Intentionality and power interplay in IS implementation: The case of an asset management firm

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ABSTRACT

This paper evaluates the interplay between intentionality of stakeholders, organizational power and information systems (IS) implementation in the context of an European firm implementing an Enterprise Resource Planning system. We found that the implementation coincided with significant restructuring of power relations within the firm. We also found that the intentions of various stakeholders came to bear in terms of how organizational power got manifested. Our findings suggest a complex interplay between individual intentions and organizational power. Specifically, our study contributes to the literature by providing insights into the systemic nature of organizational power regarding IS implementations and how it relates to individual intentions.

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1. Introduction

In this paper we study how intentions of key stakeholders and organizational power coalitions shape Enterprise Resource Planning (ERP) system implementation in organizations. While organizational power and shaping of technology has been extensively studied (e.g., Dhillon, 2004; Silva et al., 1997; Markus, 1983; Jasperson et al., 2002), intentionality and how it affects power and information systems (IS) has not been well researched. Two classes of definitions inform this research – organizational power and intentionality. Organizational power is defined as the capacity of individuals to exert influence over others (see Pfeffer, 1992; Finkelstein, 1992). Intentionality is defined as a condition for satisfying a given state where the context provides a purpose to an act (Searle, 1983).

2. Organizational power and intentionality

2.1. Organizational power and IS implementation

Most studies that explore the relationship between organizational power and IS implementation tend to take a one-dimensional view of power (Dhillon, 2004) – as either residing in the resources (e.g., Markus, 1983; Nord, 1980), prevailing meanings (e.g., Lukes, 1974) organizational processes (e.g., Salancik and Pfeffer, 1977; Bachrach and Baratz, 1962) or disciplinary in nature (e.g., Zuboff, 1988). While a focus on a single dimension of power is noteworthy, Hardy (1994b) while presenting a unified framework, suggests that all dimensions need to be considered since each provides unique insight to understanding change. The usefulness of Hardy's dimensions of power framework is illustrated by Dhillon (2004) in his analysis of multiple facets of power.

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In organizations, resistance because of IS implementations (ERPs in particular), changes in structures and the need to meet the needs of multiple roles (Howcroft et al., 2004), are often considered consequences of organizational power manifestations. This results in ambiguity in terms of the core activities. Hardy and Leiba-O'Sullivan (1998) characterize such ambiguity to reside in the very fabric of the organization. Termed *power residing in a system*, this view is based on Foucault's conception of power. Power residing in the system goes beyond mobilizing resources, defining processes or interpreting meanings. It is intertwined throughout the enterprise, resulting in intentional actions of individuals that result in outcomes they did not necessarily desire. Townley (1993) describes it as power that is historically produced and "constituted through correlative elements of power and knowledge" (p. 522).

Following Hardy (1994a), Hardy and Leiba-O'Sullivan (1998), and Dhillon (2004), we posit that power in organizations operates along four dimensions:

- *The first dimension* relates to political power over resources available in an organization. Accumulation and use of these resources can result in the type of power commonly associated with the ability to get others to do something they normally would not.
- *The second dimension* of power challenges the notion that the decision process is open to participation by all interested parties in the organization. Indeed, decision processes may be carefully designed to prevent those without power from gaining power by participating, thus protecting the status quo.
- *The third dimension of power* focuses on preventing the emergence of conflict in the first place. This is accomplished through attribution of meaning, beliefs and practices in the organization. Proper "indoctrination" of members in organizational customs and hierarchies leads to unquestioning acceptance of their role in the organization, thus preserving the status quo.
- *The fourth dimension* uses Foucault's (1979) view of power as not necessarily sovereign, but as woven into the relations and discourses throughout the organization (and its related IT system(s)). This dimension of power is disciplinary in nature, and helps to shape organizational members' beliefs about their roles. Any lack of conformance results in disciplining a non-conformant.

2.2. Intentionality and IS implementation

While there is significant literature in the area of intentions and beliefs regarding IS implementation (Venkatesh et al., 2003; Davis, 1989), the focus has largely been on constructs such as perceived usefulness and perceived ease of use and how these impact individual intentions regarding systems. In Ward et al's (2005) research, which goes beyond individual intentions, interactions between various stakeholders and an IT project team are also explored. The analysis of interactions presents a threefold view of the organization: systemic rationalism, trust-based rationalism, or segmented institutionalism (based on Kling (1980) and Kumar et al. (1998)). Within these views of the organization, project management's approach to implementation is determined to fall in one of three categories (after Ury et al. (1993)): power-based (top down), interest-based (coalition building), or rights-based (formal negotiations). Similarly, Volkoff et al. (2004) examine different communities that develop in an organization during an enterprise system implementation. The knowledge transfer between these communities of practice – the project team, power users, and everyday departmental users – is what determines whether strategic objectives are achieved. While both these studies highlight the importance of interactions and how intentions get formed, they do not necessarily focus on intentionality and its relationship to organizational power.

