such as a housing allocation system, implying that students are benefiting from the services offered via ERP
implementation and not having such system would make a university less competitive. What is interesting about this discussion is that none of these systems concern the core business of universities – research and teaching – and almost all discussion and research about ERPs has been centred on administration; the role of academics has been overlooked (Sarros & Winter, 2001).

The increased rate of ERP adoption highlights the importance of ERP research in Australia. Over 85% of the universities surveyed (Beekhuyzen, Goodwin & Nielsen, 2002) stated that they were implementing one or more modules from an ERP vendor. As Holland and Light (1999) question, “What will be the basis of competitive advantage if organizations are effectively adopting standard business models which are globally dominant? What is the potential for developing differentiation or novel business strategies if the underlying IT infrastructures are almost identical?” While it can be argued that such a large adoption rate is a response to pressure on the whole industry from government, and increases in global competition, universities are expecting the system to deliver competitive advantage. “Universities are viewing the investment in administrative systems as a critical leader for their institutions in a dynamic future, to remain competitive in their operations, and to meeting increasing internal and external demands” (NABS, 2002). Professor Fell from the University of NSW states, “The University is prepared to accept the risk (of ERP implementation) in order to achieve a significant competitive advantage” (Lawnham, 2001).

5.3. Griffith University.

The University is one of three major universities in Brisbane, situated on one of the fastest growing areas in Australia. Griffith University was established in 1975 at Nathan with around 450 students enrolled in schools of Humanities, Modern Asian studies, Science and Environmental Studies. In 1988, with the introduction of a national unified system of tertiary education, Griffith expanded and over the next few years acquired the Queensland College of Arts, Queensland Conservatorium of Music, and the Gold Coast and Brisbane (Mt. Gravatt) Colleges of Advanced Education. The University also made proposals to acquire the privately owned Bond University on the Gold Coast, in 1993 and 1995 (Quirke, 1996, p. 99.) Although these bids failed, Griffith University continued with expansion in the
Brisbane/ Gold Coast ‘corridor’ by opening a campus at Logan in 1996. The Gold Coast campus is the fastest growing in Australia.

At the time of writing the University now has more than 40,000 students from over 120 countries studying in approximately 60 schools.

The university administration has a typical structure. There is an increasing divide between the academic and ‘corporate’ sides of the University; the latter covers all areas apart from teaching or research, as shown in the diagram below. The diagram is not detailed enough to show the effects of administrative restructuring, which will be discussed in section 3.1.

*Figure 4 The University Organisational structure* (Adapted from Griffith University, 2002)

### 5.3.1. Restructuring

As well as the rapid expansion and commercialisation of the university, the most important feature to discuss which has relevance to this research project is the restructuring that took place...
place from 1987 onwards and most especially the major restructure of the university on 1997. With the impact of the Dawkins report looming (Dawkins, 1988), the Vice Chancellor commenced planning for organisational restructuring which would “more readily cope with changes of the kind associated with the Dawkins reforms” and the expected expansion (Quirke, 1996, p. 62). This resulted in the establishment of five academic divisions, renamed Faculties in 1992. Further reorganisation in 1992 brought together nine administrative sections into a single office headed by a Pro Vice Chancellor – the choice of this title deliberately “emphasising the position’s co-ordinating role” (Quirke, 1996, p. 80).and its direct link to the Vice-Chancellor's Office. In 1996 the University Council proposed further work noting the “need for balance between efficiency and academic and democratic freedom and a current need for a restructuring which will allow the Vice-Chancellor more time to focus on strategy. These are crucial times for a Council which must now assess decisions in the context of tens of thousands of students and budgets of hundreds of millions of dollars” (Quirke, 1996, p. 97).

In 1997, the University centralized the majority of its support staff and used Service Level Agreements to ‘sell’ these services back to the schools. A primary motivation for this was to remove duplication of function and to provide a standard level of service across the University. After the restructure, workload previously handled by staff allocated to schools, was also shifted into the central administration. Only Student Administrative Officers (1 or more depending on the size of the School) remained with the school offices, to handle very specific student enquiries and to be the first point for collecting student related data for upload to the central system. Since this dissertation is focusing on this group of ERP users, it is worthwhile to discuss the impact of restructure on them.

The University commissioned a report on the restructure, and this was carried out by a former senior manager, Nathan Fussell (1998). The report concluded that no improvement in services to students had been found and that staff morale and staff and student satisfaction had in fact decreased considerably after the restructure. “The working party is of the clear view that: the changes have not improved the efficiency and effectiveness of the University’s core business of servicing students’ needs” (Fussell, 1998, pg. 1). It was reported that the administration of the University has also been adversely affected by the
restructure. “Both staff and students are reporting a significant decline in their level of satisfaction” (Fussell, 1998, p. 1).

There was also a “…A decline in effective two-way communication between senior and other staff, and academic and administrative staff.” (Fussell, 1998 pg. 1). Gaps in responsibility occurred since the shift and absorption of staff into other departments and role definitions have changed. “Student Administration… has made decisions centrally without adequate consultation and has failed to replicate the client service attitudes that existed previously in the faculties. Some of this shortfall is being covered by Student Administrative Officers.” (Fussell, 1998 p. 1) Note; Student Administrative Officers (SAOs) are often referred to as School Administrative Officers in university reports and in this dissertation.

Role Definition also became blurry as prior to restructure SAO’s were the first and most visible point of contact for enrolment information, and students continued to use them as their main source of information. Interviews with SAOs revealed that they felt they had to continue in this role rather than repeatedly (and they felt, rudely) refer students to the central office. However, since it was not part of the official work description, this increased their workload. “…Although the stated role of the SAOs is not supposed to include providing advice to students, their accessibility, depth of knowledge about courses from their previous and current positions and their willingness to help students, has meant that they have been filling the void created within the new system…” (Fussell, 1998 pg. 15). This problem with role definitions has led to loss of corporate memory. “…This has resulted in a loss of corporate memory in relation to subjects and courses at the school level” (Fussell, 1998, pg. 15).

The university restructure was further complicated by the ERP implementation which defined roles (and therefore workloads) in ways which did not greatly match the actual situation. The increase in workload for the SAO group is discussed in later chapters.

In the following chapters, the notion of cultural split will be discussed (Allen & Kern, 2002). This idea has arisen because of increased commercialization and the growth of administrative areas in universities, both in staff numbers and influence. As mentioned
below, the implementation partner in the ERP implementation strongly suggested undertaking a cultural audit to identify possible sources of concern, but the university declined this offer. Interviewees in hindsight though this was a bad idea and that the university either thought that the restructuring had already revealed all potential problems, or did not wish to ‘stir up any more trouble’.

5.3.2 Information Technology Services
As mentioned above, high level administrative organisation of the university was quite typical, so only a few functions will be briefly outlined. Information Technology Services is responsible for maintaining Information technology resources across the campuses and is part of the larger Division of Information Services, which also managed the library and oversees ‘learning services’. During the 1980’s there was a convergence of these areas, as library services and collections became digitized and learning was increasingly supported by web based services. The ITS department therefore not only inherited the IT responsibilities previously handled by school staff but also provided expanded services to both administration staff and academic staff and students.

One staff member pointed out that that ITS and computer support was a serious problem; one of many problems but ranked first equal with student administration problems. Other key findings of the Fussell review showed that problems had been identified earlier but there was little will to correct them. “Many of the issues raised by the review have already been raised by other processes within the university, but there appears to be a lack of urgency to fix them” (Fussell, 1998, pg. 1). The financial situation of the University was not considered a problem and questions the reasons for the restructure. “Money is not the critical issue, rather management of existing funds available” (Fussell, 1998, pg. 1).

However, as will be mentioned below, the cost of ERP implementation put strain onto the university’s operating budget.

5.3.3 Student Administration
As mentioned earlier, the 1997 restructure saw the student administration staff centralized along with other administrative functions. The duties and responsibilities of the staff were reorganized and defined according to the functions embedded in the ERP modules and these can be seen in Appendix A. One or more student administration officers (SAOs) remained
with the school, but their range of duties was ‘officially’ curtailed. Most of the work relating to timetabling, examinations, enrolments, graduations and students records was centralized. However, since this often caused inconvenience to students and academic staff, the SAOs remained the unofficial first point of contact on many of these areas. For example, difficulties with timetabling caused by space shortages were increased with centralization as the staff were not familiar with individual school requirements. So the SAOs undertook liaison work, sorting out problems and firefighting, even though it was no longer part of their job description and added to their workload. The restructure did not suit all staff and several key staff resigned. The loss of corporate memory during restructuring and a high turnover in the central student administration section meant that expertise about specific school matters (changes to courses, etc.) remained with the individual school student administration officers. Although this increased their workload, many of the SAOs interviewed said that they enjoyed proximity to academics and students and being able to develop longer term relationships with them (which increased their ability to provide assistance).

5.4. ERP implementation at Griffith University

When selected for implementation at Griffith University, PeopleSoft was considered one of the ‘big 5’ in the ERP industry. With PeopleSoft’s takeover of JD Edwards, and more recently the Oracle acquisition of PeopleSoft, the Big 5 have been reduced to the Big 3 (SAP, Oracle and Baan). The new entity, consisting of Oracle and PeopleSoft has been speculated to release a product in 2010, aptly named “Fusion.”

There has of course been concern for the life expectancy of the existing PeopleSoft installations, and more importantly the quality and price of ongoing support now that a new organization is in control of the system. Maintenance and system updates are key factors in any system’s lifespan and usability and it will be important to determine the level of ongoing support that there will be for the PeopleSoft implementation in the coming future. Thus far Oracle has a separate PeopleSoft section of their operations, and has visibly made an effort to retain the PeopleSoft clientele, boasting 95% retention. SAP however has capitalized on the uncertainty of the future by offering financial rewards to those companies
who chose to switch to SAP. Oracle has responded in turn by offering financial rewards to companies who switch to Oracle from SAP. It is not clear if the level of competitiveness will continue into the future, or if more of the big 5 will be amalgamated. While the level of competitiveness has clearly been stimulated by the consolidation of key players, it remains to be seen what will be the level of support for existing customers, as a lot of attention has been put into drawing customers to new products rather than supporting the existing installations for those who have chosen to stay. After the acquisition Oracle announced a massive 5,000 job cut from PeopleSoft’s workforce of 11,000 (Gilbert & Kawamoto, 2005). The loss of nearly half their workers is certainly in line with the public statements from the Oracle chairman to shutdown PeopleSoft product lines, and while they have endeavored to maintain the current PeopleSoft clients, the reduction in PeopleSoft specialists will likely reduce the depth of knowledge and ability to serve and support clients like Griffith University. In the long term the quality and content of product updates and upgrades is likely to be reduced because of this acquisition, however the University may be offered incentives to move to the new “Fusion” software.

5.4.1 The implementation schedule
The schedule and bare facts of the implementation have been detailed elsewhere (for example Beekhuyzen, Nielsen & Goodwin, 2002). The implementation schedule of the ERP is presented in Appendix A. The following description draws from earlier publications and official university documentation and makes no other comment on implementation problems or benefits. These will be discussed in later chapters.

The New Age business Services (NABS) project was established in 1998 to identify a suitable replacement for the university’s aging and inadequate administrative systems. Evaluation of a number of vendors was completed by March 1999 and the University signed a contract with PeopleSoft on 30 June to implement the New Age Business Systems project “designed to integrate its finance, HR, and payroll systems to improve business services and support to the University” (Griffith, 1999, p. 21). This was followed by the selection of an implementation partner in June.
Three modules of the PeopleSoft system were chosen for implementation – Finance (commenced in September 1999 and implemented in October 2000), Human Resources management (April 2001); the first, limited release of the Student Administration module (including student admissions) took place in April 2001 with subsequent releases including enrolments and assessments in October 2001, and finally research higher degrees and scholarships in March 2002. This last installment signaled the completion of the NABs project. Despite the problems, the original timetable for implementation was closely adhered to. “The various modules of the system will be implemented progressively over an 18-month period, starting with the first phase of the finance system in July 2000 and culminating with the implementation of the final phase of the student system by the end of 2001” (Griffith University, 1999, p. 24). Some interviewees indicated that sticking to this schedule created problems as difficulties were sidelined in the interests of meeting the implementation partner’s schedule.

A number of reference groups were established to advise on the implementation; an interview with a member of the academic reference group indicated that the University declined the implementation partner’s suggestion that a cultural analysis should be undertaken and that subsequent problems were attributed to this neglect.

The University acknowledged the impact that this project would have on the university’s operating budget. “The University cannot escape significant costs in this area if it is to have good quality information systems underpinning its operations” (Griffith, 1999, p. 24). This warning was repeated in subsequent annual reports with the additional comment that this would lead to “limited levels of working capital being available for daily operations in 2001(Griffith University 2000, p. 35); a statement repeated each of the subsequent three years.

The 2002 Annual Report (Griffith University, 2000, p .28) indicated that “post-implementation work was undertaken to consolidate the gains resulting from implementing the New Age Business Services (NABS) project”. And in 2003 work on new versions was commenced. The University has continued to upgrade the systems on an almost annual basis, but there has been little information made generally available about the costs or
implementation problems, part from general statements such as “significant investment in system performance tuning and application capability enhancement has been made to the student, HR and finance products during 2009 to enable increased efficiency in these administrative areas. These systems enable not just back-office administration activities, but also directly assist our student body to access relevant program and course information, as well as performing critical tasks such as their enrolment” (Griffith University, 2009, p. 23).

At the conclusion of the research project interviewees still expressed regret for the obsolete system; even though it lacked a good graphic user interface, the SAOs had become highly proficient in its use. According to them, with the old system, it took only minutes to search, print and collect reports on class numbers and other key details relating to the courses each school requires to run, while with the new system “it can take weeks to get the same information”. The system provides a limited selection of reporting options so SAO’s are required custom run reports, which can only be performed by system maintenance staff. As the reports are no longer run by the individual SAO’s, delays are inevitable as SAO’s queue for access to the specialized reports. These extraordinary delays were usually attributed to the centralization of key processes which were then tied to more fallible technology, such as the nature of the printing process; one problem with the print server that services the entire university could hold up every job.

5.4.2 Training and workload
Perceptions of the value of training for the software varied greatly. The corporate student administration staff generally reported that the training and support was adequate, and thorough. The SAOs however had different reactions. A primary problem that arose was that training was conducted on average six months before the software went live, meaning that staff had essentially forgotten what they were taught, as they had not used it since the few hours in training. To compound this problem the versions changed significantly between when they were trained, and when the system went ‘live.’

Reports on the quality of the training for the ERP are varied. On the whole the corporate staff reported that the training was good, and the support has also been good. The staff from the academic elements however had a less than ideal experience and on the whole thought
the training was poor and left them unprepared for the changeover. A core problem that has arisen stems from the fact that the training on average for the academic staff was conducted six months before the software went live.

The ERP that was selected for implementation by design allocates and distributes workload by work function. However, staff perceived that the pre-defined job definitions were haphazardly mapped to actual staff positions. It appeared that unless an organization has exactly the structure that the system is designed for, there is potential for overlapping, over allocation, and gaps. The hierarchy of user and roles and security access also meant that in some cases authority to delete information was removed from end users, allowing only managers to correct a mistake in data entry. This shifted autonomy, and created delays while staff waited for management to performed tasks defined by their access authority rather than by their job description.

This method of workload distribution has created problems for the SAOs. The ‘service agreement/user pays’ model of did not translate well to the organizational structure implemented in 1997. If the restructure had not centralised student administration, a better fit with the ERP might have been achieved. This is an example of ‘best practice’ embedded in an ERP not suiting a specific organisation - the restructuring was deemed by senior staff to important for university strategy, but did not align with ERP best practice. The result was excessive workloads for SAOs, delays and mistakes.

5.5. Selection of the research Site

The selection of Griffith University as an appropriate research site may be justified by its characteristics; it is a large, well established University which presented a typical implementation of ERP in terms of modules selected, campus size, and staff numbers. It was also readily accessible to the author and permission to undertake the study was quickly granted. There were some (expected problems) with carrying out a similar study at another university, which expressed reservations about confidentiality being respected, and not being willing to admit to problems to a student from a ‘rival’ university. An Honours study conducted on the Y2K problem at Griffith University (Goodwin, 1999) also meant that the author was more familiar with administrative procedures, locations, etc.
The student administration module was selected as the primary focus of study for several reasons. Firstly, it is the most visible and arguably the most important administrative aspect of a university – if students cannot be enrolled, assessed and progressed, the university cannot do business or earn income. Secondly, it was the most critical in terms of linking the two major domains of the University - teaching and administration. The student administration system more than the others has serious impacts on all sides of University as it is the interface between the University Administration, the Faculties and its students.

The Student Administration system went ‘live’ six months before this research project commenced, allowing for the system to be at least partly bedded down before data collected was begun. It was hoped that the users would be familiar with the system and any bugs would have been corrected. However, Amber (SAO5) confirmed that the situation has not improved over time - “Second semester was just as bad if not worse.”

As mentioned earlier, some staff attributed implementation problems to the pressure to meet deadlines. The system was implemented in 2001 to be ready for the major student intake in semester 1 (February) 2002. as the steering committee members at the time believed it was prudent to start operation of the system at the beginning of a fresh semester. Data collection commenced a few weeks after this period as no staff are available for interview during the very busy enrolment period.

5.6. Data collection

Apart from official and unofficial documentation referred to earlier, the main data set consists of in-depth interviews with 19 personnel, as follows (and summarised below).

- 8 Student Administrative Officers (SAOs) who were located in Science, Biomolecular Science, Engineering, Nursing, Aviation, Behavioral Sciences, Marketing & Accounting Faculties
- 1 project team member assigned to the project for development expertise and business knowledge from the SA perspective
- The Director and 2 managers from the centralized student administration section (SA), one of whom was on the panel for the selection of PeopleSoft
- 4 staff from the centralized Student Administration Department
The Head of the Information Technology Services Division

A member of the Academic Reference Group (who were consulted on technical and organisational matters)

The Head of the Academic Administration Division (which oversaw the student administration services)

A number of other staff are referred to in the interviews and will be identified as such. It should be noted that their actions or attitudes were not directly observed, but reported by the interviewees listed below. There was no attempt made to verify these reports except during discussions with other interviewees and where there are differing opinions, these are noted. It is not the intention of this dissertation to arrive at some form of ‘objective’ account of the implementation (if indeed such a thing were possible). The focus is on the experiences and perceptions of the SAOs and other key personnel.

### Table 3 Summary of Interviewees

<table>
<thead>
<tr>
<th>Alias</th>
<th>Position and responsibilities</th>
<th>Acronym</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betty</td>
<td>Director of Student Administration</td>
<td>DSA</td>
</tr>
<tr>
<td>Donald</td>
<td>Manager of Student Administration Office Mt Gravatt Campus</td>
<td>MSA1</td>
</tr>
<tr>
<td>Earl</td>
<td>Manager of Student Administration Office Nathan Campus</td>
<td>MSA2</td>
</tr>
<tr>
<td>Sally</td>
<td>SA Employee (Nathan Campus Student Administration Staff Member)</td>
<td>SAE1</td>
</tr>
<tr>
<td>Crystal</td>
<td>SA Employee (Nathan Campus Student Administration Staff Member)</td>
<td>SAE2</td>
</tr>
<tr>
<td>Jenna</td>
<td>SA Employee (Nathan Campus Student Administration Staff Member)</td>
<td>SAE3</td>
</tr>
</tbody>
</table>
5.6.1 Conduct of the Interviews
As discussed in chapter 3, most qualitative research makes use of “unstructured, open-ended informal interviews for they allow the most flexibility and responsiveness to emerging issues” (Schwandt, 1997 p. 74) and this approach is taken in this research project. The interviews lasted between 60 to 90 minutes.

The questions below aimed to allow the interviewees to express their own perceptions of the ERP implementation, rather than asking specific questions which might limit their
responses. The nature of the power frameworks requires establishing what actions took place, but also understanding how the interviewees viewed these actions within the context of their work. Experience in interviewing gained during an Honours project (Goodwin 1999) was used; developing an informal conversational technique which elicited the subjects ‘stories’ of the implementation. As mentioned above, analysis was performed during the interview as well as afterwards, and this allowed the author to pursue topics which seemed relevant without having to adhere to a fixed interview schedule.

Examples of initial questions.

1. What does your role entail?
2. Tell me about who else you work with? Who do you report to?
3. How do you get things done here?
4. What do you think about the PeopleSoft project?
5. How was the consultation process?
6. How has your School changed?
7. How do you think this project has affected the University’s image?
8. Do you see the university as a Business?
9. What sort of conflict have you seen in the project?
10. How was the communication from the project team?

Communication problems have already been referred to as a major problem during the implementation. Perhaps because of this the interviewees were very forthcoming in their responses often seeming relieved that they could discuss their problems with an ‘outsider’. Since many of them had difficulty communicating with the IT project team, they seemed particularly pleased that an ‘IT expert’ was willing to listen to them.

5.7. Conclusion
This chapter has presented background information about the research site in a similar manner to the discussion of the theoretical framework in chapter 4, moving from the general
social and industrial context to the specific working situation of the target group.

Descriptions of this sort must be limited; the selection of information for inclusion must be guided by the focus of the research and this has been explained in the preceding chapters. Rather than excluding information, the author tried to provide all contextual details which are helpful. At the same time the author has tried to avoid selecting information merely to support data analysis and interpretation. As discussed in chapters 6 and 10, the process of interpretation revealed elements in the situation which the author did not expect, possibly as a result of consciously trying to apply the principles of dialogic reasoning and suspicion discussed in chapter 3.

The dissertation is concerned with the implementation of the student administration module of the ERP because of its importance to the core business of the university and its visibility. Data collection therefore focused on this group, both in the centralized student administration section and the dispersed student administration officers allocated to academic schools. A key problem which emerged and which will be discussed further is the ambiguous position occupied by the latter users of the ERP.

The research data from the above subjects was triangulated with data from interviews with management and analysis of documentation. As discussed in chapter 3, a form of theory triangulation was attempted through the use of multiple perspectives on power and politics and how these were applied to the data will be discussed in chapter 6.
Chapter 6 – Data Analysis of Two Influence Attempts

6.1. Introduction

In chapter 4, the multiple perspectives on power and politics were discussed and the purpose of this chapter is to apply these perspectives to the data collected during the study and consider their usefulness. As mentioned in chapter 4, the focus is on processual power – the ‘inner’ dimension of the four dimensional framework and the other dimensions are utilised primarily to give context and meaning to the analysis of processual power. In particular the work of French and Raven (1959) and its later development by Raven (1992, etc) will be utilised to show how processual power can illuminate the operation of power and politics during the ERP implementation. Chapters 7 to 9 will continue the analysis but will focus on contextualizing the discussion in this chapter by referring to existing ERP research and any other research which may help increase understanding.

