

Information Systems Strategy Formation in a UK Police Force: Re-Conceptualising The Exercise Of Power

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Abstract

The argument advanced in this paper is that micro-political activity is central to our understanding of information system strategy formation, and that thinking about issues of power provides us with a means of investigating such activity. By utilising the work of Hardy (1994) we can conceptualise the exercise of power in at least four different ways, enabling us to investigate dimensions of micro-political activity within which ISS formation is enmeshed. We present a longitudinal case study of ISS formation within a UK Police Force, a distinctive cultural arena into which the language of strategy has been introduced. We go on to argue that endeavouring to uncover power related activity is central to our understanding of the practice which we term ISS formation.

Keywords

IS Strategic Planning, Power in organisations, Case Study, Longitudinal study

INTRODUCTION

Whilst the field of information systems (IS) is described as being one that evokes complexity and ambiguity (Checkland & Holwell, 1998), the social dimension of IS has long been recognised (e.g. Checkland 1981; Kling & Scacchi, 1982). Such social complexity is no less evident in relation to information system strategy (ISS) where much of the literature has been dominated by methods to assist practitioners in the development of ISS. Unfortunately, attempts to inform practice in relation to ISS have tended to focus their efforts upon outcome oriented prescriptions (Scott-Morton, 1988) with ISS formation seen as a decision oriented activity that was rational, linear, and one could say, fairly straight forward. In our view this has been to the detriment of in-depth understanding of ISS formation, with comparatively little research having addressed what actually happens in practice when people are supposedly engaged in ISS formation, although there have been some notable contributions that have enhanced our understanding of the social nature of ISS (e.g. Walsham, 1993).

Social and political practices are important to our understanding of ISS (Jones, 1995), and one way of addressing such activity is to consider the role of power in relation to the concept of ISS. In this

paper, we argue that for studies of ISS formation to be more meaningful theoretically and useful practically, they could reflect upon the exercise of power as an important element in strategy oriented investigations. One way of doing this is to consider power in terms of several dimensions, and it is a discussion of such an approach that forms the first half of the paper. The second half of the paper comprises an interpretive case study of ISS formation based upon longitudinal fieldwork in a UK Police Force. A discussion follows in which we highlight the micro-political activity which forms the essence of much of what we take to be ISS formation.

CONCEPTS OF POWER IN INFORMATION SYSTEMS LITERATURE

Power has been raised as an issue of importance in improving our understanding of ISS by several authors (Davies, 1991; Knights & Murray, 1994; Jones, 1995), although literature that has specifically addressed the concept of power in relation to ISS formation is less numerous. Some authors have addressed the role of power in relation to systems development and implementation efforts (Markus, 1983; Levine & Rossmore, 1995). Within these views, power is discussed in terms of a rather mechanical, but nonetheless person based, or agency, perspective (Bloomfield & Coombs, 1992). This means that power is viewed as being located with the individual, in clear cause and effect terms, that is as something people do to bring about a specific outcome. The exercise of power by someone that has caused people to do something they otherwise would not have done can be described as a deterministic account of power, a view which has been criticised as being too restricted to take account of the varied way in which power is exercised in practice (Clegg, 1989). Furthermore, in each of the perspectives there is a presumption that through the exercise of power someone is advantaged while someone else is disadvantaged; that there are the powerful and the powerless. Such a view can be seen as lacking explanatory capabilities, as we have to ask how those who we may regard as 'the powerful' came to be seen in such a way, and how they maintain their position relative to what happens around them. This leads us to a relational perspective of power, which challenges some of the preconceptions underpinning an agency view of power.

A Relational Perspective On Power In Information Systems Literature

Within IS literature we also see views about the exercise of power that both challenge and go beyond the agency perspective discussed above. For example, the exercise of power can be understood as exercised in relations between people. Such a view argues that, "the key to understanding resides in thinking of power as a phenomenon which can be grasped only relationally. It is not a thing, nor is it something people have in a proprietorial sense. They possess power only as far as they are relationally constituted as doing so" (Clegg, 1989, p.207). In this relational view, power is not seen as being in any one place or as something that people 'have', but is dispersed and enacted through the range of relational interactions between people.