Leezenberg (2002) explores the relationship between intentions, communication, and power. Based on the work of Searle (1995) he outlines three aspects (discussed below) that come together to create *institutional facts*. An institutional fact is a representation of reality at a given time (in the context of this paper the ERP system was an institutional fact). Searle terms these relationships as the *Theory of Institutional Facts*. The three aspects are:

- *Collective intention*. Intentionality is a feature of the mind that shapes and forms individuals' actions. However, since individuals do not always act in isolation, the meeting of minds between individuals typically results in collective intentionality, subsequently followed by collective actions. Within organizations a strategy or policy may be construed as "meeting of the minds".
- *Assignment of function*. Collective intentions impose "function objects" and turn them into "social facts". For instance, in economics, money acts as a widely accepted medium of exchange. The use of money as a medium of exchange is possible because of the collective intention to accept it as such. In this case, money is an "object" to which the functions of "medium of exchange", "unit of account" and "store of value" have been assigned. Because of widespread use of money as a medium of exchange and commerce across nations and cultures, it has become a "social fact". As Émile Durkheim (Lukes, 1982) has noted, a social fact is independent of the values, cultural norms and social structures external to an individual (see pp. 50–59).
- *Constitutive rules*. Constitutive rules start out as norms related to an object or an artifact. Over time norms get institutionalized to become rules. These are rules that take the form such as: "X leads to Y in context C". Constitutive rules are an overt way to institutionalize power. Within an organizational context, constitutive rules can place the company in a poor position and hence hinder its ability to take advantage of emerging technologies. This is because the formalized constitutive rules can breed complacency or inability to transform dominant structures or prevalent ways of working.

Table 1
Summary power, intentionality, IS implementation interactions.

Power	Intentionality		
	Collective intention	Assignment of functions	Constitutive rules
Resource based	When intentions are congruent, then resources can be used to aid IS decision outcomes rationally rather than politically	Resources are used to support performance of the imposed function (structure) and the IT	Social facts (ERP) are made effective through available resources
Process based	Power resides in the bureaucratic IS processes, which determine the nature and scope of outcomes. Collective intentions minimize "bottlenecks"	Imposed technology enabled functions become part of the bureaucratic process	Institutionalization of social facts occurs within processes, where rules and procedures gets defined
Meaning based	Power resides in the interplay between the context and the process. It structures actions of agents to achieve overall organizational IS goals	Imposed function is defined in the context, which interplays with the process	Interaction between the "institutionalized social facts" and the process results in "legitimization" of the rules and procedures
System based	Power is essentially disciplinary in nature and is intertwined into the fabric of the enterprise. Collective intentionality is aligned with individual intentions to exercise power	The system-based power ensures that imposed technology enabled functions are translated into social facts	Social facts become part of normative structures of organizations. Structure may evolve with new intentionality and power interplays

2.3. Interactions between power and intentionality in the context of IS implementation

The interactions between power and intentionality are succinctly addressed by Searle (1983) who considers social reality to be a product of collective intentionality, which in turn constitutes political power. Intentionality can be observed in simple situations such as an individuals control over the use of resources or control over flow of information. From an IS perspective, implications of such interactions can have significant ramifications. There can be situations (see Howcroft and Light, 2006) where IS professionals may select system design features to which users object. If the intention is to serve users, their preferences will be duly considered; otherwise, the intentions of the IS professional are imposed.

With respect to power residing in the processes, individuals that possess tacit knowledge about an organization's operations may perceive themselves as indispensable. Such a perception may induce them to act in self interest as opposed to collective interest. They can behave in this manner because knowledge is not formalized and/or documented. Therefore, the person who possesses such tacit knowledge cannot be easily replaced. Similarly, when power resides within meanings, individual behavior can be controlled by confining decision-making to relatively "safe issues" and creating barriers to the public airing of conflict. Someone in power can control agendas in order to selectively keep issues out of the political process.

Finally there is the system dimension of power, which is used to prevent opposition such that issues do not arise at all. While as a concept, the system dimension of power was introduced by Hardy (1996), it is also well articulated by Astley and Sachdeva (1984) when they present the notion of network centrality. This is when power is drawn because of multiple inter-tendencies making an individual "functionally indispensable" (p. 106). Another aspect that needs consideration is that of resistance and its relationship to power. In researching resistance, Aladwani (2001) identified two basic sources regarding ERP implementation – resistance relating to perception and resistance derived from habits. Basically, some individuals fear the IS because they perceive it as a threat to their personal security (i.e., job), while others simply do not want their routines to be interrupted.