In chapter 3 the approach to data analysis was briefly discussed, and this will be amplified here as needed. To reiterate the most important points; firstly, data analysis commenced as soon as the first set of data was collected. Thus this analysis did guide the conduct of later data collection (for example, adding interview questions, or seeking out a particular key informant). This could be thought of as trying to achieve what is called ‘theoretical saturation’ (Schwandt, 1997) such as in studies which take a grounded theorizing approach. In fact, when the data collection period was completed, I could not be confident that anything like ‘saturation’ had been reached, since the ERP implementation was in a state of continuous change and I could not be sure that some significant event (such as the appointment of a new supervisor or project team member) might not have an important influence on the perceptions of the subjects. The exit point for this type of study is therefore usually arbitrary, but guided by when the researcher considers that there is sufficient support for a new understanding of the phenomena.

Rather than ‘theoretical saturation’, the initial and continuing data analysis were more aimed at fulfilling the principles outlined in chapter 3; especially the principle of hermeneutic understanding (Klein & Myers, 1999), where the iteration between data
collection, analysis and reflection helps to improve the researcher’s understanding. Because a critical stance is taken in this research which attempts to disrupt the dominant discourse, the principle of dialogical reasoning also is at play here – requiring reflection on the “preconceptions that guided the original research design” (Klein & Myers, 1999). Similarly the principle of suspicion is applied not only to discrepancies between the subjects’ accounts as shown in interviews and documentation but also to the analytical tendencies of the researcher.

Secondly, (as outlined in chapter 3) many approaches to data analysis involve fracturing the data and reorganizing it according to categories and ideas. This reduces the volume of data and makes it more manageable and provides a systematic and methodical approach. Schwandt (1997) contrasts this coding approach to data analysis with other approaches such as hermeneutics. Similar to the ideas mentioned above this involves a “dialogue between the analyst and the object of analysis” (p. 5) and the interpretation of each part of data (phrase, interview, document) “depends on the interpretation of the whole and vice-versa” (Schwandt, 1997, p. 63).

Thirdly, theories and concepts (such as power bases) are used as ‘sensitising’ concepts (Blumer, 1954 & Walsham, 2006) rather than as prescriptive concepts. They are used to help the researcher make sense of the data rather than forcing the data to fit the theoretical schema. In chapters 7-9 additional ideas are checked to confirm this sense making which also allows reflection on the use of the theories.

This chapter is thus organised around the theoretical framework discussed in chapter 4 so that the way data analysis has been carried out, can be demonstrated. A brief description of two specific events is given, followed by the analysis.

6.2. First example of Attempt to Influence: Graduation Data Entry is now your problem!

The first influence attempt I will analyze was discussed during an interview with Amber (SAO5). As discussed in chapter 5, SAOs (School Administrative Officers) were assigned to the schools and were often at some physical distance from the corporate staff section
which they had to provide information to. There are a different number of schools in each faculty, but SAOs usually worked independently, occasionally with the assistance of clerical officers, depending on the size of the school and the workload involved. The SAOs had the responsibility for uploading student grades for their schools, in the new student administration module in order that they could be released and published, and most urgently so that completing (final semester) students could be notified that they were eligible to graduate.

In this instance Amber had made several unsuccessful attempts to upload the results and stated that she had received no help from IT support, and was annoyed at insinuations that she was at fault.

“Because of some of the responses we were getting with it’s your fault you must have opened this document this way and just not listening to us”.

With the cooperation of some of the other SAOs, Amber decided to force the issue. “we chose the option of sending it to exams and timetabling the next day and having them manually upload and we knew we would be in the shit over that so we faxed down all our grade changes the next day and went home so they had no option they couldn’t contact us, and we had urgent messages we knew they were coming urgent messages on our voice mails there was nothing they could do because they couldn’t get us that afternoon and they had to have it fixed because it was going to paper [to be published in the city newspaper] so they had to manually enter it,”

This was despite feeling sympathy for the person who had to take on the task. “so I mean that’s horrible and its nasty and I mean it’s quite difficult because Tiffany (SAO7) and I are friends personally with the girl [corporate staff member] that’s in charge of the results entry on the exams and timetabling side of things, but that’s an option we chose.”

In summary, Amber used manipulation, and invoking the power of third parties to influence the corporate staff member whom she targeted. Her attempt was successful as the senior administration (the source of the third party power involved) had set an immovable
university wide deadline for the printing of student results. The SAOs knew that the very important deadline for grade submissions from each school restricted the options of the targeted corporate staff member. The SAOs manipulated the situation so that the only course of action remaining for the corporate staff member was to upload the school results.

6.2.1 Motivation for Influence:
The ITS software support was often also at some distance from individual SAOs and provided most support online or by phone. Amber was unhappy with the way she had been treated and this feeling formed the motivation for her to exercise power. The relevant module of the ERP had been implemented 2 semesters (6 months) prior to this event and the SAOs in general were not satisfied with the level of support provided. They felt that the senior administration were focusing resources and effort on the larger issues of business continuity. The SAO’s asserted that they were not fully trained and supported in their daily functions and perceived this as the result of their being a small group (48) of employees, dispersed, dispersed throughout the University and having no collective power. Katerina, senior SAO and member of the SAO representatives to the project team stated that “A lot of that boils down to the fact that they are a small group without much clout.”

6.2.2 Assessment of Available Power Bases
We can consider Amber’s choices in attempting to influence a staff member inside the corporate side of the University. Amber had no direct authority or position of formal authority which ruled out a legitimate influence approach. Her position required some expert power in her domain, but she stated that this was not recognized by the corporate staff in numerous consultative meetings and focus groups, so the use of expert power was not feasible. Her attempts at using informational power (persuasion) had failed; she felt insulted and put down during her conversations with corporate staff about the problems with the student administration system.

Selection of Power Base: Manipulation
Having failed on previous attempts to secure the assistance she needed, via Direct Information, this narrowed her selection to that which required no volition on behalf of her target. In other words, the use of power bases such as legitimate authority, expert power
and informational power require volition from the target - that the target acknowledges the power and accepts its appropriateness in the domain (as for example, expertise is accepted as an appropriate power base in the research domain, whereas position power is appropriate in bureaucracies). Manipulation requires no acknowledgement by the target – instead the power of 3rd parties is invoked or reduced.

6.2.3 Preparation for the Influence Attempt:
In preparation for the influence attempt Amber enlisted the support of the other SAO’s in her faculty, to ensure their agreement in the following actions. She controlled the channels of communication by switching phones off and choosing the time of day to depart the campus ensuring that she would be unavailable for contact. This ensured that avenues for opposition would be minimized as communication was impossible.

“We went home so they had no option, they couldn’t contact us and we had urgent messages we knew they were coming, urgent messages on our voice mails and there was nothing they could do because they couldn’t get us that afternoon.” – (Amber SAO5)

The Mode of Influence was therefore passive and one way. “So we faxed down all our grade changes” - Amber (SAO5)

6.2.4 Assessing the Effects of the Influence Attempt:
The influence attempt could be viewed at the processual level as successful; Amber used the environment and obligations of the University to her advantage and left the target no choice but to comply with the influence attempt.

“They had to have it fixed because it was going to paper [published in the city newspaper] so they had to manually enter it.”

There were however other effects: Amber was reprimanded for her actions. However, she was aware that this was likely to happen and given her position inside the academic side of the University she believed that her head of school would protect her from any serious repercussions. This points to a disjunction between the responsibilities assigned and the power bases available to all participants. Amber had no power to influence the software team to give her a good level of technical support. Nor did anyone in the corporate office have direct legitimate power to compel Amber to upload the grades. Only the Dean and
Head of School have the authority to direct Amber’s actions and they were not able to be consulted before Amber left the campus. There were personal costs to Amber in regard to her friendship with corporate SAE staff member who had to enter the data. According to Amber she was aware of this potential cost and was willing to accept it to get her point across to the relevant managers. Wider perspectives on the success of this attempt are discussed in sections 4 and 5.

6.3. Second Example of Attempt to Influence: *Keep this quiet or everyone will start complaining!*

The Second influence attempt was directed at Amber by an Academic Services Officer Susan, who reported directly to Wendy, (HAA). This attempt was unsuccessful. The Academic relies on access to student data and therefore their need for integrated and seamless systems is very high. There was general perception that the Academic Administration Head had strongly supported the selection of the ERP. A project representative Kristen (PTM1) stated in her interview; “I mean ultimately she’ll [Wendy] wear the can if it goes wrong, to a certain extent”.

According to several of the SAOs interviewed, the number of inquiries and complaints had escalated. The SAOs, although distributed throughout the six campuses felt united in their problems; isolation from the centralized student administration who were more interested in bureaucratic procedures than supporting students, a sense of responsibility to the students and staff of their individual academic school and resentment at the lack of support from centralized services in information technology and student administration. This caused increases in workload which they ultimately referred to the Human Resources section.

“So that’s actually part of the reason behind why the 3 SAO’s of this faculty have gone to HRM about our workloads.”- (Amber SAO5)

The level of complaints by SAOs to student administration, academic administration and information technology services provoked a strong reaction from the Academic Services Office.
“we have actually been asked to not notify other SAO’s that we are doing this which I found quite interesting, we have been asked to keep it quiet by our academic services officer who is answerable to Wendy” (Amber)

The SAOs interpreted this as a desire to prevent them from collaborating in their resistance to poorly understood systems.

“So I think we all have to band together and be quite vocal in the fact that is not working, so that’s actually part of the reason behind why the 3 SAO’s of this faculty have gone to HRM about our workloads, we don’t expect anything will be done, um we have got no illusions there, but we want it noted that we complained because you know it can’t continue” (Amber SAO5).

6.3.1 Motivation for Influence:
The Academic Service officer concerned was not interviewed for this study, but her motivation was perceived by the SAOs as resulting from concern that the SAO’s group action was the start of organized resistance. The ASO attempted to contain the situation; “We have actually been asked to not notify other SAO’s.” – Amber (SAO5). SAOs who spend most of their time interacting with academic staff and students are not accustomed to being asked to remain silent about issues of concern, except when they relate to confidentiality of student and staff records.

6.3.2 Assessment and selection of Available Power Bases
The attempt was unsuccessful because none of the power bases available to the Academic Services office were acknowledged as appropriate by the SAOs. Expertise was inappropriate, considering the specialized knowledge of the SAOs and the failure of anyone in Academic Administration to solve their problems with the system. Position power, the offer of rewards or penalties was also inappropriate and would not be acknowledged. None of the SAO’s reported directly to the Academic Service Officer or any of her senior staff. Legitimate Power seemed the most appropriate given the position of the Academic Administration and the support provided to the Academic Services Officer. Reference to rules and conventions could be acknowledged as legitimate and perhaps were chosen for that reason.
6.3.3 Preparation for the Influence Attempt:
Since she had handled the SAO’s initial complaints, the lines of direct communication were open and the Academic Services Officer felt it appropriate to execute the influence attempt.

Mode of Influence:
The Academic Services Officer chose direct communication with the SAO who was leading the complaints to the HRM department (Amber). Her mode of communication anticipated compliance and that Amber would advise her fellow SAO’s to not organize further resistance.

: “We have actually been asked to not notify other SAO’s.” - Amber

6.3.4 Assessing the Effects of the Influence Attempt:
The Academic Services Officer’s influence attempt utilizing Legitimate Power was unsuccessful. The SAO’s did not recognize the legitimacy of the request and decided to refuse it.

“So she’s actually asked us to keep it quiet, we have refused to do that.” - Amber

The after affects of this influence attempt were to make the SAOs more resolute.

“We have told our other SAO’s, they’re all sitting back waiting, because now we will be the test case and we know we’re not going to win anything here but once we have finished with our attack I can tell you that there will be a second wave of SAO’s who will hit and the waves will just continue so on and as a group we will eventually have to wear someone down to listen to us and I mean this is the mentality now as SAO’s that we have to attack as a group if we want things fixed and its becoming a war mentality that we actually have to go in waves and we actually have to plan how we attack things.” - (Amber SAO5)

6.3.5 The Application of the Processual Power perspective
As mentioned earlier, the application of concepts such as processual power are adopted to enable everyday behaviour to be understood from a political perspective. Important ideas which emerge from the above analysis are the significance of acknowledgement of a power base. The SAOs being isolated from the main group of colleagues could be considered as
relatively powerless but their reactions in the above two examples show that they are able to utilise or resist the use of power bases which they view as appropriate or inappropriate in different circumstances.

This perspective also considers an area often neglected in political analysis in Information Systems research – the effects of the attempts. The results of the power attempts discussed above are quite different; and they might both be seen as forms of resistance and the use of negative power. However, to decide whether this is so, it is important to look at the context of these events and to do this the wider dimensions discussed in chapter 4 will be applied; the organizational, structurally constrained and socially shaped perspectives.

6.4. Organizational Power

This level of power deals with interactions at a group (cultural or departmental) level inside the same organization. Although in section 2 the behaviour of SAOs was examined, the analysis did not focus on their interaction with other groups; in fact, it was the lack of interaction and reaction from the groups which they thought should support them which the SAOs perceived as the basis for most of their problems with the student administration module. The behaviour of other groups is important however in understanding the experiences of the SAOs.

The organisational power perspective focuses on relationships (and sometimes interactions) between groups (groups being defined by roles or some other significant characteristic); how; how corporate policy decisions are made by the executive group is an example of this type of power. Kling’s (1987) web model was selected as the tool to analyze this level of power as it provides a wider perspective, more suited to looking at larger issues than the power/interaction framework.

As the interviews were conducted with individuals, some of the evidence at the organisational level was gathered through the analysis of documentation. However, since the focus is on the experiences of the SAOs, their perceptions of organisation wide issues (elicited from interviews) are equally important. It is necessary to consider that most studies are bounded by the perceptions of the individuals interviewed and the authors of documentation (although these are often difficult to identify). This problem of experiencing
the ‘organisation’ (Sandelands & Srivatsan 1993); that we cannot actually experience the total organisational experience directly was discussed in Chapter 1.

6.4.1 Overt and covert group behaviour
As mentioned earlier the primary trigger for an attempt to influence is motivation; a want of a desired end. This is usually aligned with an individual’s need to satisfy their personal, task or career needs (French & Raven, 1959), what Morgan (1997) calls interests. The SAOs refusal to keep trying to upload the student administration data could be seen in this light as they were attempting to draw attention to a problem. This interpretation is made within the context of the ERP implementation and this history of the section. In other contexts, such actions could be seen in another light.

Group interactions may also include the additional motive of satisfying a need of the group (overtly for the “greater good”) or satisfying a governance objective (which makes the influence attempt seem rational in the eyes of the organization). A governance objective may also satisfy a personal need, such as creating prestige or recognition for example, as the initiator of a new business direction. It is uncommon to observe overt selfish motives at a group level as individuals will pursue those interests either covertly using the cover of rational influence attempts (passing them off as a greater good/governance directive) or utilize more precise interpersonal influence attempts to achieve their ends.

To give an example, if an executive wished to have the best car park reserved for her personal use in a previously unreserved arrangement, this would require a major change, which would need to be handled carefully to minimize employee resentment. Assuming the executive has the legitimate power to make these sorts of decisions, an overt display of selfishness could occur. However, the same desire could be satisfied covertly, by a more acceptable overt display of managerial decision making, such as a complete change to the parking arrangements with improvements for all staff, or incorporation of parking privileges in a new reward system. Most people would recognize that a change has occurred and that they cannot quite identify and might feel puzzled or annoyed without knowing exactly why. This is the power of group policy setting and an organization can be affected in many ways. Much of the behaviour discussed below falls into this latter category. The overt behaviour
appeared constructive – meeting deadlines, promoting unity, but it could also be interpreted as covert in that it enabled individuals to avoid workload increases or to spend time communicating with a user group who had no obvious power.

The failure of the Academic Services Officer to influence the SAOs can be understood within the specific context as indicated above; however if we consider the cultural divisions which were developing in the university (and are typical of the higher education sector), we are aware that the lack of success also derives from the ambiguous relationships between the two groups, where the lines of power and influence are shifting.

6.4.2 ‘Us and Them’
The split in culture is clearly visible in the centralized nature of the University after the restructure in 1997 (see chapter 5 – The Research Site), visible when hearing staff speak of their “encounters” with staff from the other side of the split, and as the ERP implementation was funded and managed from the corporate side it is visible in nearly every aspect of the PeopleSoft project.

The split is based in the differing goals and values between the two groups and it is these goals and values that make the academics dedicated to the student population and their research objectives and the corporate staff dedicated to providing the infrastructure for the University. The split and values also encourage the corporate staff to view the University as a business, whereas employees on the academic side see the University as primarily an education provider.

Their views of each other do little to bridge the gap, the existing stereotype of the corporate staff (held by the academic interviewee’s) is that they do not care about the teaching and learning aspect of the University, conversely the corporate staff view the academic side of the University as stubborn and not conducive to necessary organizational change.

The case at Griffith University as described in chapter 5 shows many examples of specific groups influencing other groups, and this is a self evident aspect of social and organisational life. The definition of success for the organisational perspective is whether computer based systems “aid corporate survival” (Sillince & Mouakket, 1997, p. 374). The difficulty during analysis is to consider whose view is taken to mean corporate survival and this is
complicated further in the case of ostensibly not for profit organisations such as universities. As well as their individual desire to control the increase in their workload, the SAOs as a group appeared to view corporate survival as quality of service to students and academics and ensuring that student records were upload by the deadline. However, the committee that selected and recommended the PeopleSoft System over other alternatives were no doubt overtly looking for the best way to replace obsolete systems and improve efficiency (data entry costs, etc. This is reflected in official statements both by the university and the implementation partner. “Disparate staff and student information, manual processes and workarounds … contributed to time-consuming and costly administration” (Accenture, 2010) and “the University’s major corporate information systems (Student, Finance and HR) are all due for replacement” (Griffith University, 1999, p. 24).

Kling’s web model of organisational power allows us to see where “established distributions of power are confirmed or disturbed by the design of technology” (Sillince & Mouakket, 1997, p. 370). Of particular importance is the need for cooperation from participants in the web created by the new technology, and for the development of conflict management strategies. Much of the information systems research taking this perspective has focused on the relationship between users and systems analysts/developers, as this is where the most obvious conflicts and misunderstandings are likely to be seen. However in this case there was a lack of interaction between these two groups; the SAOs had less contact with the project team than did the student administration staff, even though the SAOs were significant users of the student administration system. This theme will be taken up again in chapter 8.

6.4.3 Redefining expertise
The cultural differences between the academic staff and corporate staff have been well documented in the literature of sociology and education but have been given less attention in the information systems literature. These cultural differences have accelerated in the last two decades (Marginson, 1999; Harding, Scott, Laske & Burtscher, 2007) and have created many difficulties including trust, communication, genuine involvement, and negative stereotypes, all of which have further segregated these two groups. Thus the traditional roles with which employees such as SAOs have identified are being transformed, as new groups
with different perspectives on appropriate roles and missions for universities acquire more power. This is shown most strikingly in what participants refer to as communication problems.

“There was a degree of consultation in as much as their information would be sent out and the expectation was that people would give feedback, and some of that did happen but, one it wasn’t always accepted and two it wasn’t always acknowledged and it also got to the point that the SAO’s as a group began to suspect why should I bother they are not listening and they are not going to change their mind so they [the SAOs] stopped responding.” – Katerina (SAO – seconded to project)

The SAOs judged that the project management team did not acknowledge their expertise.

“It is extremely poor communication, however having said that if we complain about it and I have had an example of a really big problem it will come back to us that it’s the schools fault because we didn’t respond when we were asked for consultation yet when we go back and search the documents we find that we were never asked about it.” (Tiffany SAO7)

6.4.4 Organisational Complexity
Several authors (Harding, Scott, Laske & Burtscher, 2007) have discussed the difficulty of managing universities because of their complexity and the range of interests amongst their stakeholders which are often difficult to reconcile. Furthermore Barnett (2003) suggests that universities have not developed the precise types of management and administration processes commonly found in private enterprise which can keep the different groups aligned to the same purpose. In fact, despite the mission statements which are clearly made available by universities, there is little indication that all groups in universities share anything like the same purpose and interpret mission statements in different ways and prioritise them differently. The trend to make universities more like private enterprises and thoroughly accountable in all their activities has not been well received by all university stakeholders, with many suggesting that the managerialist approach to governance goes against the university spirit (Harding, Scott, Laske & Burtscher, 2007). According to Greenwood (2007) this makes universities much harder to manage as the relationships between groups is difficult to ascertain.
In the example discussed in section 2.2 this is shown by the fact that SAOs who might be thought to have more in common with other student administration staff, actually felt more identification with their academic schools, and likewise were not supported well by the student administration section.

The sense of ‘us’ and ‘them’ which one would not expect usually between staff working in basically the same area (student administration) is also shown in the following comment by a Student Administration manager. The problem of workload is presented very differently.

“The system relies on the user doing it and getting it back, not the user forwarding to a little group and say you do all my work and give it to me. It is the user who has to do it, so the schools are then responsible for their own work and as far as we are concerned we were happier because we are doing student admin work but the SAO’s were a bit miffed because they had to do their own work, if they wanted something they had to do it.” (Donald MSA1)

With the reference to “do their own work”, Donald is referring to the SAOs handling their own requests for information, performing uploads of data into the system, and generally being less able to rely on interactions with the corporate Student Administration staff to complete their work.

This is consistent with Markus’s (1983) study that individuals who have benefited from a new information system often have a much more positive view of the system. Donald was pleased that some of his workload had been distributed to the SAOs. Moreover, as in Markus’s (1983) study centralized staff who gained extra access to information were more in favor of the system compared to the staff who had less access and control.

As mentioned above, the relationship between the academic staff and the administrative staff in universities has always been fluid and ambiguous, with each accepting the necessity of the other group for the survival of the university. This uneasy coexistence has been further challenged in this case (and in other universities) by the introduction of the new student administration system, which has allowed the central administration to have more access and control over the school administration officers’ daily operations. Interviews revealed that the overall morale of the SAO’s is suffering due to the treatment they are receiving and the impact of the system on their daily existence. The lack of attention to low
ranking users and the negative results was also found in a study by Mouakket, (1994), cited by Sillince & Mouakket, 1997, p. 372) indicating that the same mistakes continue to be made.