This view addresses a problem in establishing real interests noted previously by arguing that interests are established through relations – and that interests do not therefore pre-exist relations (Foucault, 1980). It argues against "a belief that power determines choice and change as if the intentions of the 'powerful' were directly coincident and continuous with their effects" (Knights & Morgan, 1991, p.268). The problem then is in seeing power solely in a cause-effect sense whereby someone through their possession of power eventually brings about a change in someone else's behaviour, to act or fail to act in a particular way. That is not to say that such a view of power is wrong per se, but rather that it is limited. In an effort to resolve these limitations, some authors have concentrated upon other means of understanding relational forms of power. Sillince and Mouakket (1997) highlight the relational nature of power, arguing that it is valuable to explore

power through several dimensions as a means of explaining the richness of the concept in action. By combining perspectives, where each enlarges upon and encapsulates the preceding view, a multi-dimensional view of power is possible. This is based upon the premise that any one of the perspectives chosen does not of itself allow for adequate exploration of power as a concept. Hardy (1994, 1996) has proposed a framework for investigating strategy related issues in organisational settings which conceptualises power along four dimensions as a means of investigating the exercise of power. We illustrate this framework in Table 1 below.

	Power of Resources: 1st Dimension	Power of Processes: 2nd Dimension	Power of Manipulation of Perception: 3rd Dimension	Power of the System: 4th Dimension
Focus upon view that power can be exercised through:	Management of resources: physical, financial, human; this includes ability to hire and fire, rewards, punishments, funding, authority, expertise.	Management of levels of access to and participation in decision-making processes and agendas.	Manipulation of perception through use of: images, symbols, rituals, language, norms, values, ceremonies, stories.	Web of power relations in which individual constructions of reality and organisational setting are embedded; differential effects evolve over time.
This dimension is a challenge to:	Elitism: views of power as concentrated in the hands of the few - i.e. this view considers that power does not automatically rest with an elite but with those able to control resources.	Pluralism: assumption of equal access to decision arenas & agendas - i.e. this view considers that some may be prevented from accessing, or participating.	Behaviourism: assumption that power is used only in response to conflict - i.e. this view considers that overt conflict is not a necessary precondition for exercise of power.	Sovereign power: view that power is in the control of people - i.e. this view considers that people operate within an already and always operable web of power relations.

Table 1: A Framework for Understanding Power in Organisations (adapted from: Hardy, 1994; Hardy, 1996)

Dimensions can therefore be thought of as differing views, or conceptualisations, about a central concept of ‘power’, and it is these that we now move on to discuss.

MULTIPLE DIMENSIONS OF POWER

The power of resources is the first dimension. In much of the IS and management literature which looks at issues surrounding power, the views expressed about power reflect the ways in which people manipulate resources and has been termed a behavioural perspective (Bloomfield & Coombs, 1992; Knights & Vurdubakis, 1994). Those researchers who conceptualise power in terms of actual behaviour in making decisions presume that the locus of ‘power’ resides with the victor in a decision situation that entails a conflict of interests, often considering power in relation to the control of resources (e.g. Narayanan & Fahey, 1982). Such resources include: information, expertise, political access, credibility, stature and prestige, access to higher echelon members, control of money, rewards and sanctions.

A problem in considering power only in terms of resource manipulation is that what may be considered to be a basis of power in one context may not be in another. Hence, contextualisation of such discussion becomes critical in giving such a discussion any meaning. Furthermore, we must be

wary of any assumption that all those people in the situation have equal potential to participate in any decision making. It is the inadequacies of viewing power solely in terms of this view that lead us to consider an additional perspective.

The exercise of power through processes is the second dimension. Views in this area have moved beyond a concern with the manipulation of resources in relation to decision making situations, to address the exercise of power where issues may have been ignored or sidelined. However, we do note that such a conceptualisation is still concerned with decisions - whether taken or not. This represents a study of the exercise of power in relation to activity of people; such a view does not take account of the exercise of power through the inactivity of people, or where 'the sheer weight of institutions' (Lukes, 1974), such as political, commercial, or educational, represents an exercise of power in preventing issues from arising or being developed.

Non-decision making is often perceived as a means by which dominant people maintain the status quo, as it can be seen as a way of maintaining existing biases (Hardy, 1994), for example in the case of ISS implementation (Levine & Rossmore, 1995). There are other reasons that may lie behind the manipulation of processes though. Firstly, less dominant groups may be able to use the procedures to their advantage, and secondly those with power may seek to alter the status quo by allowing others to participate and to impact upon ISS agendas (Sillince & Mouaket, 1997). This represents a broadening of the concept of process power, illustrating how the powerful and the powerless may be advantaged.

The exercise of power through the manipulation of perception is the third dimension. The main contribution of the third dimension is to move concepts about the exercise of power beyond a link with conflict, given that the first two dimensions are concerned with issues where there are at least two parties seeking conflicting outcomes. The way in which we can conceptualise the exercise of power in this dimension acknowledges the ways in which issues can be prevented from arising at all. Hence, we are concerned in this dimension to appreciate why issues in ISS formation are not presented, why opposition or conflict does not arise in ISS practice, because the basis for these things not happening may be due to the exercise of power (Lukes, 1974; Hardy, 1994). However, we must be aware that establishing such exercises of power related to ISS may not be simple and that there may be practical difficulties in validating such a view of power, that is, one which explores why something did not happen.