Based on our review of the literature, it emerges that technology certainly plays an important role in shaping power relationships. Power relationships also shape how technology gets implemented. However intentionality also seems to plays an important role. But, the relationship between the three has not been adequately addressed. Table 1 presents our conceptualization of these interactions.

3. Methodology

An in-depth case study, in the tradition of Walsham (1993), was used to undertake this research. The context of the case is the implementation of an ERP. Researchers, including Staehr (2010) and Elbanna (2006), have noted that since ERP implementations are a rich and complex process, in-depth case studies are perhaps the best means to conduct such research (see Gable, 1994). Eisenhardt (1989), while appreciating the importance of case studies, also notes the relevance of single site cases in research.

Besides in-depth interviews with key stakeholders, we also analyzed documents provided by the firm: project plans, systems diagrams, hardware configurations, internal reports and meeting notes. A total of 16 key individuals were interviewed. This included 3 in the top management, 6 in the middle management, 4 in the lower management and 3 others, which included consultants and front desk clerks etc. A total of 48 meetings spanning approximately 135 hours were conducted.

Following Eisenhardt (1989) and others, we approached the study organization with a clear focus. We wanted to investigate how organizational power and individual intentions shape ERP implementation. To help maintain focus, we used *a priori* concepts as our starting point (Table 1). Our research framework based on dimensions of power and intentionality

guided the study in interpreting and understanding the data. As Walsham (1995) notes, the objective is to generalize into theoretical propositions so as to understand the "rich insights" gathered in the case study.

Data collection for the case began in 2002, progressing well into 2005. Follow up and debriefing activities continued through 2009. Given the sensitivity of the issues, the case study organization placed an embargo on the researchers, forbidding publication for a period of 3 years following the complete implementation. Collected data was systematically classified into different thematic areas – context, implementation content, processes used to arrive at decisions, organization structure changes, technology changes, roles and skills changes, etc. Much more data was collected than is used in this paper. However, we focused on the power and politics issues related to ERP implementation, and thus tried to constrain our data use related to the theoretical elements identified in Table 1. As suggested by Eisenhardt (1989) and Walsham (1995), this is an appropriate method for undertaking qualitative research. Once the data was classified thematically we looked for elements in the data that addressed each of the issues as per Table 1. In the literature such an exercise has been referred to as "critical reflection" (Klein and Myers, 1999, p. 72).

4. Case study

Asset Management Company (AMC) is a medium-sized European firm in the real estate asset management business. The business consists of buying shopping centers and buildings and then managing and renting the shops and offices. At the start of this study, AMC was a closely held company with a three-person Board of Directors. The CEO was a professional manager who actively managed AMC on a daily basis. The other two members of the Board included a relative of the founder (who did not work at AMC) and an Executive Director, a manager with many years of industry experience.

For several years AMC had recognized the need to grow their business. Consulting reports had highlighted growth opportunities using new business processes and ideas for developing properties with more people-friendly spaces. AMC had hired a Sales & Marketing manager to help spur this growth. This person's previous experience in Latin America had led him to develop a relatively aggressive style that was previously absent at AMC. Like the Sales & Marketing manager, the Executive Director had also been brought on board to help stimulate growth.

Two other executives were key participants in this study – the Finance and the Maintenance Manager. The Finance Manager oversaw accounting, finance, human resources and information systems. The Maintenance Manager was responsible for maintaining AMC's physical plant, raw materials, equipment, etc. Both had been with AMC for several years. Another key player was the IT Manager, who reported to the Finance Manager.

The IT Manager had developed strong relationships with AMC's current vendors; especially those that had supplied the legacy system. Over the years AMC had implemented many customizations to the original package in order to address additional requirements. The IT Manager was the only person who knew the legacy system well and thus was the only one who used it effectively. Many users in other areas were dissatisfied with the system and either struggled to get useful information out of it or simply gave up. As a result, the system had fallen into partial disuse.

Maintenance was another problem area at AMC, due in part to difficulty in obtaining accurate information. Inventory shrinkage was alarming, and information on the cost effectiveness of various activities was poor. Raw materials disappeared from warehouses and vans en route to project sites. Most maintenance people had little formal education and were not well versed in using IT. The Board believed that better information was needed to manage maintenance activities. In contrast, the Maintenance Manager was relatively happy with the current status and was suspicious of the impact ERP might have on his job.