“Not only with PeopleSoft though, but generally since I have been here and this may be the case in all organizations. There is definitely a clear discrepancy about what management says about the system or a whole lot of things and about how the staff are feeling, you know, I think, um the staff morale is by far the lowest I have ever seen it since the time I have been here.” – (Zena SAO4)

In other words, although the attempt at influence discussed in example 1 would be deemed a success when analysed via processual power, a consideration of the organisational context shows that it is an instance of problematic relations between the two major sectors in the university – the academic culture and the administrative culture. The organisational perspective suggests that “roles are different according to organizational or professional position, reputation and resources of the role holder” (Sillince & Mouakket, 1997, p. 370). Academics are undergoing some changes to their roles with the push towards commercialisation whereas the management and administrative staff play very similar roles to their colleagues in other industry sectors. The difficulty for the SAOs is that their roles are ambiguous – their qualifications and expertise put them into the student administration group, but their location, the problems they face and the people they identify with, place them with the academic and student group.

The difference in values is quite evident in the way the project has been organized and implemented, specifically shown by the fit of the system with the roles and responsibilities of the existing personnel structure (allocation of workload), the quality of the training delivered to either academic and corporate departments and the level of commitment to meeting each department’s needs. The major theme from the organisational perspective is the bias towards the corporate side of the University. The implementation team was primarily created with staff from the corporate side, with representatives from the academic side of the University being invited to participate when necessary. After the commentary from some of the representatives from the academic side, the sincerity was lacking in the
participatory sessions and after a few months of repeatedly feeling ignored many SAO representatives withdrew participation.

As discussed in chapter 5, many administrative areas may have been suffering from the same increased workload problem and there is no indication that their lack of support was deliberate. The university restructure in 1997 centralized IT services and removed local support to each school. This has forced the departments and schools to rely on ITS (Information Technology Services) to provide adequate service and as described in chapter 5, satisfaction with the service has declined. For example, the SAOs were trained on a version of the student administration system different from the version that was finally implemented.

6.4.5 Policy creation and fund allocation.
The power to set agendas and make policy is an important aspect of the organisational power perspective

“Our workload has definitely increased, a lot of our jobs have changed, we get additional work to do associated with the system and we don’t get any meetings to discuss it or anything like that.” (Sienna SAO2)

The student administration system redistributed work; coupled with a poor training experience and software full of errors, “It’s to the stage now that one SAO cannot physically do the work that they have got already and now more is coming back from the PeopleSoft project but none of the resources are coming back.”

The SAOs perceived (from their discussions with project team members and other staff) that these problems came from financial constraints, possibly caused by implementation budget blowouts, while organizational fit was clearly not the priority.

“Yes and no, when the system was first coming in, I was working in admissions, and um they were concentrating on what they were doing with internal academic transfers and I went down and had numerous meetings and in the end it basically was the management saying we will do with this system what we can, as far as our funds go and in the end whether it doubles your workload and you employ another staff member or it doubles and you just have to put up with that, that was the answer.” – (Sienna SAO2)
From an interview with one of the managers in the student administration department who has been involved with the project at the software selection level he also confirmed that money was a limiting factor in the designs of the system and customization plans.

“In most cases we didn’t have the money to do the modifications”. He continued by saying that modifications that were required for conformity to Australian law or government regulations were given top priority in the budget.” (Earl MSA2)

6.4.6 System ownership
The simplest conclusion to draw from the analysis so far is that those who had more to do with system selection and design have had a better experience. Users reported higher satisfaction with the training and software support, the technical support and the access to information has also been regarded more successful than user comments from the academic side of the University. It is this reason that the power structure of the University has been reinforced by the system, as its design has suited the corporate requirements and needs far better than it has the academic side of the University. Comments from the corporate side like “The change is not enormous.” “I think the training was excellent,” support the viewpoint that the corporate side, who initiated the project, has also reaped the most benefit.

This is the history of the social arrangements, stereotypes that lead to mistrustful interactions and from the evidence collected some occasions seem to warrant the ill-will that is felt. Several sources confirmed that the academic involvement in the project requirements phase was aimed at appeasing people rather than genuine intent to incorporate suggestions (budgetary constraints precluded most alterations to the system that were not deemed mandatory, such as complying with government reporting regulations). It has been observed that the opposite is also true, that the core values of the academics are also not focused on their loyalty to the University.

“Academics are sometimes more aligned to their discipline than their institution” – (Trevor HIT)

However, it can be counter argued that the system is neither aligned to the academic needs of the University as well.
“I haven’t found the system to be very good at all. I have actually found the system to be quite frustrating and I have found the system to be inadequate for our needs, and I’ve found it impossible to get any reports from the system which then impacts quite heavily on our work and I think that it’s probably doubled my workload at least (time wise) since its implementation so I am not a very happy vegemite. [Vegemite is an affectionate name for a person and refers to a well known advertising jingle]” (Amber SAO5)

This is another highlight of the poor system fit and it is another clear indicator of the vast gap between the academic staff and the corporate side of the University, their goals, needs, and ability have been met through a consultative development approach, as the project team and SAO’s stated the project did involve discussions between stakeholders. However, it is up to interpretation how much sincerity there was or capacity to really tailor the system to meet the needs of the University, as Earl stated above, there was not the necessary money to customize the system to optimize it for the University.

6.4.7 Boundaries and resources.
The next aspect of the web model to be applied concerns the drawing of boundaries. The criterion for drawing boundaries consists of taking into account people, equipment, and organizations. The key questions to be answered are: who are part of a chain of resource dependencies, who are taken in account of by participants, and who constrain the actions of the focal actors.

The key resource dependency that was seen in the influence attempt between Amber and Louise (Corporate) was organizational knowledge and shared objectives. Both Amber and Louise had a vested interest in the graduation data entry. While it was primarily Amber’s task to enter in the data relevant to her school, it was Louise’s responsibility to transmit the compiled graduation data. When Amber refused to keep trying to upload the student results, it was left to Louise to complete as she was unwilling to default on her task. System knowledge was an important dependency in this situation as Amber did not have sufficient training to understand the system. The technical support staff attempted to convince Amber she was at fault and her frustration lead to her final course of action. If Amber had been more experienced with the system she would have been able to know for certain whether the
system was faulty and possibly persuade the technical staff that it was worth investigating. Because her training was inadequate and she did not understand the system sufficiently she was left frustrated by the technical staff’s perception that she was at fault and solved the problem another way.

The focal actors that are taken into account are the SAO’s (Amber and her accomplices), Louise, and the IT support teams. These groups were the core participants in this power exchange. Amber banded together with her immediate SAO’s (different schools in the same faculty) to interact with the IT support teams. After the IT support teams were unable to solve the problem that Amber and her co-workers were experiencing, Amber then lead the influence attempt against Louise.

The people who constrain the actions of focal actors in this case are as follows: the heads of school and the dean of the faculty constrain the actions of the SAOs even though the student administration staff probably consider that the SAOs should also be constrained by them. The IT support teams also have some level of constraint over the SAO’s as they are the point of contact for technical information and problem resolution. Louise (corporate student administration) would be constrained by the head of the section dealing with graduations. The head of the section is further constrained by her immediate superiors. These constraints resemble lines of authority in a bureaucracy or any formal organisational structure but they also take into account resource dependency – for example the IT section has expertise which makes every other section dependent on it to some extent, whereas the dependences of the SAOs are more ambiguous, caught in an uncertain position in the cultural rift. To understand how these dependencies are created requires a look at the next perspective.

6.5. Structurally Constrained Power

The next widest perspective of power, Structurally Constrained Power, looks at what forces are exerted on the University from the marketplace, and how key actors in the university perceive themselves within the sector. For example, responses to competition would be one factor that would be viewed in this perspective, as would be changes in market/client expectations or the introduction of new technology. As mentioned in chapter 5, the
university is relatively young and underwent a period of great expansion incorporating several other institutions in order to secure its place in the top ranks of Australian universities.

To keep the perspective consistent I will continue to discuss the earlier example about the graduation data entry that has been traced from its origins in processual power perspective between two individuals, through consideration of organizational power and now to take into account the influence of industry wide forces. As mentioned earlier, this widening perspective has led to modification of the initial interpretation of the success of the SAO’s attempt to influence.

The focus of this perspective also includes “the influence of culture and ideology on managers’ thinking when using technology for deskilling, intensifying and controlling labour. In section 3, we alluded to the increase in work load and intensification of work through having to take on other responsibilities. At the same time, the insufficient training could be seen as deliberate or inadvertent deskilling of the SAOs as they were poorly trained to use the student administration module. Control was increased during the implementation of the ERP in relation to the increased access that the system gave to the centralized administration over the work of the SAOs located in individual schools.

Several factors from the market place are important to this analysis of power. Firstly, one can trace the origins of the influence attempt stems to the adoption of the ERP system by the university; the need to improve the university’s competitiveness, ostensibly to improve efficiency, but also to conform to a global trend in ERP adoption has caused major problems throughout the university sector, as discussed in chapter 1. Funds which would be available to support student administration staff are reassigned to the costly system implementation. “The university cannot escape significant costs in this area … which will lead to more limited levels of working capital being available for daily operations in 2001” (Griffith University 2000, p. 35).

Secondly, the increasing routinisation and standardization of university procedures creates rigid deadlines which staff are extremely apprehensive about missing. This again emphasizes the focus on administrative processes rather than academic concerns. This is repeatedly referred to as a major benefit of the ERP; “Workflow technology enhancing the
quality of services to end users” (Griffith University 2000, p. 35, and 2002, p. 28) The influence attempt was enabled by the university policy for publication deadlines for university grades in the city papers or be visibly behind other universities. The power interaction between two individuals needs to be seen within the context of market expectations that flow into the creation of organizational policy. Without this contextualization the interaction would seem like just an instance of petty irritation or personal difference.

6.5.1 The Technology Factor
Adoption of new technologies is another influencing force in any market. An Internet presence moved quickly from being a ‘cutting edge’, to a tool used by innovative companies to reach new markets and connect with customers in new ways, finally to becoming a necessity; without adequate internet presence many consumers will view that particular company poorly (Mellahi & Johnson, 2000). The time of technology adoption is what separates the market into segments, initially compromised of early adopters and the followers. When adoption turns from competitive advantage to a matter of necessity, the adoption rate increases until the greatest majority of organizations possess and use the technology.

The university sector has had a rapid and high adoption rate of ERP. By 2002 the adoption rate in Australia was more than 85% (Beekhuyzen, Goodwin & Nielsen 2002). Thus ERP, despite its promises of competitive advantage has become a necessity and advantage in the market place comes from how well the system is implemented. As mentioned in chapter 2, in some cases such as RMIT the opposite occurred; severe losses, including threatened law suits, were associated with its failed implementation. Financial losses and the resignations of several senior administrators resulted from the debacle.

While government funding has been reducing over the last decade, there has been an increase in accountability for the funding received. With strict reporting requirements to various agencies and being sold on the transparency and ease of data collection that an integrated system offers adoption is clearly an appealing solution. Despite the well-publicised problems this puts the overall market in a position that is receptive to the ERP
software packages; their success in other industries also adds to their rationalization that benefits can be achieved in the education sector.

### 6.6 Socially Shaped Power

This is the widest perspective on power in the theoretical framework. It focuses on the power that is exerted on an industry by the larger society; including governments, social movements, and cultural boundaries of the society the industry exists in, the wider effects of global influences.

One of the most obvious social trends which affect the university sector is social attitudes to tertiary education and how the government both responds to and influences these attitudes. The development of the competitive market place referred to in section 4 was a direct result of the unification of the tertiary education system introduced in Australia in the late 1980s (Dawkins, 1988). Smaller universities and colleges of advanced education were required to amalgamate or join larger institutions. At the same time there was concern over equity of access to higher education and these two movements allowed a much wider section of the population to enter university study. The sector expanded rapidly and size became a defining factor, status and funding wise. Universities actively recruited students, including an increasing number of overseas students, instead of regarding themselves as elite organisations concerned with excluding the unworthy.

However, interest in tertiary education has increased and decreased so that the urgent need to ‘market’ universities has increased even further, with universities facing cuts to funding if they could not meet their enrolment targets, while facing loss of status if they forced to fill enrolment quotas by recruiting students with lower entry scores. Australia reflected global trend so that the motivation for adopting technologies to cope with these change circumstances was international.

Sillince and Mouakket (1997) refer to the work of Latour (1987), which explains how information technology relates to social trends; that “information system development is the outcome of a process of translation which creates irreversibility by redefining problems in terms of existing solutions, and which reconfigure the boundaries and relationships between the social and the technical” (p. 373). In other words the problem of how to deal with a
larger number and different population of students (a social question) is redefined in terms of a technical solution (ERPs). They ask the question, “why was something considered to be technical and how was this view established and made to stick?” (p. 373). Likewise the question of the student administration officer’s difficulty with handling student grades is made to conform to the technical solution. When there is a misfit between the two, the SAO is criticized as incompetent. The structure and functionality of the student administration system is proposed as a technical solution but it embodies the assumptions about how universities should operate, through rigid, standardized controls which allow little flexibility of decision making by the users, who even so are the people who liaise with students and academics about, for example, meeting graduation requirements. The systems represent the university as a mass production facility, rather than a place of learning and research.

In conclusion, the global move towards integrated systems cannot be ignored; the vast majority of all Fortune 500 companies have implemented an ERP (McGinnis & Huang, 2007). Similarly, the adoption rates by universities are the response to social, government and employer expectations about universities role in modern society.

The influence attempt is in response to the expectation that the University will meet the demands of the government by delivering the student results to the newspapers by a specific deadline. This protocol is not incidental or arbitrary – its origins can be traced to the national, social and international influences and the effects can be felt at the most specific level of university operations.

6.7. Structuration Theory and its Application as a Meta theory.

Structuration theory has at its base the idea that the actions of the agents in a structure are defined by the structure itself and the structure is defined by the actions of the constituents, which can either reinforce the structure or allow for the agents to change the structure (Jones & Karsten, 2008). This has relevance to the power model described in chapter 4 in that its core benefit is the expectation that the actions at one level of analysis will have their value enhanced by the perspectives of other levels of analysis. Structuration theory has its heart in the idea of deriving meaning from recursive action and re-definition and reinforcement from that action. That outside forces can shape, and be shaped, by those
under their influence, is highly important in the discussion of the remaining outer circles of power.

The functionality and contextual nature of the framework becomes clear when the researcher views an act of power in a rich context with several levels of abstraction. The framework allows for a wider understanding of an event by encouraging the researcher to look beyond the immediate environment and stimuli (the influence attempt) and look for motivators and information in the wider circles of context. By broadening the research perspective new insights can be gained into the motivations and also into the consequences of influence attempts and power dynamics.

When observing an individual’s actions and influence attempts, being able to view the motivations that are coming from outside their sphere of control gives wider understanding to the encounter under investigation. While this is not always apparent in social research the effects of larger influences will filter down to individuals and form the basis for motive (responding to change), the power of third parties and define the environment in which most individuals complete their daily roles.

To further explain, an example will be discussed to highlight the individual expressions of power and influence between people (Such as Amber and Louise) in Graduations – see “Graduation Data is now your problem” for full quote). In this example the actor (Amber), attempted to influence the target (Louise), with the goal of reassigning her workload. While Amber’s primary means of influence was manipulation, it was assisted by the power of third parties. The party in this example was not an individual, but an organization (Griffith University). By this definition it was not just an individual who influenced the target of Amber’s influence attempt, but power that flowed down from the organizational level (In which Amber and Louise operate inside). So the wider context is that the University had set forth policy that was used to advantage by Amber, understanding this gives clearer determination of the power and usage of that power. When attempting to secure an outcome in her favor, Amber used her knowledge of the organization to successfully manipulate Louise into completing the data entry that Amber refused to do.
The particular policy that was set down by the University is related to printing the results in the newspapers for the community and students to read, as a means to distribute grades quickly and evenly across all the students. This is also tied into the marketplace (structurally constrained) as the rival Universities in Griffith’s locale also print their results in the papers and the precedent is there, the expectation is there that Griffith will also meet that promise. This is also reflected in the socially shaped segment of the power framework, as the students (as part of society), and family members, and prospective students have the expectation that the Universities will behave in a certain way and present results in timely and efficient fashions.

The flow of influence is fairly clear in this example. On the widest context, society (also shaped by government policy in this instances) demands that Universities be efficient and timely in their dissemination of student grades, this in turn motivates the entire education industry to set standards to meet this need of the public and government. This industry wide trend impacts on the individual University by making it a necessity rather than an option that each University make their students results public in an efficient manner and adhering to newspaper printing schedules. As such, Griffith University responds to this industry mandate by setting organizational wide policy that each faculty will have their results submitted to the central body at a set time each semester, facilitating the transmission of the data to the relevant newspaper entities allowing them to print the results on specific pre-agreed dates. This chain of influence was understood by Amber, and she took advantage of this immovable deadline and ensured that her target would have no choice but to comply with her influence attempt. So while Amber’s influence attempt is classifiable with the Power/Interaction framework, the contextual richness is not as full without the discussion of higher levels of abstraction. Combined with the contextual information the motives, means and repercussions are easier to understand. In this example the influence from the wider perspective can be traced from the societal/government tier (socially shaped power), as it influences the marketplace that the University operate as they clearly have responded to meet that demand (structurally constrained), the organizational power perspective then sees policy implemented to influence the various groups inside the University, on the processual level we can see an individual understanding this influence and using it to her advantage.
On the Structuration side of theory the concept of structure defining action can also be seen. The individuals are agents and their actions are subject to the routine and structure of the institution they exist in, and as the duality of structure defines, they are also able to influence the structure. In this case, reinforce the routine that the deadlines of the paper publication must be met at all costs. As this routine enabled Amber’s influence attempt to be successful while this routine remains unchanged Amber will be able to perform this kind of influence attempt with the same mode of power and it is expected that she would be successful again. The outcome of her influence attempt did not result in a change in the structure nor did it result in a change in Amber’s expected behavior by her superiors. A change in either set of rules could prevent this type of influence from being used in the future.

The reinforcement of the existing structure by Amber had a lasting effect on the influenced target, but it did not change the relations of power that either actor or target have over one another, while Amber still has no formal authority or recognized power to influence her target in the future, she still retains the knowledge to utilize the structure to her advantage again. There was no notable change in the upper levels of the structure after this attempt, besides their reinforcement as the target completed the data entry on time, ensuring that the routine of publishing goes unchanged and reinforcing the expectation that the University will meet that deadline no matter what.

6.8. Conclusion

This chapter is attempting to show the way that analysis was carried out and so a lot of attention is paid to one or two instances. Obviously the same level of detail is not possible throughout the dissertation if all the significant issues are to be examined. It is hoped that this explanation will support the discussion in the following chapters without the need to show the process of data analysis to the same extent.

Therefore to reiterate what has been found out so far; the first influence attempt was deemed successful at the individual level (processual power) as an appropriate power base (i.e., acknowledged by the target) was selected and used. Manipulation was an effective means of influence in this case. From the organizational power perspective it was successful
because organizational policy had been created to govern the actions of its employees and this was exploited successfully. From the structurally constrained perspective it was also successful because the university had obligations to comply with external organizations. In effect, the market place in which the university operates helps set the stage for such manipulation attempts.

However, the effects of the attempt may not be deemed effective from all the stakeholders’ perspectives. What the analysis so far does show is that persons with apparently little power may be very effective in satisfying their own needs, in ways that management might find difficult to predict. However, an environment which creates friction between staff about the performance of essential services, especially when we contrast it with the previously more harmonious relations, cannot be considered very constructive. The Socially Shaping perspective is concerned with the ‘taken-for-granted’ and all the contextual influences which created the stage for this influence attempt were not challenged by the staff. Certain ideas were considered more significant than others – for example meeting university deadlines is more important than maintaining good working relationships with colleagues. This interpretation is tentative at this stage and will be reconsidered in later chapters.

This chapter has provided a detailed account of how the Theoretical Framework is used to guide data analysis, showing how each level or dimension of power within the framework when used in reflection with the other levels provides a richer sense of understanding than could a single dimension. The full analysis was applied to the first incident alone. The second influence attempt was found to be not so open to the wider levels of analysis; it was concluded that this instance was best interpreted as an internal struggle using legitimate power of position, granted by organizational policy at the organizational level, but rejected by the SAO. It is important to the discussion to also acknowledge that not every example of power has wider stimuli than the immediate circumstance.

Many of the issues raised in this chapter will be discussed again more fully in the following three chapters. It was not the purpose of chapter 4 to reach a final interpretation of any part of the data but to illustrate how the theoretical framework is used to guide data analysis and
how the process of data analysis is carried out in this dissertation. As mentioned in chapter 3 and the introduction to this chapter, the approach to data analysis does not involve systematic reduction and coding of the data, pulling texts (interviews and documentation) apart and the rearranging the elements according to categories and ideas. Instead the data is viewed within the context of the other data gathered about a particular incident and a thematic analysis is carried out. In other words the work of the analyst is to understand what the text is ‘about’ firstly in its initial reading, then in the context of other texts which are ‘about’ the same issue and finally within the broader context of organisational behaviour and social trends which give the text meaning. This approach reflects the principles discussed in chapter 3 which Klein and Myers (1999) proposed for interpretive studies. These principles also largely apply to critical studies. The critical stance can be seen in this chapter both in terms of reflection on possible interpretations of what was happening to the SAOs and also in terms of not taking the ERP discourse at face value.
Chapter 7 – Resistance as Influence

7.1. Introduction

The two events discussed in chapter 6 were used primarily to show how data analysis is carried out for this dissertation. However, these two events also provide a contrast in that the SAOs were the agents in the first attempt at influence and the targets in the second attempt. The SAOs response to the latter attempt can be viewed as resistance, and the significance of resistance has also been discussed in chapter 2.

Most of the research on resistance in information systems implementation has focused on the reasons for resistance, how to overcome or manage it, or more recently how to identify and remove the problems which lead to resistance (Lapointe & Rivard, 2005). The resistance event is therefore viewed as a set of behaviors, including withdrawal of cooperation, minimizing outputs and attempting to increase colleagues’ outputs (Joshi, 1991) and so on. Very few researchers have tried to “open the black box” and suggest theoretical explanations for how resistance occurs (Lapointe & Rivard, 2005).

In this chapter, resistance to the various aspects of the ERP implementation at the case university is reconceptualised as influence attempts. This is consistent with Markus’s (1983) view that resistance can be positive if it draws attention to negative aspects of the systems. However, the view as to whether resistance is negative or positive depends on the ‘effects’ of resistance as perceived by different stakeholders. System champions may see any resistance as negative since resistance always consumes time and disrupts the smooth functioning of an organisation. So, this judgment tends to be made in hindsight or not at all.