However, AMC's Executive Director (and by extension, the Board) thought that the time was right to migrate to an ERP. He wanted better insight into critical business information and better control over the firms' activities. Besides addressing weaknesses in the legacy system, AMC management intended to restructure the business to limit legal and tax exposure. The legacy system was not capable of handling the intercompany eliminations and consolidations required by the restructuring.

AMC also had limited IS expertise, and the Executive Director recognized IT Manager's vested interest in the current system. As a result, AMC created a search committee to evaluate software alternatives. The preliminary committee included the Executive Director, the Finance Manager, and the Sales & Marketing Manager. The process started informally with a review of potential ERP systems. The Sales & Marketing Manager had previous experience in the software industry and brought in his previous employer as a potential vendor. After their presentation he strongly encouraged AMC to go in that direction. The other committee members were not convinced that this was the best solution.

It soon became clear that the search committee did not have the expertise to make a fully informed decision. Although the IT Manager had expertise in software solutions, he was too close to the existing system to lead a change process. The Sales & Marketing Manager, although not tied to the legacy system, had a bias toward his previous employer. The Executive Director, although aware of the benefits of IT, was not well versed in software selection and implementation. To help guide the evaluation with an informed and unbiased perspective, AMC hired an independent consultant to help evaluate the existing system and report to the Board with recommendations.

With the IT consultant on board, a new search committee was constituted. The Sales & Marketing Manager was intentionally left out of the new committee, reducing his influence on the selection process. Ten firms were invited to present proposals for a new integrated system supporting the firm's main business processes; eight responded. The selection of the ERP system and the software consultants to implement it was done by the full Board of Directors based on a report written

by the search committee. PeopleSoft, SAP, Microsoft Navision and Oracle were considered. The general consensus was to work with Navision and customize it for AMC requirements. In order to accomplish this, a steering committee was formed, which included the Executive Director, the Finance Manager, the external consultant, plus two members of the software firm.

As the implementation project started, several managers were still not convinced that this was the best choice. The Sales & Marketing Manager, who had joined AMC with his sights on gaining a position on the Board or even becoming a CEO, saw his omission from the IT steering committee as a major career setback and perceived loss of power in the organization. The IT Manager, although not a top executive, had enjoyed a great deal of influence throughout AMC regarding technology purchases and use. Although the IT Manager realized that his intimate knowledge of the legacy system was his best hope at maintaining a comfortable level of power in the organization, he could do nothing as the selection committee went in a different direction and brought in an independent consultant to manage the implementation project. To him, the success of the new ERP was a threat to his job. Like the IT Manager, the Maintenance Manager had been with AMC for many years and was quite suspicious at the onset and the project of the impact that the new ERP system would have on his job.

Four consultants were involved in the implementation: the software consulting firm's systems analyst who was the operational leader (also on the IT steering committee); the independent consultant (also on the IT steering committee), who supervised the project on behalf of AMC; two other IT consultants, specializing in networks, joined the project for a brief period of time because the implementation of the ERP required an on-line system between AMCs various offices (Citrix was used to reduce data traffic in the VPN). The ERP software vendor (Microsoft Navision) was not directly involved in the project, as the ERP license was bought through the software consulting firm that customized the system.

5. Analysis of power and intentionality at AMC

IS implementation at AMC presents an interesting interplay among multiple factors. Being a family-run business, the power residing in relatives and close friends of the owners, as well as their individual intentions, shaped the outcome of this implementation. The intentions of the few individuals who had ultimate authority were not clear initially, because intentions cannot be directly observed. Mintzberg (1983) terms such relationships as "politicized internal coalition" while Raven (1993) calls this "connectional power".

5.1. Intentionality and resource based power

At AMC new roles (or *assignment of functions*) were created and responsibilities reassigned. This resulted in redistribution of power – some had responsibility but no authority, and others had authority but no responsibility. This could be attributed largely to the ERP implementation and the manner in which resources were allocated. While changes in roles are mostly intentional; how the information flows needs careful design. AMC suffered on both fronts – there was intentional casualness and flaws in information flows. This resulted in uncertainty. Hence the legitimacy of the change initiatives themselves was questionable. The Finance Manager commented on the situation:

> It is a wait and watch game. We all know that the new system will benefit the company, but no one wants to take ownership. There is a lot of behind the scene negotiation going on.

The whole drama of IS implementation, intentionality and power relationships is epitomized by the fact that the Sales & Marketing Manager expected to become CEO and used his stature to influence decisions based on prior experience. His objective was to select his contacts from the previous employer as an IT vendor for AMC.

The Finance Manager, although strongly supporting the ERP, wanted to avoid personnel reductions in his department. The Maintenance Manager was not comfortable exposing his process weaknesses. The IT manager was afraid of becoming less important with the new ERP. He was the only one able to produce proper business reports from the legacy system and that would change with the new system in place. The Sales & Marketing Manager explained:

> We are in a state of great turmoil. Everybody is thinking about themselves. No one is interested in the success or failure of the system. Rather everybody is interested in protecting their job and ensuring how they would remain relevant to the new organization. Even **I am** [emphasis added] unsure as to what will transpire.

Since stakeholder intentions were not congruent, each individual or group was exercising their own power over resources. This in turn increased the political aspects of the "power game", and prevented collective intention from becoming a reality and aiding in a successful ERP implementation.

5.2. Intentionality and process based power

AMC presented an interesting situation. While top management wanted to eliminate the person occupying the role of IT Manager, the role itself was important to the organization. They felt that the IT Manager, while qualified, was somewhat

headstrong. He did not agree with senior management, which resulted in process "bottlenecks" and possible resistance in adopting the new ERP. In one meeting, the CEO commented:

> I wish our IT person is a little more flexible and agrees with the corporate vision. We cannot tell him everything, but he needs to have faith in the top management.

Keen (1981) explains such situations – the IT manager's resistance was because the cost of change was perceived as greater than the likely benefits. Management's perception of his resistance was also that he thought the new ERP would institute changes in his job and affect his power vis-à-vis others. The perception by management regarding resistance is interesting, since resistance is considered a consequence of perceptions for individuals experiencing change. DeSanctis and Courtney (1983) make a similar observation regarding MIS. They suggest that organizational development programs "could reduce conflict between general managers and computer specialists" (p. 737). However, at AMC, the IT manager decided to leave the organization. Such changes and their resistance are "social dramas" that are "disruptive episodes of social action" (McFarland, 2004). When we contacted the IT Manager after his departure, he commented:

> I could not stay there a minute longer. I was being undermined. I was being superseded. They wouldn't listen to me. In the end it was best that I moved on.

Our disussion with the consultants also suggested that perhaps the departure of the IT manager was the best thing the organization could have hoped for. One consultant commented:

> It is fair to say, particularly during radical change, that bottlenecks must be removed. There was no doubt in the minds of various people that the IT Manager posed such a clog. It had to be removed.

The process changes resulted in new clarity for all operations of the company and better executive control over resources. Many individuals became conscious of how they were perceived by top management, particularly in Maintenance. Although Maintenance had traditionally performed poorly, a strong personal relationship between the owner and the Maintenance Manager and overall profitability had led the Board to not push for improvements.

In the literature process clarity has been considered an important means to dissipate power and ensure that organizational members remain on board with changes (Overton et al., 1996; Kim and Mauborgne, 1997). Once AMC's processes were simplified and clarified, individuals lost much of their process-based power. A negative consequence of process clarity however can be alienation of employees, which needs to be managed properly.

5.3. Intentionality and meaning based power

Within AMC there was fear that the ERP would lead to downsizing. While it would have been possible to do so, it was certainly not the main motive for adopting the ERP. Some top managers did see opportunities to reduce the workforce, but others really did not want to let go of the employees. In an interview the Finance Manager noted:

> I am unable to tell as to what the top management really wants. While I understand that they need efficient systems and effective processes, we need to adequately judge as to what we have now. Simply firing people will not help. I hope they understand this.

Typically external consultants are also seen as change agents in order to facilitate downsizing. Our discussions with them revealed that this was not the case. As one of the ERP consultants noted:

> Our intent is not to reduce the workforce. ERP implementation does not necessarily result in reduced manpower. Systems build efficiencies into business processes. And it is our intent to ensure transparency and efficiency.

However management's decisions and their conservative approach in sharing motives created a communication barrier. Employees speculated about the real intentions. While structural changes in organizations are challenging, the inability to communicate, manage and facilitate interpretations of the new mission can cause significant problems. As Gross (1962) suggests "each agent must have a thorough knowledge of the type of organization within which he is performing, including its changing interpersonal coalitions" (p. 157). Such sharing of information helps in ensuring success when facing radical change.

The new ERP helped build efficiency into the organization, but the resultant *domination structures* (organizational power) were not in accordance with the old order. AMC was still a family business, with many relatives of the owner working for the company. Although several family members did not have important formal roles within the business, their organizational power was relatively high. Sometimes their real power was actually higher than their hierarchical superiors. Several employees influenced family members by talking ill of the new system in hopes of derailing change, thus bringing entropy to the implementation process. Mintzberg (1985) terms this as "sponsorship game" where an "individual attaches him or herself to someone with more status" (p. 137). The Finance Manager understood the "game:"

> We have people in the company who are politicking for the wrong reason. I see no rationale in resisting change to influence outcomes just for the sake of doing so. There is merit in what we are doing. There is no need to back bite or talk ill about the systems, especially in interactions with individuals close to the CEO.