To some extent this perspective on resistance complicates the French and Raven model, illustrated in the previous chapter, which represents the influence event from the agent’s perspective, and does not focus on any influence attempt the target may make in response. However, the Power/Interaction model shown in chapter 4 does take into account changes to relationships and the feedback dimension also allows us to consider how all participants are constantly reassessing their options for managing their use of power. This chapter is
therefore organised around the elements of the Power/Interaction model, as in chapter 6 but rather than analyzing each event separately it considers a number of events so that the patterns of resistance and its effects are shown. The motivation to resist is discussed in section 2, the availability and choice of power bases in section 3, the notion of stage setting in section 4 and the effects of resistance in section 5. The effects are considered in terms of success and failure but this is made more complicated by considering the interests of the different groups – the tasks of quality student administration versus the career prospects for successful project implementation.

It should be noted, as mentioned earlier, that the perspective taken is primarily that of the SAOs (School based Student Administration Officers) and to a lesser extent the SAEs (the employees of the centralized student administration section). Attribution of motives and reports of behaviour of other personnel are elicited from interviews with these two groups.

7.2. Motivation to resist

“I think it’s a disaster, and if I was a student, I would go [expletive deleted] this place.” – (Zena SAO4)

In chapter 6, the influence attempts were mainly focused on dealing with system problems which increased the workload and frustration felt by the SAOs. However, as discussed in chapter 5, one of the reasons for the increased workload was the sense of duty SAOs felt towards students who might not receive quality service from a centralized student administration. One SAO interviewed continued to have her work brought to her while she was at hospital for a few weeks, so that she could ensure that some key processes were completed.

Increased workloads were initially caused by the major restructure in 1997 (discussed in chapter 5); specific course related knowledge was lost and the SAOs perceived that the centralized section was unable to provide the quality of advice which students had come to expect from student administration. According to Zena (SAO4) “centralization means nothing” when discussing improvements in service and efficiency (which was a major goal of restructuring).

The SAOs were of the opinion that this situation was worsened by the ERP implementation.
Not only was the service to students less helpful, it was often much slower or not available. In other words, a system which might meet management’s efficiency objectives did not serve the student community or those who supported them.

“We have bought a system that never met our needs in any way” (Amber SAO5)

Also attempts by the SAOs to express what they needed to carry out their responsibilities were ignored. Many SAOs believe that the student administration module system was never intended to be useful for the teaching elements of the schools. For example, a reporting module which allowed the printing of useful statistics and information about student enrollments in particular courses was left unimplemented, because the number of users (the 48 SAOs) did not warrant the expense. Sienna (SAO2) said, “In terms of usability ... outside the central areas it’s useless basically.” Katerina (an SAO representative on the project) made a typical comment - “for the amount of money that we spent, I mean I sort of guess from the student administration perspective we got dudded [A colloquial term for being, or getting stuck with an inferior product]”

Forums were set up to apparently allow SAO input, but the SAOs perceived that their input was largely ignored and some ceased continuing to participate for that reason. Amber stated that she expected it to help “but I don’t think it did, because they just ignored information we gave them ... I think that they very much ran their own agenda and it was quite irrelevant as to what we wanted”.

On the other hand Kristen (PTM1) believed that it was not possible to meet all the SAOs requirements; “the difficulty I believe is that they [SAO’s] had fairly individual views on the basis of their experience in their school, and very few schools are alike.” However, the SAOs feelings were reflected by other users. Isabella (SLA1), a member of the Academic Reference Group who reported that she spent a lot of time making suggestions about how to improve the interface for student course selection only to hear that no one intended to even look at suggestions; the design had already been decided upon.

Overall the SAOs perceived that attempts to involve them in the implementation process were not sincere and were designed to appease them during a difficult period.
“There was a degree of consultation in as much as they, information would be sent out and the expectation was that people would give feedback, and some of that did happen but one it wasn’t always accepted and two it wasn’t always acknowledged and it also got to the point that the SAOS as a group began to suspect why should I bother they are not listening and they’re not going to change their mind so they [SAOs] stopped responding” (Katerina SAO6)

The further along the implementation proceeded the more tasks were delegated back to the schools

“It’s to the stage now that one SAO cannot physically do the work that they got already and that it’s now coming back from the PeopleSoft project but none of the resources are coming back.”

Brandy (SAO3) who had moved from the centralized student admissions section continued,

“In the end whether it doubles your workload and you employ another staff member or it doubles and you just have to put up with that -, that was the answer.”

The SAOs would put up with it rather than reduce service to students

In conclusion, unlike many studies of resistance, this dissertation is concerned with a group of people who appear to be motivated not by a loss of power but by resentment at factors which reduce their ability to properly carry out their work. This relates to the criteria for success for processual power, discussed in chapter 4, which is overall user satisfaction. Much of the action taken by the SAOs was not so much concerned with easing their own workload (which they could have achieved by simply sticking to their job descriptions). They were concerned about the deterioration of service to the students who as they regard as the most important group in the university.

“We are here for the students. If it weren’t for the students there would be no universities” (Bianca SAO1)

7.3. Assessment of power bases; resistance is futile?

If considered as resistance, the behaviour of many of the SAOs could be considered as a response to the use of negative expert power. In these cases the target mistrusts the
intentions of the experts and does not defer to their knowledge (Raven 1993).

“Ultimately they are decisions being made by Andy [senior manager in Academic Administration] and Wendy (HAA) - they are responsible for the team and they are ultimately responsible” – Amber went on to say about a problem with Credit for Advanced Standing Module [CAS] that “that “again we lodged a complaint with the CSSRG [student services reference group] and it never made it to the agenda item; so it went up to Wendy (HAA) and she said what’s CAS?. Well it’s run by a unit that she’s in charge of, and she has the right to set work agendas for SAOs and she didn’t even know what the CAS system was. And it was an entire system that we had to come to terms with no training and we weren’t aware of it until it went live”.

Advanced standing (credit for previous studies) is obviously an important student service, since it recognizes the studies already completed at another accredited institution, reduces the students’ tuition fees and the time needed to complete their degrees. From one SAOs point of view this led to students withdrawing from the university (since credit for previous studies.

“Well I know for a fact that a student that dropped out went to another university which was due to our enrolment being so difficult and um not having the support they needed.” (Sienna SAO2)

Hence the SAOs did not always accept directives from the central student administration personnel, without questioning them. In contrast, within the SAO group there was considerable trust, which allowed them to act in concert, since they did acknowledge each others’ expertise – in the form of appropriate assessments of the value of what they were doing. Moreover, the restructuring and centralization from 1997 onwards meant that the SAOs were not inexperienced in negotiating difficult working situations. Several of them had been moved from other sections or between schools in the same or different faculties. Morgan (1997) asserts that “most people working in an organization readily admit in private that they are surrounded by forms of ‘wheeling and dealing’ through which different people attempt to advance specific interests” ( p. 184)

However, the SAOs were aware of the investment which had been made in the ERP and
none of the interviews revealed any illusions that it would be abandoned for a system with better organisational fit. Thus, it is worth considering why there was any resistance to the implementation. The motivations seem clear but the anticipated effects are more difficult to determine. It was not clear how the SAOs saw the long term consequences of their actions. They appeared to be more concerned with managing the immediate problems of providing a good service to their Schools, mostly by working around the problematic areas of the system. “That’s how we seem to get around problems; use something else” (Sienna SAO2)

The SAOs also made a very clear link between their increased workloads and the likely effect on service. Their protests seemed aimed at getting formal recognition of their problems with the view to obtaining non-technical solutions, if not for themselves at least for future staff. They were concerned that the management did not take their views seriously and realized that their own job satisfaction would impact on student service through increased staff turnover;

“I can tell you that there will be a second wave of SAOs who will hit and the waves will just continue …it is becoming a war mentality …we actually have to plan how we attack things” (Amber SAO5).

Although none of the staff interviewed had immediate plans to leave or ask for transfers, they were confident of finding employment elsewhere if they needed to, and realized that this feeling was endemic.

Tiffany (SAO7) went as far as to say “I think the University is functioning currently on the good will of the staff who have been here for a long time and I don’t think that it will continue to be the case.”

This type of behaviour has often been termed ‘passive resistance’ but the SAOs were not inactive. Having made many unsuccessful attempts to use ‘Direct Information’ (Raven 1993) through participation in Forums, requests for assistance and communication about system problems, they resorted to ‘Indirect Information’ which does not directly confront the target with information. The problem with this type of power base is that information is more likely to be distorted as it is communicated informally.
7.3.1 Indirect Information and Communication Issues
The above discussion relates to Expert Power, which would seem an appropriate power base in this type of situation (where a complex system is being installed and everyone is on a steep learning curve) However, it was concluded that expert power was perceived as negative – the SAOs mistrusted the sources of expertise and their motivations.

Expert power can be exercised between equals whereas legitimate position power is more appropriate when an actor needs to influence a subordinate to comply with rules and regulations (which may not be related to expertise, but are simply the results of policy choices made for the administration of an organisation).

Legitimate power in the form of reciprocity (the target feels they should return a favour), or equity (the target feels obliged to even things out) is an obvious choice of power base between equals. Favours are bestowed and returned in the form of extra work taken on, covering colleagues for long lunches; equity is achieved by helping a colleague with an ‘unfair’ work allocation or an unexpectedly difficult task. However, between unequals, position power is the appropriate choice for the person in the senior position. The target complies because they acknowledge the legitimacy of the rules or the authority of the position occupied by the agent. In such unequal situations, subordinate staff who wish to resist the influence must assess the usefulness of other types of power. The most appropriate power base in a professional workplace is expert power, but as mentioned above and in chapters 5 and 6, the SAOs had tried this unsuccessfully in relation to their main concerns – the functionality of the systems, their increased workloads and the lack of attention to their requirements (for example in relation to the reporting system).

“I resent that no one asked us what we wanted to do.” (Zena SAO4)

It is not certain if the SAOs explicitly chose to use Indirect Information. Most of them expressed the opinion that the way communication was being handled was unsatisfactory. They clearly would have preferred that their concerns were dealt with in a more transparent and direct manner and often referred to ‘communication problems’ as a major source of dissatisfaction. However, as mentioned earlier, repeated instances of having their input ignored led to their withdrawal from Forums which were the main arenas for user input.
This absence was noted by project staff but was seen as a sign of user acceptance (no more noise was being heard at meetings). “So I assume they are quite happy” (Kristen PTM1).

However the SAOs felt communication about the project fell into three types; firstly they were not asked - Tiffany (SAO7) commented that when she looked at the documentation concerning the development of a particular system, “when we go back and search the documents we find that we were never asked about it.”. Secondly if they attended meetings their suggestions were ignored:

“I don’t know, it’s just the party line, they just don’t admit to palming work off to SAOs” (Tiffany SAO7)

Thirdly their requests for specific information or help in dealing with problems were ignored or ridiculed:

“.. the responses we were getting where it’s your fault you must have opened the document this way and you’re not listening to us” (Amber SAO5)

In chapter 3 I referred to Habermas’ notion of the ideal speech situation which requires sincerity and authority. The lack of sincere communication appeared to be a major motivator for SAO resistance; the staff felt unable to trust the management and the outcomes of the project.

Perhaps more importantly the spread of misinformation to the SAOs did irreparable damage to the credibility of the project management.

“A lot of stuff is not being fed back to us, I’m, I am actually on the SA [corporate student administration section] staff email mailing list because of my role at the conservatorium and nobody has got around to taking me off the listing and … its actually quite useful that I am actually getting emails that are going to the [SAE] staff telling of problems in the system that no-one in the schools were just not being told about. .. They impact quite heavily on us, on aviation for example because their students are mostly, a lot of their students are internet [distance education] students and … and we even had one where I knew Tiffany [a fellow SAO] had a specific problem at the time. The email came from SA to SA staff addressing the exact issue that Tiffany was dealing with. I forwarded it on to Tiffany, … so Tiffany
actually rang the enrollments officer and was told there was no problem. So Tiffany was
blatantly lied to, about whether there was no problem or not. So I am not sure how I am
supposed to deal with the client when I am being blatantly lied to by the University
administration.” (Amber SAO5)

It was not clear whether allowing Amber to continue to receive emails from her previous
position was an error or an influence attempt using Indirect Information. Some of the staff
(SAOs) transferred from school positions to the central office, resented being moved from
direct interface with students and academic staff. The loyalties of such staff were uncertain.
Over time their affiliations may have firmed and their perspectives changed according to
their new positions (as was the case in Markus’s (1983) study where centralized staff
changed their views when transferred to remote offices). Certainly instances such as the
above could have been deliberate, giving the SAOs concerned ammunition for their next
conflict. Obviously Amber was antagonized by the content of the email and that may have
been the intention of the agent.

Email communication was a problem during this time. The project team had several
methods of communicate at large with the university, email and internet communications
being the most readily accessible and used. The onus was on staff to read their email or
check the internet communications. This proved problematic with a lot of the staff on the
academic side as their inbox’s were often inundated with student emails on top of project
team requests and communiqués and information was either lost, or given a lower priority
than otherwise it may have deserved.

“So if I say to friend who works behind the scenes in BSS [Corporate Dept] - like we got
literally thousands of these problems she says you don’t know the half of it” (Barry SAE4)

7.4. Setting the stage
Harvey (1998) showed that staff use a number of ways to avoid implementing new
initiatives – hiding and destroying documents or using existing systems and procedures, as
well as refusing to participate in training or consultation. Such actions and those described
above can be viewed as individual influence attempts, but also as ‘setting the stage’ (Raven
1993) for future attempts. This means showing the potential targets that the agent has the means and is willing to accept the consequences of future influence attempts.

However, the SAOs suggested that they thought they were being ‘softened up’ to accept the inevitability of a system which none of them found acceptable, and the insistence of the university on sticking to the implementation schedule was part of that process.

“A lot of decisions were made by people like Wendy (HAA) or the review groups on behalf of the rest of university; because the time got shorter and shorter and shorter there was less consultation the closer we got. We are not being consulted. Things just get dropped on our lap” (Katerina SAO6)

One example was the SAO, who had become aware of potential problems with the ERP’s compatibility with Macintosh hardware (used by only a small percentage of staff but supported by the University’s hardware infrastructure). This concern was raised multiple times and yet each time the SAO was shunned and told that it would not be a concern. Upon implementation the problem of compatibility became evident and persisted, despite being assured by the project team that it was never going to be a concern.

“We don’t get any meeting to discuss it or anything like that, this is just now happening” (Crystal SAE2)

As tensions escalated, the SAOs attempted to ‘invoke the power of third parties’ (Raven 1993) by appealing to their direct reports - Heads of School (HOS). This had mixed results as the authority of the Head of School in relation to student administration was not clear. Overall the SAOs perceived that they were supported by their HOS.

“I actually take so much [problems] then I actually send an email to my HOS and say I want you to complain about this because if I complain nothing will get done. So yeah I realistically have to feed it thru HOS and to my dean and they go to Wendy [HAA]. My boss is really supportive, I mean if I choose to miss a deadline he will support me and the Dean is not necessarily as supportive, but I am lucky that I have a boss that will support me if I choose not to meet a deadline or not to do a process so because he has had enough of the system as well.” (Amber SAO5)
Escalating the problem to the Dean of Faculty did not always have the desired effect

“I can complain to the head of school and they can complain to the Dean, but the Dean wouldn’t give a toss.” (Zena SAO4)

Some staff indicated that this softening up/stage setting had been effective in making the SAOs feel powerless.

“Not only with PeopleSoft though, but generally since I have been here, and this may be the case in all organizations, that there is definitely a clear discrepancy about what management say about the system or a whole lot of things, and about how the staff are feeling. You know, I think, um the staff morale is by far the lowest I have ever seen it since the time I have been here” (Barry SAE4)

7.5. The Effects of Resistance

It could also be seen that the stage was being set by members of the project team, to prevent delays in the implementation schedule. A project team member confirmed in her interview that she had no ‘position’ authority to deal with ‘recalcitrance’ by SAOs and although she had expert power, this was not perceived positively by the SAOs. So, she admitted that most of the time she invoked third parties using arguments such as “if this doesn’t happen it’s your students who will suffer” (Kristen PTM1). This is similar to the use of coercion which often invokes potential threats to third parties (family, junior staff) to ensure the target’s compliance.

As mentioned in chapter 5, the final stage of the implementation of the Student Administration modules was only a few weeks behind schedule (see Appendix A). It is interesting to note that the SA modules were implemented after the Financial and Human Resources modules and Isabella (SLA1) who had been a member of a reference group for the selection of the implementation partner, confirmed that the student administration systems were expected to be the most problematic. The total implementation process will be reviewed again in chapter 9, using the four power perspectives (discussed in chapter 4).

But it is useful to consider here how the implementation process was viewed by the NABS Project team.
A Senior Manager in Student Administration who had been a member of the selection team commented that after reviewing other implementations he and several other members of the team concluded;

“Best practice doesn’t fit on PeopleSoft, the option is change the practice to something less than best or modify PeopleSoft at X dollar cost … so you could claim that whatever best practice was, it was diluted to fit PeopleSoft” (Earl MSA2).

This was despite the fact that ERPs are promoted on the basis of transferring best practice to the recipient organisation.

More seriously, staff felt that the number and type of changes that they were making to their work practices was counterproductive – it provided neither efficiency nor best practice and possibly compromised the university’s standards of service.

“We have bought a system that never met our needs in any way … we have had to change almost everything in the University to fit a system instead of having a system to fit us” (Amber SAO5)

This theme will be taken up again in chapter 9

Many of the ideas proposed by SAOs for improving the interface or incorporating available functionality (often at no additional purchase cost) were seen as “pie in the sky” by another project team member (Kristen PTM1). Several modules were deemed by all the student administration staff to be fundamentally unusable.

“And if you get to it, it can give you information, but in terms of usability … it is useless basically” (Crystal SAE2)

However, the difficulty of making improvements to the interface and implementing systems such as the reporting module were attributed to personnel problems rather than technical problems. Student administration lost increasing amounts of time to staff training, while the continuing complaints and inquiries from SAOs created resistance amongst the project team.

The project team selected to work with the implementation partner was drawn from a diverse range of staff, intending to represent the full range of interests. However, as
Markus’s (1983) study showed, when staff are transferred to another location/tasks, their perceptions of problems and their loyalties may change. Moreover, the centralization of the university administration had meant that staff’s career interests became aligned to meeting the criteria for project success – particularly meeting the implementation schedule and avoiding expensive delays. As mentioned in chapter 5, many staff reflect that an initial mistake was not carrying out a cultural audit as suggested by the implementation partner. One manager summed up the situation as saying that staff were ‘change weary’- expansion, restructuring and adjusting to new cohorts of students (overseas students as well as specialized areas such as Music and Fine Arts) had created an antipathy to any change, however beneficial it might be.

Criticisms were also made of the project steering committee which consisted of senior management, many of whom had been members of the committee that selected PeopleSoft for PeopleSoft for implementation. It was felt that they might be adverse to criticism and that the control and its direction of the implantation were abstracted from workplace impacts. As mentioned earlier, this was particularly the case with a significant module (Credit for Advanced Standing) that was almost overlooked by the committee, leaving insufficient time for its effective implementation. Students who are not given advanced standing by the course enrollment cutoff date could have their degree delayed, or in the case of overseas students might not be able to enroll in sufficient courses to fulfill the requirements of their student visas.

The situation was worsened by high staff turnover both within the IT section of the university and the implementation partner, who lost several senior staff during this period..... Kirsten (PTM1) commented “the management side of it [implementation partner] sometimes felt like a waste of money.”

7.6. Conclusions

It may be considered that the influence attempts by the SAOs had no effect, except to provide some sort of recognition of the problems they were experiencing. The implementation went ahead, almost on schedule, without the changes recommended by the SAOs. Therefore success might be attributed to senior management and the project team
for not allowing delays to occur and to achieve an implementation which at least was more successful than some other ERP implementations in the Higher Education sector.

Although at least one of the senior managers, viewed the selection of the software as a compromise – ‘a diluted success’, the implementation process was so challenging and the record of failures in the sector so daunting that the final implementation was viewed with relief.

“I don’t think the University realizes how bloody well it went, and if you looked at the RMIT experience they are in absolute diabolical troubles”. (Earl MSA2)

As mentioned in Chapter 1, the political perspective on organisations focuses on conflicts of interests and how these might be resolved. Moreover there are three types of interests which are relevant to organisational life – task, career and extramural. Making a distinction between task interests and career interests in relation to ERP implementation provides some insight into how a system which was viewed as a failure by some could be viewed as a success by others.

Task wise, the ERP was deemed fairly useless by many of its users – and recent reports indicate that it took several years for full functionality to be achieved. However, project managers would be more interested in whether the project meets budget and deadline goals, especially in terms of their future careers, and would therefore deem the ERP implementation to be at least a modest success. This was certainly they way that it was represented in official documentation. In the 1999 University Annual Report (Griffith University, 1999) the proposed system as described a follows; “One of the main attributes of this new system will be the innovative use of Web and Workflow technology, enhancing the quality of services to end users” (p. 24). This statement was repeated in the annual reports for 2000-2003 with only the removal of the word ‘will’. The only indication of problems was in the admission that the expense involved would “lead to more limited levels of working capital being available for daily operations” (Griffith University, 2000,p. 35, 2001, p. 37and 2002, p. 28).

Overall, resistance was three fold; firstly and perhaps less obviously, individual SAOs exerted influence over their colleagues to persuade them to resist certain practices and to
voice negative opinions. In that regard, attempts at influence were successful, as the SAOs presented in interviews as a very cohesive group who were in complete agreement about what and why they were resisting.

Secondly, the SAOs resisted attempts to keep them quiet about problems they were experiencing or to use the system exactly in the way prescribed. It is difficult to establish what the wider effects were, since there was no opportunity to revisit the research site and many of the SAOs moved to other positions during the next three years. Furthermore the senior staff were not open in their replies to questions about modifications that had taken place or the reasons why suggestions had not been implemented. SAOs perceived that invitations and procedures for participation by stakeholders were carried out merely to leave a ‘paper trail’ as evidence that the project had been properly conducted.

Lastly, the project team and project managers resisted attempts by the SAOs to make changes to the technical aspects of the system or to associated work practices. At the same time they provided overt opportunities for participation so that lack of involvement by the SAOs was viewed as negative behaviour. As mentioned above, their handling of conflict may have provided some career success but as will be discussed in the next chapters, it may not have been judged a success in terms of the final functionality and usability of the ERP.

Both of these types of resistance would usually be described as resistance behaviour (Lapointe & Rivard, 2005) but considering them as influence attempts enables us to view the power bases which are utilised for political maneuvering. Assessing the effectiveness of the use of any of these power bases involves looking at the wider context and this will be discussed in chapter 9. In the following chapter, the success of the influence attempts will be considered in relation to the diverse organisational goals of the main groups of participants.
Chapter 8 – Cultural Rifts and the Redistribution of Power

8.1. Introduction

In Chapter 6, an analysis of two influence attempts using the Organisational Power perspective suggested that an ‘us and them’ mentality had developed in the university between staff who were oriented to the academic domain and staff who were concerned with management of the university as a business. Some research has been carried out into this developing rift and its implications for the future of universities (Marginson, 1999; Harding, Scott, Laske & Burtscher, 2007) but there has been very little research into the implications for information systems implementation. However if we consider information systems as technical systems, socially implemented whose purpose is to influence people (see chapter 1, section 4.1), then it is important to think about the interaction between how the information system (ERP) represents the reality of university work and the changing goals and values of major stakeholders. As mentioned in chapter 1, Hofstede (1980) identified three strong subcultures in most organisations and suggested that paying attention to these might help management identify cultural rifts which will have serious consequences.

The student administration personnel represent the service oriented subculture – the nexus between academia and administration – with loyalties to both domains, but this group has rarely been identified as problematical. It is for this reason that this group was studied for this dissertation.

This chapter firstly considers again the relationship between culture and politics to show how culture legitimates the use of particular power bases and how these show the developing rift between the two cultures – academia and administration (administration (section 2)). Section 3 discusses the differences between these two cultures in terms of the espoused values of the university and Section 4 attempts to draw the discussion together by asking ‘whose university’?

8.2. How culture legitimates power

In chapter1 four different perspectives on organisations were outline (Morgan, 1997) with a
view to choosing an appropriate perspective for this study. The perspective is important as organisations are not tangible entities but are notions relating to activities, personnel, equipment, names and so on, which together make up the ‘organisation’. In choosing the political perspective it was acknowledged that other perspectives are also relevant – particularly the cultural perspective, since culture legitimates the use of power in specific situations and governs the type of political rule found in nations, societies and organisations. Culture is therefore manifest in organisations via official organisational structures and the norms and values associated with activities, policies and organisational behaviour.

In the previous two chapters a number of power bases were discussed and Raven’s (1993) Power/Interaction model (shown in chapter 4) clearly indicates that assessment of these power bases takes into account organisational culture as well as personal preference. (Gender may also be implicated but is not explored in this dissertation). In other words, culture legitimates which power bases are acceptable.

Most organisations and societies comprise a dominant culture and subcultures (Hofstede, 1980; Hofstede & McCrae, 2004). In organisations these subcultures are groupings of likeminded people, united by an occupation, orientation towards client or colleagues and like or dislike of specific types of activities. For example, in health organisations, nurses are traditionally oriented towards their patients, surgeons towards their discipline and administrators towards their institutions. Generally it has not been expected that professionals (such as architects, scientists, doctors and academics) have greater loyalty to their institution than to their discipline or colleagues or even to their clients. The assumption is that the length of training and need to keep up to date is motivated by an intrinsic interest in their work rather than necessarily an interest in who benefits from their work (either commercially or personally).

As described in chapter 5, the university is a collaboration of units that collectively provide the essential services that allow the University to teach, conduct research (and where relevant professional or community engagement) as well as support itself and its internal processes (Pollock & Cornford, 2004). Although academics provide the services which
make up the ‘core’ business of the university, the administrative staff do not appear to understand their motives and behaviour.

“They don’t respond to the same rationale as they are usually more aligned to their discipline than to their institution” (Trevor HIT).

More worryingly, Isabella (SLA1) reported overhearing comments such as the following, when she attended the project reference group meetings

“I haven’t a clue what makes academics tick!”

Traditionally universities have pursued primarily intellectual, civic and ethical goals, but more recently a culture of ‘money’ has developed which is often seen as the overriding ethos of the modern international university, (Gould, 2003). This development is particularly disliked by some older Griffith University staff who can recall the distinctive student orientation of the early days of the university. Quirke’s (1996) history of Griffith University points out how much the founders were concerned for the welfare of students and the openness of consultation processes between all staff and students. Commenting on those early days, an SAO said

“I think its greedy, money hungry; it’s not caring for its students or its staff, because it’s too busy to trying to make money now, so yeah it’s a business not an education provider.” (Zena SAO4)

Whether academics do or do not accept this, the dominant culture will tend to change attitudes towards which power bases are acceptable or not, since the use of power aligns with prevalent cultural values.

In chapter 4, Raven’s (1993) six power bases were discussed and these were further explained in the illustration of data analysis in chapter 6. Below is a summary of the analysis of how power bases have been used by actors in this study.

**8.2.1 The legitimation of power bases**

Coercion, as traditionally thought of (force and threats) is not considered an acceptable power base in most organisations, even though it is likely that coercion takes place more
often than desirable (Ashforth, 1994). Personal threats were not evident in this study, but there is evidence of impersonal coercion which took on the flavor of bullying. Firstly, the SAOs were subject to constant criticism for their inability to use new systems, with the inference (invoking the power of 3rd parties) that other staff were not having the same difficulties. Secondly, the threat that students would be disadvantaged by their lack of cooperation constantly loomed and was referred to explicitly several times. This was one of the main reasons for the increased workload which SAOs experienced during the implementation.

**Table 4 Development and use of bases of power** (adapted from Raven 1992)

<table>
<thead>
<tr>
<th>Bases of Power</th>
<th>Description of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impersonal Coercion</td>
<td>3rd party power (negative impact on students) invoked to persuade SAOs to accept the system</td>
</tr>
<tr>
<td>Personal Coercion</td>
<td>No evidence of personal threats</td>
</tr>
<tr>
<td>Impersonal reward</td>
<td>Potential career success offered to project team members</td>
</tr>
<tr>
<td></td>
<td>No evidence of use with SA</td>
</tr>
<tr>
<td>Personal Reward</td>
<td>Used only within SAO group</td>
</tr>
<tr>
<td>Formal legitimacy</td>
<td>Many unsuccessful attempts made by senior managers to influence SAOs</td>
</tr>
<tr>
<td>(Position Power)</td>
<td></td>
</tr>
<tr>
<td>Legitimacy of Reciprocity</td>
<td>SAOs rarely acknowledge obligations outside their group – SAOs exchanged favours frequently</td>
</tr>
<tr>
<td>Legitimacy of Equity</td>
<td>Evidence of use only within SAO group – SAOs collaborated to help each other improve working situation</td>
</tr>
<tr>
<td>Legitimacy of Dependency</td>
<td>Very little use between interviewees as all SAOs were equally experienced</td>
</tr>
<tr>
<td></td>
<td>Frequent use with students who were perceived as dependent</td>
</tr>
</tbody>
</table>
on SAOs for support

<table>
<thead>
<tr>
<th>Positive Expert Power</th>
<th>Attempts to target SAOs with expert power mostly unsuccessful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative expert power</td>
<td>Expertise relating to system operation and commercial goals mistrusted</td>
</tr>
<tr>
<td>Positive Referent Power</td>
<td>SAOs mainly identified with each other and school staff. Some identification between SAOs and SAEs but being eroded</td>
</tr>
<tr>
<td>Negative Referent Power</td>
<td>No identification with ‘business’ goals of university and with senior management</td>
</tr>
<tr>
<td>Direct Information</td>
<td>Success varied with SAOs as targets SAOs’ attempts were perceived as unsuccessful</td>
</tr>
<tr>
<td>Indirect Information</td>
<td>Significant evidence for wide use – disliked by SAOs. Motivations and success are difficult to judge</td>
</tr>
</tbody>
</table>

Rewards in the form of promotion or pay rises were not relevant to the focus of this study – the SAOs. Mostly they were committed to remaining in their current positions and were unlikely to seek transfer to other divisions within the university. They were more likely if extremely antagonize to seek work elsewhere altogether. Other forms of behaviour which might seem like rewards are assigned to the categories of reciprocity and equity as discussed below.

A distinctive feature of the use of power in this study is the failed attempts to use legitimate position power, which is surprising in a bureaucratic organisation which would usually rely heavily on position power. It is to be expected that expert power would be more appealing to academics (whose loyalties are more to their discipline than to their employing organisation (Trevor HIT), but it was expected that student administration employees would be more responsive to formal legitimate power. And it appears that was the case with some employees in the central student administration office, but not so for the school based
SAOs. This is another example of the SAOs falling between (or perhaps bridging) the rift between administration and academia. The implications for the ERP implementation are that this lack of acknowledgement for position power should have been identified during or after the 1997 restructuring. Once again, a cultural audit as suggested by the implementation partner, might have achieved this. The Fussell report (1998) which evaluated the restructure did not clearly identify problems in lines of communication or decision making, primarily being concerned with effects on efficiency and service (which it identified as having deteriorated, as mentioned earlier).

Position power is legitimately used in influence attempts between unequals. The other bases of legitimate power are more appropriately used between equals and were heavily used between the SAOs. They attempted to help each other in difficult situations and so therefore built up networks of reciprocity and equity where they were very aware of what they could expect from each other.

Legitimacy of dependence mostly related to how the SAOs perceived the students. Before the restructuring in 1997, the school based staff handled most aspects of student academic life, including course selection and progress, timetabling, examinations, misconduct and special consideration for deferred exams, etc. After the restructure many students found that the advice provided from the central office was not tailored to their needs or even inaccurate. Isabella (SLA1) cited two examples where students had been delayed in completing their degrees because they had been given the wrong information, and in another case a student had been wrongly told that the course they wished to do was only available at the Gold Campus (approximately 60 k to the south). Many SAOs therefore continued to provide service even though it increased their workload and they could gain no reward for their extra work.

Another problem area was the use of expert power. Firstly in relation to the system functionality the SAOs gradually became distrustful of the advice they were given as the system often did not work as specified, or the training manuals were out of date,

“No, they [the manuals] haven’t been touched [revised], that’s a bone of contention” (Katerina SAO6)
SAOs frequently called friends at other universities or colleges for advice because they became distrustful of the training as well.

“I found a lot of the trainers quite defensive about PeopleSoft though, some of them were sort of selling it in a marketing sense, and trying to say there are good thing with it and these are what they are; whatever, some of them had obviously copped a hard time in the training and said don’t blame me I didn’t say the uni [university] should get PeopleSoft” (Bianca SAO1)

In terms of referent power, the SAOs identified with and were responsive to influence from staff who had similar values and priorities to their own. They disliked the commercialization of the university and were nor responsive to pleas to keep down the level of the complaints for the sake of keeping the implementation on schedule;

“So yeah it’s a business not an education provider.” – (Zena SAO4)

At the same time they seemed to wonder why the university did not do more to support staff who directly served students – the main source of the university’s income.

In summary the SAOs felt that their use of direct information to influence other staff was unsuccessful outside of their own group, and were concerned about the use of indirect information.

8.3. The widening rift

The above summary indicates that there were changes to the traditional types of power base one would expect to find used in a university, and that this might suggest changes to values amongst various groups in the university. This has already been referred to as a cultural rift (Marginson, 1999) between the two major groups in tertiary education. An interpretation of the significance of these power bases relies on ideas from the wider perspectives of the multiple perspectives framework. In other words, the culture of an organisation and the political behaviour it legitimates are not just the result of processual power or organisational factors. The culture and political behaviour develops within the context of structural constraints and enabling factors and socially shaping influences. Legitimation can be explained well by reference to structuration theory which shows the interaction of the agent
(individual actions by individual agents) with the established structure (rules and resources). Cultural rifts show a modification of these structures via the actions of different groups of agents. The university as an institution is being modified and transformed.

During this process of transformation, the espoused values and goals of the organisation will probably be represented as unchanged. It is difficult and unsettling for the participants of any institution to undergo change particularly when it involves changes to fundamental values.

The ostensible culture of an organisation can be seen in the various mission and vision statements it produces. Griffith University’s mission statement (Griffith University 2007) was as follows:

In the pursuit of excellence in teaching and research, Griffith University is committed to:

- Innovation
- Bringing disciplines together
- Internationalization
- Equity and social justice
- Lifelong learning

For the enrichment of Queensland, Australia and the International community

Mission statements are often referred to as ‘motherhood statements’ which are not often operationalised. Jenkins (1999) discusses the need for universities to reflect on and publish their conclusions about the interaction between the different elements of the university and the difficulty of reconciling disparate elements (such as the need to keep time aside for research while being available for consultation with students). Such debate seems to occur primarily outside the universities by critics such as Greenwood (2007).

However vague statements such as those above might seem to be the perception of the SAOs was that the students were the main reason for the university’s existence. Their needs took priority with academic needs coming a close second (since the academics provided the core service – teaching and postgraduate supervision) to the students.
“We are here for the students, if it weren’t for the students there would be no universities”- (Bianca SAO1)

Moreover, as mentioned above, most of the SAOs regarded Griffith as a potentially student ‘friendlier’ university than the other two universities in Brisbane, who they saw as more concerned with academic prestige or industry affiliations. They understood that Griffith had to compete in an international marketplace but perceived that competitiveness derived from the university’s reputation with students. At the time this study was conducted, funding from overseas students made up a quite small percentage of the university’s income; local students could be seen as a sort of ‘captive’ market as university places were limited and students had to accept the places that were offered to them or not attend university at all. The competitive dimension came into play with regard to the quality of the students attracted.

As the newest of the three universities in the Brisbane city area, Griffith University generally attracted the lowest ranking students (according to the entrance guide published by the Queensland Tertiary Admissions Centre). It is unlikely that administrative systems had a direct impact on this situation, but SAOs saw that problems with modules such as the Advanced Studies degree admissions [for academically excellent students] and the Credit for Advanced [prior studies] Standing would impact on Griffith’s attractiveness to the higher achieving cohort of students.

None of the above statements refer to the increasing commercialization of the university or the need for efficiency to be achieved to support competitiveness in the local and overseas student market place. These can be seen to some extent in the statement of values to be found on the same website. Values are fundamental to cultural life and give rise to norms (patterns of behaviour) and roles (positions which society gives authority and status to). As mentioned above, culture legitimates political behaviour so the values espoused by the university should give rise to consistent uses of power in the negotiation of competing interests and the management of conflict. The espoused values of the university were as follows. A discussion of how these values are perceived and align with political behaviour
at the university is given below. This helps to clarify the notion of the widening rift between major groups of stakeholders.

In pursuit of our mission, the University values:

- Rigorous standards of scholarship
- Continuous quality improvement
- Accountability as befits a learning organization
- Commitment to individual rights, ethical standards and social justice
- Participatory decision making and problem solving
- Lifelong learning and personal development
- Contributing to a robust, equitable and environmentally sustainable society
- Tolerance and understanding of diversity in society. (Griffith University 2007)

The data collected in this dissertation indicates that there are significant problems in perception of some of these values, and three of these will be discussed below. As Jenkins (1999) mentions, where tensions are developing between potentially contradictory movements in the university, it would be useful if these were made more explicit through public discussion and negotiation. To some extent this dissertation contributes to this discussion.

8.3.1 Accountability
Accountability is usually associated with responsibility but whereas responsibility may not be held to account, accountability implies that agents will be required to ‘account’ for their actions to an audience to whom they are obliged (Stahl, 2006). Giddens (1984) expresses this as the ‘responsiveness’ aspect of responsibility. In political terms it infers legitimacy of relations between the accountable agent (in this case the university) and its legitimate targets (close and distant stakeholders – specifically students, staff, the immediate community, government and the higher education sector), since it could bring anyone of these groups into disrepute if it acts wrongly. The stakeholders should be in a position to evaluate the ‘account’ and the conduct it represents but as Jenkins (1999) indicates, this is rarely the case in relation to discussion of the fundamental missions and values of
universities and the conduct they give rise to.

As mentioned above, there was no indication in any of the university’s public documentation of the problems occurring during the ERP implementation or the extra expense involved, except for the identical statements repeated in the annual reports, which did not allude to any problems. This type of representation is more consistent with corporate behaviour where problems are not publicised unless the company is legally required to disclose such information, for fear of the effect on shareholders confidence, suppliers and customers. It is a significant departure from academic tradition which supports the open and frank discussion of competing views and supports critique of prevailing opinions.

The SAOs, when complaining about the use of indirect information, alluded to the fact that their concerns were rarely dealt with in an open manner. They felt that information was being provided in ways that they could not act upon (as in the case with the misdirected email, discussed in the previous chapter.

More importantly, the SAOs viewed the student administration module of the ERP as primarily for the purpose of accounting to students and staff all the relevant details of student admissions, enrolments and progress. This is a common idea about information systems – that they should accurately represent and make available information which is ‘about’ the real world, and that the processing which information systems enable (calculation, compilation, comparison etc) should provide extra value to its clients.

In this regard the SAOs perceived that insufficient priorities were given to student administration needs “even when it was a matter of maintaining the level of service to students that existed before the implementation” – (Katerina SAO6)

One SAO was concerned that the way they were being required to transfer data could cause problems with accuracy.

“I’ve got a degree where they decided not to bring data across from the old system and put in on their transcripts on the new system because it was deemed that it wasn’t required … I was told by the PeopleSoft consultants that I had to actually go through the academic transcripts of every student who has ever been in the Bachelor of Science with advanced
studies since it came into existence and actually document the notings [comments] that should have been on every student’s record every semester of enrollment and then send them a database of what should have been there and they would look at putting it back up.” (Amber SAO5)

Skovira (2003) discusses how information systems allow for the ascription of responsibility to the individual or entities involved in data processing. In this case the SAO was concerned that responsibility would be ascribed to her but she was not in control of accountability. Katerina (SAO6) was also concerned with the number of requirements which were not deemed important and the outcome was “to let them do things manually instead”.

This completely contradicts the ideal of information systems that they should capture, process and distribute information to all the relevant stakeholders.

8.3.2 Commitment to individual rights
The above example was one of a number of instances which were quite obviously counter to the justification given publicly for the ERP implementation “the innovative use of web and workflow technology enhancing the quality of services to end-users” (Griffith University, 2002, p. 28).

The SAOs saw not only their rights to provide good service being negatively affected, first through the 1997 restructuring and now through the ERP implementation. Part of this was due to the ‘evening out’ resulting from the restructuring. One of the aims of the restructure was to standardize the level and type of service across the university but the SAOs saw this as ignoring the specific needs of individual schools.

“All schools in the university even though we are all schools and ultimately doing the same thing we do it in different ways, so my requirements in science can be quite different than say psychology for example; so whereas the uni may have consulted with a unit or a few units they didn’t consult widely enough and so requirements for some areas didn’t happen because other units didn’t need them” (Sienna SAO2)

They also viewed this as not doing the right thing by the students. The following comment relates to administration of ‘advanced studies’ students who have been admitted to an
‘advanced’ form of a degree because of their very high entry scores, or are eligible to transfer into the degree, because of a high grade point average.

“Every semester I have an advanced studies board, so when the results come out at the end of semester I have to run a report now …. I had a week [to get it done]… and I also had to run my advanced studies board, well it didn’t run because I had to order listings. To stay in that degree you have to maintain a GPA of 5 or better. I ordered the reports, couldn’t get them, I am also at that point where I am supposed to check all students in … any degree that has a combination with Bachelor of Science and see what students there are sitting on a GPA of 5 or better, to see if any of them are eligible to be interviewed and to transfer into advanced studies. We didn’t transfer any into advanced studies this semester because PeopleSoft could not provide the reports [in time]. I got the reports in week 4 –, I mean I can’t transfer students in week 4.” (Amber SAO5)

This SAO was enraged and embarrassed that she had been unable to identify eligible students who therefore lost the chance to gain entry to a prestigious degree. She was particularly annoyed because she had brought this problem to the attention of the project team at an earlier meeting.

“I thought that it would help but I don’t think it did, because they just ignored information we gave them and I mean they were busy taking notes at various you know whenever the meetings were on they would have someone on the laptop writing down all of our questions and supposedly taking that into account” (Amber SAO5)

Overall, the SAOs felt that they were unable to do justice to all the students and that students’ rights to have accurate and timely information about their progress recorded and used by the university were not being met.

“I don’t think they realized how critical it is for us to have reports, ah even simple reports of how many students are enrolled in a program” – (Aileen SAO8)

and

“We can’t meet all our deadlines; when we can’t even get reports we can’t access the information that you’re asking for” – (Crystal SAE2

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They perceived that despite the university’s promotion of the ERP as enhancing service to students, they were not able to access information as easily as they had done with the old system.

“Certainly can’t provide instantaneous information. I can think of instances where our HOS [Head of School] would walk in and say I just need a list of all the students in a particular program and you use to be able to get onto SIS [previous system] and type it in and it would print out on the local printer about 2 minutes later. Now there’s up to a two week wait” – (Katerina SAO6)

Even the senior management wondered about the suitability of the ERPs for student records and to what extent it would meet their needs, and be easy to use. This was a matter of concern since the student would lose it for a much longer period than any single member of staff.

“It is not purpose built for it, the student function … well yeah I mean it works, you, you know it is clunky and cumbersome in way. But fundamentally, a staff person comes, get paid [to use the system] and 2 years down the track leaves, whereas students do a hell of a lot more transactions with the system than a staff person has to.” (Earl MSA2)

8.3.3 Participatory decision making and problem solving

The last of the espoused values which is especially relevant to this study is that of participation in decision making. Many examples have been given in previous chapters of how the SAOs participated in forums and reference groups and provided information about their requirements, as well problems that arose from implemented systems, only to be disappointed at the lack of clear response. This relates particularly to the use of Information as a power base. In a rational organisation, there should be clear lines of communication where staff can provide feedback to upper levels about problems and requirements and receive directions and instructions back about how to handle things.

Perhaps because of the tight deadlines and the escalating costs of implementation, there was never any sense that problems raised were systematically dealt with. “I think the university believes that they consulted because they did set up networks where we were supposed to
feedback however I really don’t think that there was an intensive consultation process,” (Sienna SAO2)

Furthermore, the SAOs perceived that they were being made scapegoats for an ineffective process.

“It’s extremely poor communication; however having said that if we complain about it and I have had an example of a really big problem, it will come back to us that it’s the school’s fault because we didn’t respond when we were asked for consultation. Yet when we go back search the documents we find that we were never asked about it” – (Tiffany SAO7)

User participation is an important topic in information systems development, and intrinsically would seem like a good idea, to get the requirements right and to help participants to achieve ‘ownership’ of new systems. As discussed in chapter 2, however the notion of ownership can be quite complicated and not always a ‘good thing’ from management point of view. Likewise, Hirschheim, Klein and Lyttinen (1995) argued that participation could be seen in three quite different ways. It may enable the creation of “shared meanings” (p. 18) similar to the notion of ownership. Secondly it could be seen as a stakeholder’s ‘right’ – to influence the direction of the development. Certainly the SAOs saw the ideal form of participation in that light. However, the authors point out that it can also be viewed as an “expediency either to collect needed information or overcome potential resistance to change” (p. 18). And the SAOs came to view the mangers’ and project team’s actions that way. However, they still maintained that ‘proper’ participation should be workable and would benefit everyone.