The IS implementation emanated three different messages – top management's assertion of control; middle management's discontent; and the consultant's role as agent of change. By bringing transparency to processes and improving reporting, the board would be better informed and increase their power. Weaknesses and flaws would emerge because of new reporting capabilities. Since such flaws existed in many areas, middle managers were fearful of the new system, as it would expose shortcomings. The independent consultant was committed to enabling the changes. With the organization's complex political environment, it was important for the Board to have an outsider whom they trusted and was recognized to have competence in IS and change management. This would give management credibility, and also enhance the legitimacy of the implementation. In one of our interviews with the consultants, it became obvious that while communication problems were rampant, the consultants did not want to be involved in the internal organizational politics:

> I can see politicking everywhere. However as a professional I don't think I should get involved at all. I am very focused in getting the implementation completed and business processes streamlined.

5.4. Intentionality and system based power

The Executive Director had experience working for large multinationals and he noticed opportunities for improvement, including business intelligence, which the existing software would not support. Given these requirements, the ERP would facilitate the change process. Under the old system, the IT Manager wielded considerable power by controlling business reporting – a situation the Executive Director was not happy with since it meant dependence on the IT Manager.

The Executive Director's actions were intentional. Mintzberg (1985) argues that game playing by senior managers is "counter insurgency" at best. In bypassing the IT Manager, the Executive Director was exercising his power by aligning himself with the nascent system (which had been legitimized by *his* superiors). Such actions can also be explained by Lukes (1974) argument for power shaped by "perceptions, cognitions, and preferences in such a way that they accept their role in the existing order of things" (p. 24).

The IS implementation also caused stakeholders to resist, by rejecting it altogether or by suggesting that it contained errors. Emerging resistance was evidenced by criticizing the lack of customizability compared with the legacy software. The IT Manager emphasized that the legacy system was customized specifically for AMC, which would be difficult to achieve in the new ERP. He argued that the legacy system should be extended to meet new needs. However, personal objectives and fear of losing power could be construed as the IT Manager's true motive.

Such employee actions are legitimate. Mintzberg (1985, 1983) calls them power residing in expertise and/or the game of rival camps. At AMC, the IT Manager created a rival camp, building alliances in the middle rungs of the company. He hoped that he would remain pivotal regarding IT initiatives. While such endeavors make sense individually, their organizational success depends on who controls the resources. At AMC, the IT Manager was limited in his ability to "win and influence."

Table 2
Summary of key power/intentionality findings.

Dimension	Summary findings
Resource based power and intentions	• Structural changes leading to apparent diversification had a tax avoidance motive, something not well understood by employees lower down in the hierarchy. • Redefinition of roles and responsibilities under the guise of streamlining was to eliminate certain roles. • Structural and organizational changes helped legitimize the need for the ERP). The system was clearly a tool for facilitating change, where the desired change was rooted in individuals' intentions. • Resultant allocation of resources and assignment of functions helped in redistribution of power to those the company wanted to have power.
Process based power and intentions	• Clearer definition of business processes for all operations of the company. This resulted in many individuals in the company becoming conscious of how they were being perceived by the top management. • IS implementation used as a means to define business processes thereby reducing emphasis on change management. • The implementation further helped in evaluating performance, which brings clarity and transparency in job performance and other business processes. • Casualness in business processes sets the stage for significant changes, which were not necessarily accepted by key stakeholders.
Meaning based power and intentions	• ERP system emanated three different messages – the top management's (owners) assertion of control; the middle management's discontent on too much clarity in the business processes; the consultant's roles as an agent of change. • The new system clarified the processes, but the resultant domination structures were in discordance with the old order. • The imminent personnel changes were being resisted by rejecting the system or suggesting that it was riddled with errors.
System based power and intentions	• Formalization of workflows although accepted by all, resulted in questioning the manner in which the "old fabric was woven". • Formalization also resulted in confusion as to how and why the new system should be adopted. • The ERP system represents radical change, which was not entirely understood by all.

In contrast, the Executive Director was rather successful in having his way. In many ways the Executive Director *wanted* the ERP system to undermine the power, authority and expertise of the IT Manager. In an interview he noted:

> I am sure that the new technology and the systems will help in redistributing power and authority. In order to be successful, our company needs such a change.