The last view of participation mentioned above is difficult to reconcile with the espoused values of the university, which leads us to ask – participation for whom and for what reason?

8.4. Whose university?

In chapter 1 I raised the idea that it was difficult to ‘experience’ the total organisation during a research project or even if working there for a long period of time and so it is necessary to take a particular perspective (or perspectives) in order to organise ones thoughts about the object of investigation.

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Morgan (1997) proposes that “in contrast with the view that organizations as integrated rational enterprises whose members pursue a common goal, the political metaphor encourages us to see organizations as loose networks of people with divergent interests” (p. 158) whose goals may differ considerably. However the cultural perspective outline by the same shows how likeminded people tend to gather together into occupational groupings and that ‘strong’ organisational cultures share similar goals. These two ideas can be reconciled by saying that in general people tend to associate with people whose values they share but that in large organisations there may be several groups of people whose values are in conflict or difficult to reconcile.

Again if we consider Giddens’ (1984) view of the transformation of institutions we can see that an institution such as a university, or even more broadly, higher education, has great concrete force (in other words will be difficult to change through the actions of individual agents) but may be transformed by the influence of wider social trends. The critical view is interested in understanding why these movements occur and why institutions such as universities and ERPs become solidified into structures within which individuals must operate. However, the focus of this dissertation is on a small group of people and these wider factors are of interest only in so far as they affect their experiences.

We could summarise the discussion so far by saying that that rather than just two dominant cultures existing within the university, the SAOs make up a third important grouping. And this group may be significant for translating the values and interests of each of the other groups. The diagram below states that corporate staff are more aligned to the institution because this is the perception provided by staff. Of course it raises the question again of ‘whose institution’ but it may be worth leaving it there, since many academics believe that the traditional university around which they built their careers is vanishing, replaced by education as business.
The confusion felt by many staff about how best to serve the student population probably illustrates the ambiguities that occur as an institution undergoes transformation. According to the SAOs the espoused values displayed on the university’s website were not reflected in everyday behaviour and the lack of respect paid to them seemed to indicate that the students also were not a high priority.

8.5. Conclusion

This chapter has considered how difficulties with the ERP implementation derived from confusion about the values to be enacted by the university, both in terms of the use of bases of power (section 2) and the enactment of values which represented fundamental interests which the university could be expected to pursue (section 3). Of particular concern were how the university enacts the values of accountability to relevant stakeholders, commitment to individual rights, and participatory decision making.

Power bases which one could expect to see acknowledged as appropriate and used successfully in a university were largely ineffective and behaviour not usually associated with a rational organisation (such as the use of Indirect Information and Impersonal Coercion) were widespread.

This gives rise to considering which are the main cultural groups (or sets of interests, in political terms) within the university and what conflicts are likely to occur between them. It was concluded that the SAO grouping may share the values and interests of both dominant cultures and could provide a ‘bridge’ between them. Understanding the overall identity of an organisation is important but in this study, the question of ‘whose university’ (business,
academic or student stakeholders) was raised. According to authors such as Greenwood (2007) this debate continues today.

In the next chapter we will consider implementation overall as a political process and review the findings in relation to the multiple power perspective.
Chapter 9 – A Political View of ERPs Implementation

9.1. Introduction
In the previous two chapters the operation of power has been looked at in terms of resistance and how the use of power is legitimated by the culture of the organisation, indicating there have been significant changes in the cultural landscape of Griffith University. In this chapter we will firstly review the implementation as a political process – looking at how the participants viewed the operation of power at the various stages. This will include a discussion of the system selection and the composition of the project team, how, how change management and project management were perceived, resource allocation and requirements gathering.

Secondly, in section 3 the multiple perspective framework will be reviewed to understand the implementation project from the four perspectives according to important criteria such as success.

9.2. Implementation
In chapter 1, the entailment of the political view of organisations was considered in relation to implementation which can be viewed as a series of technical phases, underpinned by the Software Engineering discipline, or as a social process, which tends to the perspective taken more often in Information Systems research. The approach taken in this dissertation does not view these processes as having an objective reality (so that ‘accurate’ reports may be made of their operations) but rather they are viewed via the perceptions of stakeholders as elicited from the interviews.

9.2.1 System selection and composition of the Project team
According to the understanding of the SAOs the selection of the ERP software was undertaken by a small committee, drawing from a cross section of university interests. Many of the SAOs only became directly involved when reference groups were set up to
select the implementation partner – since there probably wasn’t much to choose from amongst the ERPs available at that time. Their perception was that Wendy (HAA) was heavily involved in the selection; “I mean she was the business owner, from where we were at and she was very much involved with it” (Kristen PTM1).

Perhaps in hindsight the SAOs saw Wendy as defensive about a decision that had not worked out as well as expected.

“Wendy is quite protective where the PeopleSoft system is concerned. I mean ultimately she’ll wear the can if it goes wrong to a certain extent. I don’t think there’s an openness about it, that’s, that’s normally there with Wendy” – Katerina (SAO6)

According to Isabella (SLA1), the implementation partner was considered to be even more important than the software vendor, and the reference group was able to interview several large companies before selecting Accenture as the partner. This process was viewed as much more open, with greater use of direct information than was the Software Selection process. How well this perception was justified, is not relevant. It indicates that the initial process was not well handled in terms of ‘setting the stage’ for the future implementation, and it seems to have coloured the perceptions of later events.

Once the software and implementation partner had been selected, the project management team was created with a diverse base of representatives, from different academic schools and administrative sections. Some staff were seconded in order to obtain their full-time commitment.

The major criticism directed at this stage of the process is that the team rejected (or were not able to persuade senior management to accept) a cultural audit to identify communication and other potential implementation problems. A second problem perceived by many of the interviewees was that the steering committee for the project management team consisted mainly of people who had been on the selection committee. It was thought that these people were more interested in justifying their position than looking for potential problems and correcting them. It was also felt that control of the system implementation rested with senior management who were remote from the workplace and the potential impacts of system changes. This led to negative responses to the exercise of expert power which should have
been successful if the team had been trusted. A striking example referred to earlier in this dissertation was in relation to the module which handled credit for advanced standing.

“Wendy said ‘What’s CAS?’, well its run by a unit that she is in charge of, and she has the right to set work agendas for SAOs and she didn’t even know what the CAS system was and it was an entire system that we had to come to terms with no training and we were not aware of it until it went live.” (Amber SAO5)

Students who experienced delays in being granted credit were quite likely to transfer their enrolment to another university. Isabella (SLA1) recalled an instance where she advised two overseas students who were waiting for notification of credit to attend up to 8 courses “in case their applications had been rejected and they might need to make different decisions about what to actually enroll in.” The students were required to confirm their enrolments by the third week of semester, and withdraw from courses for which they had gained credit. In this case the students only decided to stick with their enrolment at Griffith because they had friends studying there. Isabella was concerned that they might recommend to other students not to come to Griffith.

Events like this one increased staff concerns about what the project management team’s goals really were.

The project was also managed with the expertise of outside consultants from the PeopleSoft implementation partner (Accenture). Accenture, who had no knowledge of the University culture, had requested a cultural analysis but it was deemed unnecessary by the University Management (as they were confident that they understood their own university). The external consultants also had varying experience and during the project the loss of several senior consultants left the Accenture management in the hands of less experienced staff and this did not go unnoticed by project team members, although they held the younger staff in high esteem, they considered they were just ‘stumbling around’.

When a manager was asked about the experience with using a 3rd party implementation partner, and the PeopleSoft product, it was clear that high expectations of support were not always met.
“That’s not to say that PeopleSoft is forthcoming with absolutely complete support when everyone wants it because it just isn’t; they need a hell of a lot of prodding along” (Donald MSA1)

Katerina (SAO6), a SAO who had been involved with the project from the beginning (and had been with the university for over ten years) expressed the opinion that PeopleSoft’s commitment to the university was lacking “they have sold it as a package, they have given us the package they have gotten their money and they have left”

9.2.2 Change management
The perceptions about how much change would be involved varied greatly. May of the staff who had been affected by the restructuring and its lack of success (Fussell, 1998) were very wary about the ability of senior management to handle the new changes. Perhaps because they were not involved in the actual changes to daily work practices some managers were quite optimistic about the amount of change involved.

“The [amount of organisational] change is not enormous.” (Earl MSA2)

Management was also cheered by the relatively smooth progress in comparison with the disasters elsewhere. It is likely that many of their efforts were focused on not repeating these mistakes and in that regard they were obviously successful – there were no publicized problems at Griffith.

“The implementation, in..er … I don’t think the university realizes how bloody well it went, and if you looked at the RMIT experience they are in absolute diabolical troubles” (Earl MSA2)

However, this may have blinded them to the problems which were concerning other staff.

“Yeah that’s true … things like graduation, RHD, [Research Higher Degrees] because that had to be dealt with at phase 2. We had to fix some exams and timetable stuff and this was taken out of SR2 [System release 2] and put in SR3 because we knew we were going to be late on that on that. In other words we took out some functionality that was planned to be placed in… RHD were delayed because what happened with RHD is that PeopleSoft doesn’t do it at all; it all had to be built from scratch… though some stuff slipped from 2 to
3 because they weren’t going to be ready and other stuff was always going to be late because it wasn’t essential” – (Earl MSA2)

Obviously, trying to change between two very different systems over a quite short time period is likely to cause problems. But SAOs considered that the lack of proper representation of the staff who actually did the work caused unnecessary problems. No one bothered to ask for details about how some processes worked (for example, the Credit for Advanced Standing process). Universities are subject to very strict deadlines in a great variety of areas in order to allow students to progress satisfactorily.

A striking example of a misunderstanding of how changes to processes need to be managed is given below.

“The graduation process - when the timeline was set up for the implementation of it, they took it on the advice of one SAO who was working on the project, who said ‘oh well I used to do my graduation checking here’ [at this point in the schedule]. So they basically built that into the timeline for the whole university, which was six weeks too late. And they only reason she did it [graduation checking] there was because she used to take holidays at that time of the year, every year, you know. But nobody twigged [realized]. But it made such a huge impact on workloads of every other SAO, who you know when the timeline was put forward, everyone said - that’s too late we can’t do it then, so there was quite a bit of scrambling around to fix that.” – (Katerina SAO6)

The SAOs perceived that many of these sorts of problems could have been avoided if expert power had been used successfully. Either the managers were not prepared to listen – had no respect for the expertise of the SAOs or they had more important concerns to preoccupy them.

9.2.3 Project management

Project management was perceived in a variety of ways by the SAOs and other interviewees. The PeopleSoft implementation initially had an optimistic timeline and budget, and those were pushed back (and out) to accommodate the reality that the system was not as simple or seamless as initially prepared for.
“The areas [representatives on project team] won’t have it that there’s something wrong with the system, and no amount of budging it and their very protective of it because they don’t know that ultimately the team knows if it goes wrong if it fails they’re the ones that will be wearing it” – (Amber SAO5)

and

“I think so, I think so, yeah we had limits, there was um certain, there was limits imposed on us, in other words certain processes and certain databases were agreed to be taken over” (Kristen PTM1).

Previous chapters have outlined communication problems with the project team. There were also problems within the team. Kristen specified personality conflicts, and conflicts of interest, as well as the idea that some activities were taken on just so that the right things were being seen to be done (the boxes being ticked).

“Oh yes, just personality conflicts more or less, um some of the other conflicts that were at higher levels would have been resources, particularly when the um ACC were moving their resources around because they wanted to tick the boxes so to speak, and we have to be seen to be doing this. And they would move the resources in and out and there were times there when this was really frustrating, because you would have someone who knew what the business process was and you would work with it right up to the nth hour and then all of a sudden there would be a crisis over here and they would take the person out and move them across which is what um someone like Accenture would do” – (Kristen PTM1).

9.2.4 Resource Allocation and Requirements Gathering

“Every now and again they say ‘do you need this functionality?’, and you’d go ‘yes!’ and they would come back to you and say ‘no - can’t do it’” ((Zena SAO4).

The way that Accenture (the implementation partner) utilised and deployed resources caused irritation to some project team members. Another aspect of the resourcing issues arose from the “lack” of resources available to the university to ease the transition into the new system. Training and transfer of knowledge suffered from the low resources. The staff interviewed complained that the training was poor, and further specified that the manuals provided for training and use were several version out of date. This basic failure of the
university to provide up to date manuals, and to develop training courses on version of software that were obsolete left the staff in a position of weakness and failed to prepare them for the changes required to transition quickly.

Project team members were not at all certain that there would be any additional resources to further customize the system to meet staff requirements - “*talking additional resources is talking pie in the sky really*” (Kristen PTM1).

The funding was limited but the way that funds were allocated was not clear.

“When the system was first coming in, I was working in admissions, and um they were concentrating on what they were doing with internal academic transfers and I went down and had numerous meetings and in the end it basically it was the management saying we will do with this system what we can as far as our funds go, and in the end whether it doubles your workload and you employ another staff member or it doubles and you just have to put up with that, that was the answer” – (Sally SAE1)

Staff perceived the problem with resource allocation as originating in the restructure of 1997 and the annual reports, as mentioned in chapter 5, allude each year from 2000 to 2003 every year to the “*,more limited levels of working capital being available for daily operations*” (Griffith University, 2000, p. 35).

“Oh absolutely, absolutely, that started back in 97 when they did the restructure, when they basically said that the dollar comes first” (Zena SAO4)

Requirements gathering for any project requires balancing essential functionality with other considerations – particularly meeting deadlines and staying close to the estimated budget. (Beynon-Davies & Williams, 2003). System failure is often identified primarily in terms of budget overruns and missed deadlines. If a small group of people require functionality, it may be rejected on economic terms without realising how significant the functionality is for the overall functioning of the organisation.

“The PeopleSoft was sold with a reporting module that was completely inappropriate for GU, it was an American one, they bought it because it came with the 28 million that they spent, and then they put it aside and said we are not going to worry about it because it
doesn’t work anyway, um, they looked at the stats from the old student system in terms of reporting usage of reports and it was quite low, and they thought oh well we won’t put the resources into converting these reports because not a lot of people who use them and the not a lot of people who use them are the 48 SAO’s, which in the scheme of things is not a very big group, so that part of the process has been I think very poorly handled and there has been no effort to rectify that.” – Katerina (SAO6)

The reporting module of the system was not purchased, relying on other workarounds which introduced extensive time delays. Expenditure was saved on implementation costs but caused expense further down the line.

“I haven’t found the system to be very good at all, I have actually found the system to be quite frustrating and I have found the system to be inadequate for our needs, and I’ve found it impossible to get any reports from the system which then impacts then quite heavily on our work and I think that it's probably doubled my workload at least (time wise) since its implementation so I am not a very happy vegemite” – (Amber SAO5)

The failures in the requirements gathering lead to incomplete data migration for some schools essential course data which negatively impacted on student service

“They get very frustrated, so they come here, and I find it actually easier and even though I am not supposed to do it, and it has actually made a rod for my back because it takes a lot of my time but my students come in and they see me and I log them on to Enable [enrolment system] here while they are sitting with me and I actually go through and do it with them. And that way we don’t have all the problem; it takes up so much of my time but I would rather do that than deal with the problems later on” – (Amber SAO5)

In some cases the lack of attention to requirements at the workface caused problems for other staff. For example one interviewee (SAE) commented that they no longer allow front desk staff to make corrections to any data they enter because they were not deemed senior enough to be given that level of security clearance. Therefore their floor manager had to make each edit, adding considerably to her workload to that manager, drawing the manager’s attention to small errors which previously the staff member could correct, and delaying the completion of data entry.

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The overall perception that SAOs had that their concerns were not important was shown by the following response to a request for software to access email via Apple Mac hardware.

“Their answer was - ‘there is not that many Mac users - go out and buy the individual software and install it yourself’ ” – (Amber SAO5)

9.2.5 Training
As mentioned in chapter 5, perceptions of the usefulness varied with corporate staff generally happier with training than were the SAOs. The latter group did not feel that the training prepared them adequately for their work.

“It’s a frustrating thing where the people on the project side insist things are a certain way and the users saying this is not correct and being told well you’re using it incorrectly - that you must have done this when the users say that they didn’t” – (Aileen SAO8)

The main problems concerned being trained on earlier versions of a system, often months before the system went live, and having manuals which had not been updated.

“No, they haven’t been touched, that’s a bone of contention” – (Katerina SAO6)

The SAOs often felt that the trainers resented being left to deal with the mess.

“I found a lot of the trainers quite defensive about PeopleSoft though …. some of them had obviously copped a hard time in the training and said don’t blame me I didn’t say the uni should get PeopleSoft” – (Bianca SAO1)

One SAO reported sympathy for the training staff - long unpredictable working hours, test databases ‘falling over’ and continuous software updates from training to go live. It was never clear to them why sufficient funding had not been allocated to provide proper training.

9.3. Using the Multiple perspective Framework
This dissertation has focused on the perceptions of the SAOs and to a lesser extent other staff who were involved with the ERPs implementation. It is obvious that when the study was carried out there was considerable dissatisfaction not only with the system, but more
importantly with the processes associated with all phases of the implementation. Primarily negative views have been presented. Being able to revisit the site might provide a different perspective; however this dissertation is interested in how a political perspective might illuminate how ERP implementation proceeds and the difficulties faced.

To provide an overview of the findings we return to the Multiple Perspective framework (adapted from Sillince & Mouakket, 1997, and discussed in chapter 4), to see if we can gain more insight into the SAOs perceptions of the events and how the ERP implementation might be viewed using these broader perspectives.

An overview of the four perspectives used was given in chapter 4 and is shown her again for convenience of reference.
**Table 1 The Four perspectives on power** (adapted from Sillince & Mouakket, 1997, p. 374)

<table>
<thead>
<tr>
<th>Metaphor</th>
<th>Processual Power</th>
<th>Organizational Power</th>
<th>Structurally Constrained Power</th>
<th>Socially Shaped Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power base</td>
<td>Power base</td>
<td>Power web</td>
<td>Power as control</td>
<td>Power in eye of beholder</td>
</tr>
<tr>
<td>Relations between individuals</td>
<td>Relations between groups</td>
<td>Ability to control</td>
<td>The taken-for-granted</td>
<td></td>
</tr>
<tr>
<td>Satisfaction for all users</td>
<td>Support for Corporate survival</td>
<td>Success of control or of resistance</td>
<td>Ability to shape meanings</td>
<td></td>
</tr>
</tbody>
</table>

9.3.1 Metaphors and Locus of Power
The metaphors applied to processual power and organisational power have I think, been clarified by their application in chapters 6-8. Analysis of events as processual power is concerned with the power base. This is viewed as metaphorical because power does not literally have a base – it is an image of something which supports someone in their influence attempt and consists of rules, resources and methods which can be drawn upon. The locus of processual power is in relationships between individuals as can be seen in the analysis of the two influence attempts (chapter 6) and the following analyses of how targets (mainly the SAOs) responded to the actors’ attempts to influence them.

At the organisational level, interactions become more complicated and relations are formed into a ‘web’; relations between groups become important as affiliations and loyalties form
and are modified. The clearest example is how the SAOs formed a group united in their difficulties with the ERPs and their perceptions of the way they were being treated, and started to differentiate themselves from staff in the central student administration, even though only two years previously many of them had been working together in the same school offices.

The metaphors applied to the two broader perspectives are rather more difficult to understand. The Structurally Constrained Power perspective presents the metaphor of power as an ‘agent’ which can control what is going on. In chapter 7, the resistance to the system was analysed and it was questioned as to how much control the managers could exert over the SAOs – who remained defiant and worked around the ERP systems in order to maintain a reasonable level of service to the student population. In Sillince and Mouakket’s (1997) case study they found that control through the visibility enhancing capability of the system was a locus of power and many studies have been concerned with the effect that technology has on the autonomy of the users and the capacity of staff to practice surveillance via the computer systems. The findings in this case are significantly different. Control in this sense was absent because the systems lacked complete functionality – in fact the SAOs were concerned with lack of visibility. This is in contrast to the academic staff who were worried that the collection of information via the ERP would require them to provide great detail but all their activities, involving them in tedious clerical work and eroding their traditional autonomy.

Technologies and other structural factors such as legislation provide the capacity for control, although this is obviously not always under the command of the management. Perhaps the most is significant question here, is to what extent the pervasiveness of ERPs is extending the control of governing bodies. For example, the increased accountability required of universities and increased government control over funding and activities, as discussed in chapter 5, has largely been enabled through the implementation of integrated large-scale systems such as ERPs. It is difficult to imagine how many of the auditing processes that universities are now routinely subject to, would be possible without such systems.
Additionally, from the SAOs point of view, the quality of information about students might not be satisfactory, but it is likely that functionality has improved since the early days of implementation.

The metaphor for Socially Shaped Power perspective extends this idea. ‘The eye of the beholder’ as a metaphor represents power as something which the beholder accepts or does not. If power is not acknowledged, it is not power. Therefore the locus of power is the taken-for-granted; people who accept ideas about the world (for example, the importance of integrated systems, accountability, etc), acknowledge the power of those ideas and to some extent their force lies in the fact that they are taken for granted – they have become so much part of our accepted way of thinking that we do not question their origins, validity or usefulness; we rarely think of them as ideas – we just accept them as ‘reality’. This relates back to the notion of ‘false consciousness’ discussed in chapter 4, and one of the motivations for undertaking this research study – the motivation to overturn conventional wisdom about ERPs which have become the dominant discourse for systems integration.

The experiences represented in this dissertation indicate that the corporatization of universities is becoming taken for granted. Although it is subject to some criticism it seems like an inevitable trend which cannot be resisted.

9.3.2 Definition of information systems success; user satisfaction
Each of the perspectives defines information system success differently. The Structurally Constrained Perspective defines it as the success of resistance or the control of resistance. This has been discussed in some detail in chapters 7 and 8 and will not be repeated here, although it will be reviewed again in chapter 10.

The different views of information system success are consistent with the political view of organisations – not as unified entities with agreed upon goals but as coalitions of actors with different interests. A limitation with the following discussion is that the view of success must be seen through the perceptions of the SAOs – but every analysis is bound to be limited in some way. As discussed earlier, it is impossible to get a total view of any organisation which includes all facets and all the opinions of all the stakeholders.
Firstly the processual view considers system success as satisfaction for all users. We do not have access to all users of this system but may derive some opinions from the documentation and the accounts of the interviewees.

**Managers:** the only significant indication of success from the SAE managers is a sense of relief that calamities such as those that befell RMIT were avoided. The study took place too early for success to be assessed. A broader view of success – from the organisational power perspective is relevant here and will be discussed below.

**Academics:** Only one academic (Isabella SLA1) was interviewed for this study, primarily to elicit perceptions about the selection of the implementation partner. However, she did comment that more clerical type responsibilities had fallen on academics as a result of the ERP – there was more “form filling in which used to be done by the administrative support staff”. Nor did she see any of the promised efficiency, commenting that certain areas (such as academic activity reports) still seemed to be unable to take information which had been entered for other purposes (such as teaching allocations and research activities). Overall she felt that academic staff were worried that this was the thin edge of the wedge – that the system would lead to more and more time being consumed on clerical work.

The ERP implementation at Griffith University has been the subject of some smaller studies for Honours dissertations, some of which were compiled in the work by von Hellens, Nielsen & Beekhuyzen (2005). The above opinion was supported by the study carried out by Beekhuyzen (2005) which asked for academics’ comments about the system. These included assessments like “it’s big slow and clumsy”, “it has no flexibility” and it’s “much ado about nothing” (pp. 117-118).

**SAOs:** When this investigation finished SAO satisfaction with the ERP implementation was very low. No positive assessments were expressed. As defined in chapter 1, implementation is concerned with processes and factors, social and technical, and the intersection between them. There was considerable resentment about the process by which the system was implemented; consultation; consultation and participation in decision making were perceived to be a veneer rather than genuine attempt to involve stakeholders; expertise was not respected and workload had increased substantially.
“Our workload has defiantly increased, a lot of our jobs have changed, we get additional work to do, associated with the system, we don’t get any meeting to discuss it or anything like that, this is just now happening” (Crystal SAE2)

If the workload had resulted in improved service it might have been less resented but the overall judgment was as follows:

“we have bought a system that never met our needs in any way and we that we have had to change almost everything in the university to fit a system instead of having a system to fit us, almost every policy in this university has been rewritten to fit the system, and our nomenclature has had to change to fit the system, and I don’t understand the mentality that says turn everything you know upside down because what we just purchased doesn’t do it, you know like, that is just amazing to me that these educated people couldn’t see there was some strange logic there” – (Amber SAO5)

Student: Student satisfaction cannot be judged directly but staff perceptions indicate considerable dissatisfaction.

“In all the time I have been here this is by far the most disgruntled students have been” (Jenna SAE3)

Dissatisfaction was also elicited via student complaints.

“So you apply through QTAC [the tertiary admissions centre] and your sitting at home and your waiting to hear back from the university and basically you don’t know what’s going o. … so then once upon a time the university would send you out a big fat book with everything you needed to know in it and we would put stuff in that book, now there is a piece of paper saying log onto such and such and all will be revealed; well it’s not, and our Uni. website sucks, like it does, it’s hard to navigate and it’s not logical.” (Zena SAO4)

Overall, the system as it functioned at the conclusion of this study was not judged as successful by (or on behalf of) most of the stakeholder groups.

9.3. 3 Success as Support for corporate survival
The Organisational Power perspective defines information systems success according to whether it supports the survival of the organisation. One of the major reasons for adopting
ERPs as discussed in chapters 2 and 5 are the promised benefits in terms of increases in efficiency and benefits from data integration. ERPS are also meant to embody best practice which will enable organisations to improve their competitiveness (Hemsley-Brown & Oplarka 2006). This is similar to the ideals of most information systems that they should support organisational effectiveness.

There is some about whether ERPs improve competitiveness. Since ERPs offer much the same features to all client organisations they cannot provide anything distinctive which will give the organisation a competitive edge. However it would be hoped that they do not actually reduce competitiveness. Some of the examples discussed earlier and outline below indicate that this could be the case – that deterioration of service to students could make the institution less attractive to those students who have the choice to go elsewhere.

“I’ve got a degree where they decided not to bring data across from the old system and put in on their [student] transcripts on the new system because it was deemed that it wasn’t required, and I mean I have been to my dean … I need them to grad check them [check if students are eligible to graduate]. They haven’t been fixed, and I have been complaining about that since it went live; and I mean I howled for two days over it because I was told by PeopleSoft that I had to actually go thru the academic transcripts of every student who has ever been in the Bachelor of Science with Advanced Studies since it came into existence, and actually document the noting [for grades etc] that should have been on every students record every semester of enrollment and then send them a database of what should have been there and they would look at putting it back up” – (Amber SAO5)

and

“Well I know for a fact that a student that dropped out went to QUT which was due to our enrollment being so difficult and um not having the support they needed” – (Sienna SAO2)

Corporate survival may mean the bottom line performance of the institution, its growth and prominence in the market and during this time Griffith University expanded rapidly via mergers with other campuses. Communities have significant investments in universities and it is doubtful that any large institution would be allowed to flounder. It is therefore likely that the ERP was not viewed as having a significant contribution to make to corporate
survival. This was being achieved by other means. Cost cutting and systems to support the increasing government demands for accountability were more likely to be the motivations. With the increasing importance of education as a source of export revenue, estimated between $7.9 to 13.7 billion per annum (Trounson, 2010) it is understandable that government wishes to exert more control over how universities operate and that universities must find a way to respond to these pressures.

The measure of corporate survival appropriate for this perspective is the area most affected by the ERP implementation and this dissertation has chosen to focus on the student administration area. Competitive advantage is therefore viewed as the ability of a university to attract and retain students (Hemsley-Brown & Oplarka, 2006), rather than other business activities such as management of investment portfolios.

If the attractiveness of the university is measured in terms of the entry scores required for admission, Griffith University has not improved its competitive advantage and in some academic areas its attractiveness has declined. (This has been ascertained through an examination of the tertiary entrance scores over the time period). The discussion above shows that the ERPs has adversely affected several operations of student administration. An SAO in a Science School stated categorically that the new system had reduced functionality to a point where they could no longer compete with a rival university.

For example the failure to offer a course in time for student transfers led to the course being withdrawn for a semester. Amber (SAO5) stated

“That’s our star program, that’s our program that we compete with UQ [University of Queensland], in the science arena. Because they do get all the top OP [tertiary entry score] students as a rule, and we really have to struggle to get top OP students, and that’s our program that we get them and we keep them with, and we can’t now compete in that arena because we can’t get the report and to top it off we are in a semester now that we have absolutely screwed over our current advanced studies students”.

SAOs were concerned that ultimately the university’s reputation would suffer.

“Eventually we are really going to tarnish our image, I mean the graduation ceremonies for 400 students who graduated never got their graduation noting on their academic transcripts
because of a systems error, and no one has had time to correct that so there is a listing of over 400 names sitting with the PeopleSoft tea; no-one has time to fix it. … students complaining that their academic transcripts are wrong and that’s unacceptable” – (Amber SAO5)

Overall the SAOs perceived that neither the students nor academics were receiving any benefits from the ERP, and if corporate survival meant ignoring the clients and providers of core business then it was “there was some strange logic there” (Amber SAO5).

“I don’t think we are providing a good service, your forgetting we are here for the students, if it weren’t for the students there would be no universities, but that seems to be forgotten, do you know what I mean, it’s all about making it a lovely place to be an academic, and it’s not, because they have so much more work to do for themselves now”. – (Zena SAO4)

On a more positive note, more recently the university has excelled in attracting overseas students, winning several awards such as the ‘Premier of Queensland’s Export Awards in Education and Training’ indicating that the service provided to overseas students, at least, has improved. However, it is unlikely that this has anything to do with the ERP system.

9.3.4 Success as Ability to Shape Meanings
The broadest perspective has as its criteria for information systems success as the ability to shape meanings. Some of the managers acknowledge the likely reasons for implementing an ERP

“Best practice doesn’t fit on PeopleSoft, the option is change the practices to something less than best or modify PeopleSoft at X dollar cost, and the decision in all cases was that we didn’t have the money to do the modifications except when it was an absolutely essential function like you had to do this for HECS [the government administered system for students to contribute to the cost of their higher education] because it’s legislative requirement type of stuff. In most cases we didn’t have the money to do the modifications, so you could claim that whatever best practice was diluted to fit PeopleSoft” (Earl MSA2)

A project team member acknowledged that fitting an American product to an Australian situation had caused “a definite shift in the uni thinking that student studies are no longer program based but career based and that been the major move”. (Kristen PTM1).
Academic concerns about the impact on the way degrees were offered were also noted by student administration manager.

“There seems to be a number of instances in PeopleSoft where we are actually changing the nature of academic programs or the way we run the programs to fit with the system, rather than to fit best interest of the students or the best academic outcomes and that worries me and I know it worries a lot of academics when they hear about it from admin staff.” – (Betty DSA)

Ultimately the ERP had the ability to shape meanings because the university had to adapt to the system rather than vice versa.

“We have bought a system that never met our needs in any way and we have had to change almost everything in the University to fit a system instead of having a system fit us. Almost every policy in this University has been rewritten to fit the system and our nomenclature has had to change to fit the system.” – (Amber SAO5)

9.4. Conclusion

This chapter has explored the implementation as a political process and shown how aspects of the implementation can be seen as the exercise of power. From the SAO perspective little was achieved by the implementation and several disadvantages resulted. To understand this we would need to understand the motivations behind the ‘influence attempt’ which the ERP implementation can be viewed as. The motivations of the selection committee and the senior management of the university are only available to us in this dissertation through the perceptions of the SAOs and the other interviewees as well as the official documentation. Clearly there was a need to replace the fragmented and outdated legacy systems and ERP adoption was the alternative to the largely unsuccessful attempts by the Australian higher education sector to develop integrated systems tailored to the Australian situation. The much vaunted attributes of ERPs to improve competitiveness and transfer best practice are repeated in the official documentation about the ERP implementation, but there is no evidence that anyone in the university though that these were realistic goals and had any value except for publicity purposes.
Secondly this chapter has reviewed the implementation from the four perspectives in terms of the operation of power at the processual, organisational and broader contexts. The definition of information systems success implicit in each of these perspectives provides quite different points of view about the ERP systems. From the point of view of most of the stakeholders the implementation was not a success, nor could it be said to support corporate survival. However consideration of the social shaping perspective indicates that adoption of the ERP had a considerable effect on the shaping of meaning – in terms of the way the university was reshaped by having to fit the system. The implications of this will be discussed in the final chapter when the research questions are reviewed.
Chapter 10 – Conclusion

10.1. Introduction
This thesis has focused on the implementation of an Enterprise Resource Planning system (specifically the Student Administration module) in an Australian university.

This dissertation has explored the influence of power and politics on an ERPs implementation at a university. In chapter 1 I outlined the reasons for taking the political perspective, particularly considering the endurance of ERPs as technical solutions to problems of systems integration despite widespread reports of implementation problems and failures. The critical view taken in this dissertation encourages viewing events and phenomena within their historical context. The history of information systems development is puzzling in that regard. In the 1970s and 1980s there were important indications that systems development was moving away from a monolithic approach (which to some extent had been justified by the newness of the discipline and the many technical problems still to be overcome) towards more participatory approaches which took into account the multiple perspectives of the different users of the system (Hirschheim, Klein & Lyttinen, 1995). However ERPs solutions which promote a ‘one system fits’ all approach are so pervasive now, that it seems appropriate to subject them to close analysis. Since most research indicates that there is little that can be done to modify these huge systems to fit the user (for cost and predictability reasons), the focus should therefore be on the process by which these systems are implemented. This is the view of information systems as technical systems, socially implemented and it is the view taken in this dissertation.

This chapter summarises the answers to the research question, as developed in chapters 6-9, and in section 3, the research is evaluated using the criteria discussed in chapter 3.

10.2. Answering the research questions
The original question posed in chapter 1 was as follows;

“How does power and politics affect the implementation of an ERP at a tertiary education institution?”

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Instead of exploring the question further at that point, I considered why it was justified to pose this question and from a review of the literature as well as reflecting on my own experience as a student, I developed the following argument (summarised here from chapter 1). The focus of this dissertation is also indicated and some of the general conclusions are outlined. These will be expanded in the following sections.

1. ERPs are widely adopted integrative systems assumed to improve performance by eliminating wasteful replication and by improving access to data. Although there have been widespread failures in ERP adoptions the question of why ERPs have been so widely adopted remains. The dominant discourse of systems integration remains unchallenged. Universities differ from many large organisations by incorporating a large proportion of ‘professional’ members (academics) and serving a clientele (students) who are not customers in the conventional sense. The integration of all the organisation’s operations will therefore be more complicated than for many other types of organisations. The integration of the administrative and academic functions became the focus of this study, and showed the greatest problems.

2. ERPs will therefore change the way that a business operates by altering business processes to pre-decided best practices. The adoption of an American based system (PeopleSoft) caused considerable disruptions to the university’s operations and many staff became concerned that the nature of the academic programs was being changed to fit the ERP.

3. If information systems are viewed as social systems, it follows that the changes to business processes created by new systems will inevitably have an impact on the working lives of the users in the target organisation. Because of the recent major restructure, the implementation of the ERP caused major changes and disruptions to the working lives of the student administration personnel and unwelcome changes were also starting to be noticed by the academic staff.

4. Effects such as resistance seem eminently suited to a political perspective but could be viewed in several ways, according to the perspective taken on what is an ‘organisation’ (including the nature of the relationships between organisational members). The political
perspective taken in this dissertation is different from earlier studies, in that it takes a multiple perspective framework (adapted from Sillince & Mouakket, 1997) and expands the conceptualization of power at the interpersonal level (using the work of French and Raven (1959) and later revisions by Raven (2002, etc). The phases of the ERP implementation are therefore reconceptualised as political processes and attempts to exercise influence within the university (and possibly over external stakeholders as well).

5. To gain the greatest benefits from ERP (and other information systems) implementation and to avoid the worst effects, attention needs to be paid to the existing power structures and the strength of the culture. This dissertation has focused on the social processes of ERP implementation, taking as a given that the functionality of an ERP is very difficult and expensive to modify to any great degree. Paying attention to existing power structures and how culture legitimates the use of power has revealed changes in the university’s culture which are reflective of national if not international trends in higher education.

6. Research using multidimensional view of power and politics will capture more detail and may assist in refining concepts and models. The framework used in this dissertation allowed specific influence attempts to be analyses in detail, including the effects of these events which are rarely discussed in the information systems research literature.

7. Higher education institutions (and possibly other types of institutions with two dominant professional groups) are a special case in relation to large scale systems integration. As mentioned above, the transformation of universities in the last two decades has resulted in a shift of power from the academic to the administrative domain, but this has been neglected in information systems research. The impact of ERPs on academics and students has hardly been studied. This dissertation has investigated not only relationships between the two domains but also a third group (student administration) who were shown to be at the nexus of the cultural divide.

The above reiteration of the research argument has shown broadly how these topics were dealt with in this dissertation. In the following section, the initial question will be reviewed in relation to existing research.
10.3. Relationship to existing research
Answering the questions requires thinking about what has been found out in relation to existing research which has investigated similar topics. The review of the literature in chapter 2 focused on a number of key studies in the broader area of information systems implementation since there is a dearth of literature on ERP implementation in higher education in Australia (Rabaa’i, Bandara & Gable, 2009). It identified a number of themes about the effects of information systems implementation. In this section I will consider the findings from this dissertation in relation to this previous research to show the contribution of the study to knowledge in this area. These are discussed in approximately the same order as in chapter 2, but some areas have been combined under the general heading or resistance, since many of these ideas seem mostly related to the staff reactions to and actions to delay or modify the ERP implementation.

A summary of these findings is given below in Table 5.

10.3.1 Centralisation
Most studies found that information systems implementation tended to transfer power to higher levels of management. (Markus, 1983; Sillince & Mouakket, 1997; Ein-Dor, & Segev, 1978). This dissertation complicates this idea by considering how particular types of power are affected. The SAOs resisted handing over the power that they valued (Information power to be exercised over students) to other areas or to senior management. When the resources were not available to properly exercise this power (for example, with regard to Credit for Advanced Standing and Graduation information) they worked around the system to enable students to receive appropriate information. This also implies that information was not being centralized effectively since the data was not accessible to senior management. It was not clear whether the senior management were concerned about this as the student administration information systems elements of the ERP overall were given the least attention (implemented last and over a relatively short period of time – see Appendix A). As mentioned earlier, at this time most of the university’s income came from ‘captive’ students; i.e. the income was guaranteed by government funded places and the income from overseas students was still relatively small. The academics were concerned about falling
standards for student entries which would be affected by lack of good student administration systems but this concern may not have been a priority for other areas.

Lowe and Locke (2008) assert that the centralising tendencies of ERPs “reduce autonomy and increase rigidity in the organization, which contrasts to the claimed intention of PBO to increase flexibility and local decision-making”. (p. 384). This was confirmed in this study. Even though the implementation as quite recent, the SAOs perceived that the processes associated with the implementation did not pay attention to the needs of stakeholders and as discussed in chapter 8 (section 3.1) there was very little notice taken of suggestions by the people who carried out the work, as to how the systems should be implemented. The use of forums and reference groups therefore appears to coincide with Hirschheim, Klein and Lyttinen’s (1995) idea of management expediency “either to collect needed information or overcome potential resistance to change” (p. 18).

Lowe and Locke (2008) also found that ERPs are likely to produce “conflicting pressures” (p. 395) in relation to the balance between trust and control, especially in what they call ‘post bureaucratic’ organisations where the large proportion of highly educated staff will created different expectations about how work and autonomy (such as universities, hospitals, etc). They suggested that more work be carried out in such types of organisations, and this dissertation confirms their suggestions. The pressure on SAOs from the different expectations of the various groups with whom they interacted made their lives very difficult. The ERP as it was implemented at the university focused on the commercial aspects of the enterprise, whereas the majority of the clients (students) and a large proportion of the staff (SAOs and academics) were antagonistic to the business model and angered by the lack of attention to their concerns.

Finally Although ERPs functionality may support decentralisation, the study by Sia, Tang, Soh, and Boh (2002) found that that ERP implementation generally reinforces management power and therefore management tends to suppress the potential of ERP to empower users.

10.3.2 Resistance
Studies by Sillince and Mouakket (1997) and Markus (1983) show that when stakeholders lose or are threatened with the loss of some form of power which they value, they will tend
to resist change. Raven (1965) called these ‘power bases’ taking the view that power only exists when it is exercised; similar to the idea proposed by Foucault (2003) that “power is the implementation and deployment of a relationship of force” In chapter 8, section 2.1, I discussed how power was exercise in this study and how what was considered as ‘legitimate’ power (sanctioned by cultural values and norms) was being modified by the transformation of a university from an academic institution to a business enterprise (see table 4 for a summary).

The SAOs resented their loss of ‘expert’ power, primarily because they viewed it as affecting their ability to influence ERP implementation in a direction that would benefits students. This is similar to the conclusions of a study by Warne and Hart (1996) which over a period of nine years investigated study of a government department implementation showed that resistance has more to do with perspective and position rather that the individual interests of the users. In particular, an employee’s sense ‘ownership’ of information (which the authors term as ‘information wards’) may be energetically defended, which is consistent with Raven’s (1965) reason separating information from expertise as a power base. However, in this dissertation, the SAOs seemed less concerned with their ownership of the system or any ‘information wards’. Rather they were concerned with the quality of information which was being collected and processed about the students and how it might affect student progress. In contrast to Warne and Hart’s study, these SAOs perceived no loss of ownership of information as it related to their specific understanding of students’ needs.

The study by Harvey (1998) showed how a group used a particular tactic to denigrate the project development team. This tactic (crude and discriminatory language) was not ‘legitimate’ in the organisational context so that the project team had difficulty opposing it. In chapter 8 I discussed how different power bases were being legitimize through cultural change. The use of manipulation (invoking or reducing the power of 3rd parties) and Indirect Information were frequently used against the SAOs. This dissertation has more clearly spelled out what power bases are available and how these are being transformed, thus improving the conceptualization of power.
The significance of taking the organisational context into account was discussed in chapter 2 and the lack of research re ERPs in that regard has been mentioned by authors such as Sharpanskykh (2008) who consider that implementation is a key driver of organizational change and fundamentally a political process. This study has confirmed the importance of organisational context and has been able to examine it systematically through the notion of Organisational power dimension of the Multiple Perspectives framework. The recent restructure and rapid expansion of the university were not taken into account and the implementation’s partner proposal to conduct a cultural audit was rejected. A strong perception that staff were ‘change weary’ was therefore not taken into account. The lack of benefit from the very stressful 1997 restructure was also ignored; staff tend to evaluate future changes in the light of recent successes or failures, which may have contributed to the general negativity about the ERP.

Lastly some researchers such as Keen (1981) suggest that resistance to information systems implementation may be ‘positive’ – coming from a desire to avoid a particular change for fear of the negative consequences. The actions of the SAOs can be viewed in this way in that they were concerned that the student administration module would negatively affect students, and that the processes for understanding user requirements were unsatisfactory. It is difficult to judge the success of such efforts without undertaking a longitudinal study.

10.3.3 The Power of Selection
The power of selection relates to centralization and resistance with regard to the factors of reduced participation in decision making. As discussed in chapter 2, the work by Fincham (1992) pointed to how the power to select systems enables a dominant group to maintain and reinforce the existing power structures. In this dissertation the centralization of power achieved by the 1997 restructure was reinforced by the implementation of the ERPs. How and why the particular ERPs had been selected was not clear to most of the people in the study although Wendy (HAA) who was a member of the selection committee indicated that the usual processes had been followed. The power of selection was reinforced by including several members of the selection committee on the ERP project team. The SAOs regarded this as a mistake since they were likely to be protective of a system which they had chosen rather than on the lookout for potential problems.
The effects of the selection on other areas of the university were not studied but the student administration area was centralized and the official arenas of the SAOs were greatly curtailed. What is interesting is that the SAOs ignored or resisted this centralizing effect by continuing to give advice to students which should have been provided by the central office.

The initial gathering of requirements was also a point of interest in this study as the poor design of the project environment (communication lines, power structures etc) would lead to the conclusion that similar mistakes would be evident in the design and selection of key requirements for the system. It is also important to acknowledge that an overriding concern of the upper management (university) was to keep the modification list as short as possible as all future maintenance would be affected, by increasing complexity and cost of installing factory patches for the system. Overall, the management were relieved that they had avoided the costly mistakes of other university ERP implementations.