The strategic decision to implement a new enterprise system shaped how processes are defined and performance measured (Pozzebon and Pinsonneault, 2005). Although such changes may be desired, they can be irritating for long-time employees. Intentionality in these early configuration decisions is important in determining whether resulting changes are purposeful or not.

A summary of findings pertaining to the dimensions of power and intentionality are presented in Table 2.

6. Discussion

The analysis of AMC shows that while IS implementation plays an important role in shaping power relationships, power relationships also shape how an IS gets implemented. In this study, we also found organizational power to have a significant impact on individual intentions of stakeholders and how those intentions shaped implementation. This impact is captured in the Executive Director's comments towards the end of this study:

> My intention was always very clear. I did not want to share information with my other managers that the real reason for organizational restructuring, the new ERP system, etc. was to shake the company up and get rid of the flab. Also there was a hidden agenda where such a reorganization would help us with tax saving.

When the situational aspects of this case are analyzed, we can decipher elements that made it possible for the Executive Director to impose his intentions. We can also interpret reasons for his ultimate success in accomplishing his objectives. Other than the CEO, it does not appear that anyone in the organization had enough organizational competence to assume control over the daily operations of the company. The IT Manager, the Sales & Marketing Manager, the Finance Manager, and the Maintenance Manager all handled the situation differently. Each of these individuals had some power; they also had their intentions. How well they aligned their individual intentions with that of the Executive Director determined the outcome. The alignment of individual intentions resulted in "collective intentionality" which is rooted in the intentionality of the individual (Executive Director in this case) with power. In line with exchange theory, the Executive Director knew full well what he planned to do. Those that cooperated with him received favor and those that did not would no longer feel welcome. The Executive Director thus manifested power that was "disciplinary in nature." For example, the Finance Manager never attempted to fight any of the changes; consequently his staff was not reduced.

The three dimensions of intention are not problematic, but they do have an important implication. The implementation of the ERP system at AMC was one institutional fact. However it would not have been possible to create this institutional fact if some transition intentional states were not achieved. As Leezenberg (2002) points out, "intentional states like beliefs are logically prior to institutional facts" (p. 898). Leesenberg also notes that organizational power manifests itself by realizing "one's own intentions even in the face of opposition" (p. 898). This was evident at AMC when the Finance Manager noted:

> Our intent was to undertake the restructuring at whatever cost. The top brass at the company knew that they could force organizational members to comply. It was important to engage in the restructuring essentially to stay in business.

Dimensions of power therefore become an important aspect to understand successful institutionalization of technology. However, an important implication that emerges is that most technological implementations have an inherent structure to them: the complex relationship of intentions, power and *institutional facts*. And most institutional facts take the form of technological artifacts and the related systems that get created around it.

At AMC the impact of intentions on power and IS implementation was also found to be important. The IT Manager's recalcitrance, the Manufacturing Manager's poor performance, the exclusion of the Sales & Marketing Manager, the need to improve management processes and the necessity to implement a new ERP, all formed a collective intention that shaped how top management exerted power. Such power was exerted not only to implement technology, but also to dramatically restructure the organization. Such restructurings and changes in roles and responsibilities relate to the *assignment of function* (Leezenberg, 2002). The Executive Director, when asked which factors came together to exert so much power to institute changes, said:

> It may be hard to pinpoint it to one factor. We had various intents. Clearly there was a financial motivation and tax advantages, which we did not want to share with many managers. But, there were other things as well. Many of the section heads and managers were not performing as well as they should have been.

It emerges therefore that some mutual consent[1] may have been forming at AMC. There certainly was cooperation among certain stakeholders. Managers that were in disagreement with the top management either got sidelined or left (i.e., the IT Manager). The Finance Manager summarized:

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[1] In the literature such mutual consents have been referred to as "social contracts". Discussion of such concepts is however beyond the scope of the current paper.

We know what we need to do to make this company successful. Already we are seeing many managers come on board and support the mission. People who don't like the changes should go elsewhere.

His comments also indicated an emergent self-interest, i.e., if someone was not interested in cooperating and consenting to the *institutional facts* (ERP System), they *should* leave. Therefore cooperation was a matter of self-interest, leading to social cohesion and integration. It takes a while for organizational actors to balance out. When that happens a new reality emerges – a process referred to in the literature as redefinition of "constitutive rules".

Typically constitutive rules are initially shaped by resource-based power. There is a mutually adjusting relationship between power that resides in resources and process based power. The interplay between the two defines the constitutive rules. In the case of AMC this interplay resulted in defining the intentional states, which in turn 'created' the power that resided in the meanings. As the Maintenance Manager noted:

It is relatively easy to ensure compliance – control the resources. And that is exactly what the management did. The ERP implementation had to be natural, which was not the case since we were forced to change our ways of doing things. At one point in time the need for the ERP system became huge since we had already changed the processes.