10.3.4 Benefits of ERPs
Integration, improved accessibility and elimination of duplication are amongst the potential benefits of ERPs outlined in chapter 2 (Davenport, 1998; Lawnham, 2001; Markus & Tanis, 2000). Many companies adopted ERPs to replace fragmented legacy systems and this is the case at Griffith University (as outline in chapter 5). It was too early in the study to indicate whether all these benefits would be achieved and accessibility had actually deteriorated at that point. SAOs were forced to manually collect and enter information (such as advanced standing information) which previously had been computerized.

In addition ERPs may offer the capacity to automate more transactions as well offer new capabilities (Holland & Light 1999, Markus & Tanis, 2000). The customization of the web interface made some information easier to access and promoted greater use of the web for providing information about the university. In all other regards for student administration none of the benefits had been achieved.

10.3.5 ERP Problems
The most striking disadvantage referred to in the ERPs literature is that it forces the recipient organisation into a rigid template and does not cater for specific requirements. (Davenport, 1998; Markus & Tanis, 2000). The organisational benefits of the ERPs at
Griffith University had not yet been realized, but there were already concerns that it was changing the way the university operated both in academic and administrative terms. This was particularly shown when the ‘Socially Shaped Power’ perspective was applied (in chapter 9) and the taken-for granted usefulness of ERPs was shown to be influencing the direction of the university’s development.

### 10.3.6 Summary

The following summary considers the findings as confirming or extending existing research or providing some variation or questions concerning the results of studies discussed in chapter 2

**Table 5 Summary of Findings in relation to existing research**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Previous research</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Centralisation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participatory decision making reduced</td>
<td>Lowe and Locke (2008)</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Management suppress potential of ERPs to empower users</td>
<td>Sia, Tang, Soh, and Boh (2002)</td>
<td>Too early in implementation stage to confirm, but similar tendency evident</td>
</tr>
<tr>
<td><strong>2. Resistance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of power and</td>
<td>Sillince &amp;</td>
<td>Confirmed - SAOs resisted loss of ‘expert’ power</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Topic</th>
<th>Reference</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy will cause resistance</td>
<td>Mouakket (1997)</td>
<td>Base. Autonomy was not in question</td>
</tr>
<tr>
<td>Ownership of information</td>
<td>Warne &amp; Hart (1996)</td>
<td>Extended – notion of what is owned is clarified. Information is not valued for personal use but on behalf of a 3rd party (students)</td>
</tr>
<tr>
<td>The choice of influence tactic (power base) to exercise power</td>
<td>Harvey (1998)</td>
<td>Extended – the choice of power bases is explained in detail via the Power/Interaction model in chapter 6. Transformation of appropriate power bases through cultural change is discussed in chapter 8</td>
</tr>
<tr>
<td>Resistance is poorly conceptualised (types of resistance behaviour, objects of resistance, perceived threats and initial conditions)</td>
<td>Lapointe and Rivard (2005)</td>
<td>Extension to conceptualisation of resistance; systematic explanation of resistance events (chapter 6); motivations for exercising power, the selection and effectiveness of power bases and the effects of specific resistance events. Contextualisation of specific events via multiple perspectives framework showing influence of organisational, structural and socially shaping power. (chapters 7-9)</td>
</tr>
<tr>
<td>‘Positive’ resistance</td>
<td>Keen’s (1981)</td>
<td>Confirmed re motivation for resistance – to ensure functionality was reviewed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Extended – ‘success’ of influence attempts needs to be taken into account. Not certain in this study</td>
</tr>
<tr>
<td>Importance of understanding organisational context</td>
<td>Sharpanskykh (2008)</td>
<td>Confirmed – the history of the organisation and the recent major restructure were major factors associated with resistance to the ERP and other implementation problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Extended – the organisational and wider context</td>
</tr>
</tbody>
</table>
are more systematically examined via the multiple perspectives framework.

| 3. The power of selection | Fincham (1992) | Questioned – the effects are not clear. SAOs arena was curtailed but important areas of concern were maintained |

| 4. ERPs benefits | (Davenport 1998, 20001, Markus & Tanis, 2000) | Not achieved for student administration data within one year of implementation |
| Integration, improved accessibility and elimination of duplication | (Holland & Light 1999, Markus & Tanis, 2000) | As above |

| 5. ERP problems | (Davenport 1998, Markus & Tanis, 2000). | Extended – the Socially Shaped Power perspective shows how this is achieved via the management of meaning – ERPs are a ‘taken for granted’ solution to the problem of fragmented systems |
10.4. Additional Findings

The view of power taken in this dissertation has not been replicated any existing studies so there are additional findings which do not quite fit in the topics outlined above. Without repeating in detail the conclusions from chapters 6 to 9, it is possible to broadly summarise these additional findings as follows:

1. Organisational complexity and ambiguity. Underlying many of the problems was the widening cultural rift which will be illustrated in Figure 6. The research study was distinguished by misunderstanding, ambiguity and the blurring of boundaries between group, sections and functions which were perceived to have previously been clearly delineated. The rapid rate of change – expansion, restructuring and the adoption of an ERP caused considerable confusion about responsibilities, values and loyalties and these are discussed in detail in chapters 6 and 7. Kling’s web model shows how organisational interactions, supported by information systems for organisational webs. At the time that the ERPs was introduced, the web had already been ruptured and was further damaged by the restructure implicit in the ERP implementation. These are not good initial conditions in which to be undertaking such a huge project.

2. Whose University? In chapter 1 I mentioned the difficulty of conceptualizing ‘organisation’. The political perspective is useful because it views organisation as an ongoing reconciliation of opposing interests. How well these interests have been reconciled is significant for the health of an institution. All aspects of power are legitimized by culture so that even conflicting interests could be seen as the expression of different interpretations of similar values. However the analysis in chapter 8 showed that the espoused values of the university during this time did not seem to be enacted in a way that was genuine to at least one important group – the SAOs. Accountability, respect and support for individual rights, and support for participatory decision making - all were viewed by the SAOs as not genuinely ascribed to by important elements of the university. This can again be contributed to the cultural rift, where traditional academic values appeared to be overturned by commercial imperatives.

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This rift complicated the implementation task. The implementation became an intense political issue, even more than the technical problems to be overcome. The project team comprised representatives from most areas of the university, but the academic area (academic staff and SAOs) who were deeply affected by the changes lacked ‘teeth’ to make any serious impact on requirements gathering and prioritisation by the project team. Arguably, the representatives from the corporate side of the project were given no more official power in the project (from the user representative group), but their managers were more directly involved and had more power to influence the project outcomes than the SAO groups or academics.

The political interests most served by the implementation approach seemed to be firstly continuity of the administrative operations and the avoidance of any problems such as the disaster experienced by RMIT. The deepening of the cultural divide fostered resistance to the project initiatives.

3. Stage setting as a political tactic. The approach taken to analyzing this case revealed that many of the influence attempts and exercises of power combined into a form of stage setting. This is a significant concept (Raven 1993) which to my knowledge had been hardly used in Information Systems research. Being able to recognize when stage setting is occurring may overcome the problem with research into resistance – that models and theories do not suggest how resistance develops over time and cannot predict when resistance might occur (Lapointe & Rivard, 2005).

4. Whose power? Lastly, and related to the first three points, there was considerable uncertainty about what sort of power was legitimate to use in a university setting. The effective use of personal coercion (invoking the power of 3rd parties) and indirect information and the ineffectual use of legitimate position power were of great concern to the SAOs.

Overall, the above concerns did not seem conducive to attempting a radical change to the university’s systems and work practices.
10.5. Power and Politics

In order to answer the first part of the question – ‘how does power and politics …’ we need to consider what is meant by power and politics. One of the objectives of this research was to clarify the concepts associated with power and politics and to provide a more detailed and rigorous application of a well established framework, as recommended by Jasperson et al (2002) and Silva (2007). In summarizing the literature relating to resistance, Lapointe and Rivard (2005) indicated that very little research based their analysis on substantial political theories so that the findings are fragmented and poorly conceptualized (types of resistance behaviour, objects of resistance, perceived threats and initial conditions). This dissertation has systematically examined the motivations for exercising power, the selection and effectiveness of power bases and the effects of specific resistance events.

This was achieved in two ways; firstly by adopting the multiple perspective framework proposed by Sillince and Mouakket (1997) and detailed in chapter 4; secondly by expanding the processual power aspect of the framework (which deals with power relations between individuals) by using the work of French and Raven (1959) and later revisions and expansions by Raven (1965, 1992, 1993 and 2001). This work delineates powerbases and proposes a model for the interaction of power and is illustrated in chapter 6. It is amongst the most heavily cited in social science research investigating power and politics (Elias, 2008) but has hardly been used in information systems research and the later work by Raven, not at all. Moreover Raven’s later work in social science research has primarily been used for quantitative studies whereas this dissertation expands its application by applying it to a qualitative study of a small group of people.

In addition, the incorporation of a systematic way to look at the wider contexts and how the influence interpersonal and power relations has enabled a better, more contextualised understanding of political behaviour (such as resistance).

10.5.1 Application of the Framework

The discussion of findings in sections 3 and 4 may therefore be summarised according to the Multiple Perspective framework.
This also shows to some extent how power and politics affect ERP implementation. The arrows show how the factors at various levels of context influence interactions at the organisational and interpersonal level. The strengths and weaknesses of this approach are discussed below.
The strengths of this model have been discussed above. An additional strength is that it allows a study to be focused according to the limitations of time and access. This is done by studying the power relations at the smallest level, micro-politics and moving into wider contexts as time permits. In this study, the Processual Power and Organisational Power levels were accessed via interviews but access to senior management was limited because of their preoccupation with the project. Therefore official documentation and university reports such as the Fussell report (1998) were used to supplement that view. The two wider views were considered only by referring to government publications and research literature about the contextual issues. It would be useful to try to get direct access to policy makers at the structural and socially shaping levels.

10.5.2 Limitations of the Framework
The shortcomings of the processual power perspective are as follows (Sillince & Mouakket, 1997).

1. Actors are seen as equals. This is compensated for in the operational theory selected for the perspective, Raven’s Power/Interaction Model, discussed in chapter 4. This theory places each act of power inside a series of selections based on availability of power, of resources and of position or status, for example, exercising legitimate power is not available in many situations as employees have little official power to influence their senior managers.

2. There is a failure to identify inequalities that underlie interest. This shortfall is addressed by referring to the Organisational Power perspective (Kling’s web model), which shows the relationships between people from different areas (factions/groups) and brings to the foreground the importance of roles and the obligations that may be present because of the position than an actor holds inside the organizational structure. The issue of inequalities underlying interest is also covered by Raven’s (1993) power/interaction model, as the actors’ motives are included in the analysis.

3. The Organisational Power perspective fails to indicate likely occasions where political activity will occur, as it assumes a rational view of political interests, and it treats organizations in isolation of cultural contexts and structural constraints. It also provides no
boundary between technical aspects and social relationships (Sillince & Mouakket 1997). We have already discussed the importance of the culture in this organization and what difficulties can arise when challenging the status quo. The cultural rift between the academic and corporate domains has been shown to play major role perceptions of the ERPs functionality and the implementation process. However, this shortcoming is addressed by reference to the wider perspectives

3. The Structurally Constrained view allows market influences to be considered, so that the university’s rapid expansion and the implementation of the ERPs can be viewed within the context of decreased government funding and increased requirements for accountability. However, this perspective gives no credit to the effects of technology, portrays management as omniscient, and it reifies the distinction between social and technical. The reification of the difference between social and technical change is mitigated by socially shaped power as it encompasses broader views of the nature of change and its sources.

4. The last of the circles of power utilized in the theoretical framework is Socially Shaped Power, which focuses on wider trends in, for example higher education and corporatisation of enterprises which were previously in the public sector. The main shortcoming of this perspective is that it raises many questions that are not readily answerable, within the scope of a particular research project, for example the prevailing social attitudes on technological adoption in a particular society. Because it deals with the taken for granted, it helps to inform the critical approach, but this does not provide answers for how to mitigate the effects of some of these broader trends.

Overall the framework provides a number of useful perspectives which can be related to each other in widening and narrowing areas of influence. In this way it supports the hermeneutic circle approach to analysis where interpretation is achieved by reference to the specific instance, reference to the wider context and then vice versa.

**10.6. Research Outcomes**

The dissertation therefore has attempted to fulfill the research outcomes expressed in chapter 1 as follows.
1. A rich description of the experiences of the SAOs experience during the implementation. As mentioned in chapter 1 most studies of ERP implementation have taken the ‘business’ perspective (Rabaa’i, Bandara & Gable, 2009). This description although unable to generalized, can provide some insights into how organisational structure and power intersect with systems functionality, particularly in large integrated systems such as ERPs. The confirmation and extension of findings from existing research as well as the additional findings outlined above provide another rich account of an ERP implementation. Each of such accounts can be considered to contribute to ‘phronesis’ (Schwandt, 1997) in information systems research; it improves our ability to analyse specific situations, to identify local circumstances which may inhibit the success of projects.

2. A case study of ERP implementation. As mentioned earlier, political perspectives on information systems still lack well defined concepts. A case study enables ‘analytic generalisation’ (Schwandt, 1997; Eisenhardt & Graebner, 2007) – the findings from the case will be used to clarify and refine concepts and to evaluate the multidimensional approach (discussed in chapters 4 and 6). It is believed that the Multiple Perspective approach, enriched by a detailed use of Ravens’ (1965) six power bases and his Power/Interaction model (1993) provides a clearer understanding of how power operates within a particular organisation.

The answer to the research question confirms that information systems and political processes exist within a state of mutual influence. Although this dissertation has focused on the political process it is clear that the functionality of the ERPs and its anticipated effects were the motivating influences for much of the political behaviour described in this dissertation.

**10.7. Evaluation of the Research**
The findings have been outlined above both in relation to existing research and in relation to the use of the Multiple Perspectives framework. However, as well as reporting the outcomes of the research it is important to evaluate the contribution. This may be considered in
relation rigor and relevance (Lee, 1999).

The problem of relevance in Information Systems research has been widely debated and Lee (1999) proposes that positivist studies which attempt to provide generalizations (rules which may guide the practitioner) often merely codify and explain what the practitioner is already doing. Lee (1999) concludes that the most important thing is to ensure that issues which are considered important by the practitioner are taken into account. This dissertation has focused on resistance and contextual considerations for that reason.

The second aspect of relevance concerns the topics for study. It has been shown in chapters 1 and 2 that ERPs implementation continues to be a topic for concern for academics and practitioners alike. In particular, there are problems in alignment between higher education and the functionality of some ERPs. Therefore it is believed that providing some new insights into problems that need to be addressed before implementation is commenced is relevant to theory and practice.

The rigour of the research was discussed in chapter 2, using Klein and Myers (1999) widely cited criteria for conducting and evaluating interpretive field studies, which they propose are also relevant for critical studies. These were discussed in relation to how I intended to conduct the research and will be reviewed briefly here to identify the strengths and limitations of the research as carried out.

1. The Hermeneutic Circle

The use of the Multiple Perspectives framework was designed to meet this principle and chapters 7 to 9 have shown the reiteration of interpretation from specific events (such as influence attempts) to the wider organisational and social context. This is illustrated in figure 6 above. In principle there is no limitation to the reiterations which we might do. It concludes when no more competing interpretations present themselves.

2. Contextualization

Taking the history of the situation into account is dealt with primarily in chapter 5. However because it was not possible to revisit the research site, I have not been able to see how
events unfolded. Recent work on developments in higher education seems to support the work presented here – that the cultural rift continues to be of concern.

3. Interaction between subjects and the researcher

This principle was applied in the interpretation of data, and the reader was alerted to the implications of this principle in chapter 3. The author does not present this as an account which would be identical to that which might be obtained by another researcher. It is not possible or relevant to propose such an idea. Background information was presented in chapter 5 and the reader must assess for themselves the usefulness and authenticity of the account, within that context. As mentioned in chapter 3, this may be viewed as a weakness of interpretive and critical research, but it is more honest to make this limitation clear than to pretend to an ‘objectivity’ which the critical perspective views as impossible.

4. Principle of Abstraction and Generalization

The discussion of the findings above shows that although this case cannot be generalized to all other cases, the research does confirm some findings from earlier research and provides some additional insights. As mentioned in chapter 3 this type of research has more to do with *phronesis* (Schwandt, 1997) – the development of the capacity for analysis and understanding – than *episteme* – the development of general laws and principles. In terms of relevance, this type of practical understanding is also useful in that rich descriptions of cases can help train the analyst to understand future situations.

5. Principle of Dialogical Reasoning

The ‘prejudices’ brought to this research are discussed in chapters 1 and 3, and the weaknesses of the theoretical framework have been discussed in this chapter. It is proposed that the multiple approaches used in the theoretical framework have provided sufficient alternative views to prevent any interpretation being accepted uncritically. The several theories utilised for example have enabled different interpretations of information systems ‘success’ to be considered.

6. Principle of Multiple Interpretations
It could be considered that a major weakness of this study is its focus on a small group of people. Although their perspectives were viewed within a wider context and checked against accounts given in other interviews, the dissertation does present primarily their account of the ERPs implementation. It was thought to be useful however to focus on this group as they are at the nexus of the cultural rift and such a group have not been studied before. It is not proposed that this is the only view that may be taken of the implementation and this study could be complimented by other studies from other viewpoints. It is difficult however to provide a very rich description of several groups within the time etc limitations of the research project.

7. Principle of Suspicion

The notion of ideas which are ‘taken for granted’ has been an important part of this project. The prevailing ideas about ERPs and the need for systems integration, as well as the corporatisation of the higher education sector, have been critiqued in relation to user satisfaction with the new information systems at the university. This taken for granted aspect resembles the ‘false consciousness’ which Klein and Myers (1999) discuss.

This dissertation has also challenged the notion of an organisation as a unified entity pursuing agreed upon goals. These ideas need to be challenged in relation to achieving good outcomes for all stakeholders.

10.8. Future Research Directions

The discussion so far in this chapter indicates some future research. It would be worthwhile to continue to clarify how power is exercised, including how stage setting is undertaken so that stakeholders could be alerted to circumstances which indicate that major political conflict is likely and imminent.

The developing roles of the SAOs would be useful to review, as it appears that they could play a major part in bridging the increasing cultural rift in higher education institutions. It is not clear how the different tendencies will develop and how the corporatization of universities will affect the traditional function of academic institutions. This is beyond the scope of information systems research but is interesting to us since our work concerns providing systems which represent what organisations are about. If that is not clear, or is
subject to continuing conflict it will be difficult to construct information systems which satisfy stakeholders’ needs and which are not subject to political resistance.

One limitation of this work is that gender is not taken into account, especially given the fact that most of the SAOs were female. How power is exercised inevitably involves social distinctions and the problems experienced by the SAOs might have been affected by those. The lack of clarity in their roles is also worth investigating further – considering the rate of rapid change, having clear lines of authority and decision making seems to be imperative.

10.9. Conclusion

This research has attempted to tackle some of the weaknesses in information systems research studies which utilise the political perspective (Jasperson et al., 2002) as well as some of the shortcomings of research into resistance (Lapointe & Rivard, 2005). It has shown that it is important to understand and assess the political tensions in an organisation before an implementation of large scale change is attempted. By focusing on the student administration officers it has provided further detail of ERP implementations in higher education. It has also further illuminated the cultural divide which will continue to cause problems in higher education unless some effort is made to reconcile the different values of the commercial enterprise, the academic traditions and the student centred service staff. Giving voice to the latter group, I believe is one of the main contributions of this dissertation.
References


Accenture (2010) Griffith University Makes the Grade in Enterprise Resource Planning Integration and Automation, Retrieved April 3rd 2010 from


220


225


NABS (2002, April 13) What has been achieved to date?


228


Wagner, E. & Scott, L. (2001) Unfolding new times: the implementation of enterprise resource planning into academic administration. London School of Economics.


### Appendix A – Key Project Dates (from Beekhuyzen & Nielsen 2005, p.288)

<table>
<thead>
<tr>
<th>Start Date</th>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 1998</td>
<td>Phase One: Project Initiation</td>
<td>Identify a business system solution as fundamental enabler of process re-engineering</td>
</tr>
<tr>
<td>March 1999</td>
<td>Evaluation Completed</td>
<td>Functional and technical evaluation of software and vendor complete</td>
</tr>
<tr>
<td>June 1999</td>
<td>Implementation partner and vendor chosen</td>
<td>Implementation partner and PeopleSoft</td>
</tr>
<tr>
<td>September 1999</td>
<td>Project commences</td>
<td>Finance module implementation begins</td>
</tr>
<tr>
<td>March 1999</td>
<td>Academic Reference Group</td>
<td>Formal academic reference group</td>
</tr>
<tr>
<td>July 2000</td>
<td>Finance: Release one (a) Completed</td>
<td>General ledger Purchasing Accounts Payable Supported by web and workflow</td>
</tr>
<tr>
<td>July 2000</td>
<td>GST</td>
<td>GST</td>
</tr>
<tr>
<td>October 2000</td>
<td>Finance Release one (b)</td>
<td>Fixed Assets</td>
</tr>
<tr>
<td>October 2000</td>
<td>Release two: Revenue Management</td>
<td>Student Financials Accounts Receivable Billing Receipting</td>
</tr>
<tr>
<td>April 2001</td>
<td>Human Resources/Payroll: Release One</td>
<td>Recruitment Hire Leave Workplace health and safety Employee details Payroll Reporting Workforce planning</td>
</tr>
<tr>
<td>Date</td>
<td>Module</td>
<td>Features</td>
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<td>--------------------------------------------------------------------------</td>
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<tr>
<td>April 2001</td>
<td>Student Administration: Release One</td>
<td>Administer training, Performance management, Case management</td>
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<tr>
<td>May 2001</td>
<td>Web &amp; Workflow</td>
<td>Recruit and marketing, Admissions, Advanced standing, Student web self service, Reporting</td>
</tr>
<tr>
<td>October 2001</td>
<td>Release Two: Student Administration</td>
<td>Academic program structure, Course offerings, Publication of program and course information, Student records, Enrolments, Academic advisement, Advanced standing, Tutorial allocation, Student web self-service, Assessments, Examination administration, Assignment tracking, Progression and exclusions, Management of research studies, Scholarships, Prize administrations, Graduations, Convocation, alumni, Reporting</td>
</tr>
<tr>
<td>March 2002</td>
<td>Final Functionality Implemented</td>
<td>Research Higher Degrees, Scholarships</td>
</tr>
<tr>
<td>March 2002</td>
<td>Official end of NABS project</td>
<td>Project formally completed</td>
</tr>
</tbody>
</table>