As evidenced in our study, the mutually adjusting nature of various dimensions of power results in new patterns of work and new norms becoming ingrained, which results in social cohesion and integration. In the literature, we have found criticism to this observation. It has been argued that social cohesion may never occur; there will always be resistance to change for implementation of technology-based systems (Keen, 1981). However our research suggests that while intentions shape power, power shapes implementation of technology, which in turn shapes individual intentions. This observation is consistent with Durkheimian assertions that take social cohesion and integration as fundamental in creating institutional facts (Durkheim, 1968). Our observations are also in sync with Searle's contentions (Searle, 1995). However, we also observed that power could also shape technology implementation and hence intentions. It is also possible that an institutional fact (ERP system/technology artifact) could define collective intentions, which in turn shape power. The logic underlying shaping of system implementations is shown in Fig. 1. In Fig. 1 our starting point is individual intentions that affect organizational power. As time progresses, the cyclical nature of the process manifests itself. One interesting observation at AMC is that the organizational power was not necessarily negative or restrictive in nature; rather power facilitated achievement of organizational purpose (similar to Foucault's notion of power being productive to social reality). This could be an interesting future research direction.

Our interpretation of the intention-power-IS relationships were succinctly captured in an interview with the retired CEO of AMC. He noted:

There is no doubt in my mind that any company can get things done as long as they have the intent to do so. We had the intention to implement a new system and redefine the processes. We did it. I do not believe in resistance to change and being overly considerate to personalities. If we want to do it, we'll do it. Then there is the question of power. Yes we will exert power. [*At this point we probed on the kinds of power that could be used*] Power is power. It does not matter what kind of power. I can control resources. I can make changes to processes. I can change people. I can hire new people. But, it is difficult to make changes to the established culture. Radical change there lead to problems.

As Wolf (1990) notes, power is always part of the signification and can inhibit or facilitate new meaning structures and institutionalizations.

Like any research, we believe that there are limitations of this research. Clearly our findings are based on a single case. While opinions may be divided as to the usefulness of single versus multiple sites, AMC did afforded a good environment

Note: Arrows indicate shaping of system implementation
and the thickness of the lines represent the degree of influence
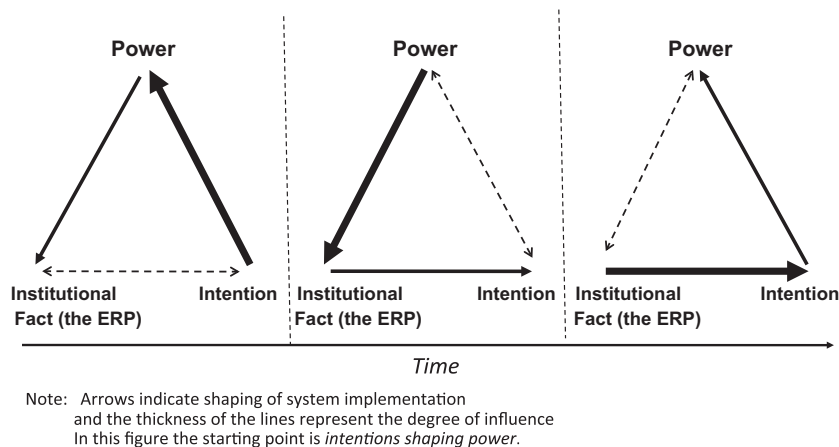In this figure the starting point is *intentions shaping power*.

Fig. 1. Shaping of IS implementations.

to study various dimensions of power and intention. Even though we wished to go a level deeper, in terms of granularity, to understand how each power and intention dimension manifested itself for each role, the moderate size of the enterprise prevented us from doing so. As a future research direction, it would be useful to identify a more in depth case situation that may afford such an analysis.

7. Conclusion

In conclusion, this paper presents a complex interplay between organizational power, intentions and IS implementation. Based on an in-depth case study it was found that intentions indeed shape power (which is largely external to an individual) which in turn forms intentions. The mutually adjusting interaction of power and intentions stabilizes eventually and impacts an IS implementation. Once an IS gets implemented, it gets characterized as an institutional fact. Institutional facts then in turn shape individual intentions. Our research also found that the realization of a IS implementation largely occurs because of a collective consent where various stakeholders align their power and intentions. If such consent does not get formed, realization of an institutional fact (IS implementation) is either flawed, lacks vigor or has other inherent problems. In a cyclical relationship between intentions, power and IS implementation, new constitutive rules come into being. Such new rules may be a function of the nature of power and/or intentions.

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