In conceptualising the exercise of power in terms of three dimensions, we are acknowledging the idea that the exercise of power is concerned with some person or persons determining what others should do. This is an agency view of power, one which has caused concern due to the perceived assumption that power is possessed, or that power is exercised in a simple cause-effect relationship (Clegg, 1989; Knights & Morgan, 1991). Viewing the exercise of power solely in terms of the three dimensions discussed can be considered problematic in that each of the dimensions exhibits, "a belief that power determines choice and change as if the intentions of the 'powerful' were directly coincident and continuous with their effects" (Knights & Morgan, 1991, p.268). This would not account for ISS practice where a considerable amount of what occurs results from the complex nature of ongoing activity, and hence renders such a deterministic account inadequate. This is not to say that such a view of power is wrong per se, but rather that it is limited. In an effort to resolve this problem, and to move beyond such a limitation, we introduce a fourth dimension - the power of the system.

The power of the system is the fourth dimension. In seeking to respond to the above concerns, Hardy (1996) argues for a further dimension which incorporates a view of power that acknowledges the power of the system. This view of power develops the work of Foucault (1980) in understanding the power of the system which moves beyond conceptions of power along

sovereign lines, where power is seen purely in terms of a capacity or capability of any individual to attain an outcome. Instead, power can additionally be perceived in terms of relations, as, “historically constituted configurations of practices” (Knights & Vurdubakis, 1994, p.172). Power can thus be viewed as a pervasive phenomenon that is concerned with relationships between parties, whereby “power is neither given, nor exchanged, nor recovered, but rather exercised, and that it only exists in action” (Foucault, 1980, p.89). In this dimension, power can be conceptualised as, “the name one attributes to a complex strategical relationship in a particular society” (ibid.,p.9), as opposed to something that an individual possesses and exercises. This view of power of the system is particularly interested in “the values, traditions, cultures and structures of a given institution or society” (Hardy, 1994, p.232). These relationships have been referred to as net-like, or a web of power relations (Clegg, 1989; Introna, 1997). Here certain people are advantaged while others are disadvantaged without any clear notion of power being actively engaged.

In utilising multiple dimensions we are not arguing that we should choose any one of the dimensions as *the* most appropriate view; instead we argue that it is by taking all four dimensions collectively that we can address the multi-dimensional nature of the exercise of power, and through which we can investigate the nature of ISS formation.

CASE STUDY - COUNTY POLICE FORCE

Method & Background to Case Study

Case studies are recognised as an appropriate and valid IS research method (Cavaye, 1996; Klein & Myers, 1999), and the perspective underpinning this case study may be characterised as interpretive (Klein & Myers, 1999). We undertook a longitudinal case study between 1995 and 1998, and data collection has involved a number of methods: in-depth semi-structured interviews, informal conversation, participation, collection of documentation produced by the people involved, and collation and analysis of secondary materials produced outside of the direct areas of study. The fieldwork also included an intensive period of study based upon participation by one of the authors being conducted during July, August and September 1996. In all, we interviewed 117 people, some on several occasions over the period of research. This was in addition to informal discussions with these and other people during the period of fieldwork. A condition of the fieldwork was for anonymity in the identification of the Force and in the reporting of the comments of individuals, which is reflected in this paper.

County Police Force is responsible for a relatively small population (less than 500,000) but covers a relatively large geographic area. The Force has approximately 1000 staff, three quarters of whom are police officers. Force expenditure on IT normally amounts to around 1% of gross expenditure, out of a Force budget of just under £40 million. The fieldwork for this case study was initially focused upon the practice surrounding the strategic decision to implement a new Force-wide IT based system comprising multiple applications (which we will call the TOTAL system), which formed the heart of ISS within the Force between 1993 and 1998.

Information Systems Strategy Formation – The TOTAL System

During 1990 and 1991 an alliance was formed between a senior police Officer and a supplier (XYZ) which was to be instrumental in the development of systems during the remainder of the 1990s. The Research and Development unit had instigated the purchase of a custody office application and a crime recording system from XYZ after seeing the systems demonstrated in another Police Force. The Officer in charge of the IT department became aware of this development, this person becoming the principle contact between County Police Force and XYZ.

An IT strategy document was produced in 1992, and set out a review of the existing systems together with a plan to develop and implement a suite of applications from XYZ over the next two years. No other companies were considered in this document, and no suggestion was made that a tender should be placed in order to attract interest from other suppliers. The document was primarily an overview of technology to be implemented in the short to medium term. The document addressed *how* this was to be done to a limited degree, but the question of *why* this should be done was not considered.

An agreement was reached with XYZ by the IT Department acting on behalf of senior management for the development of a suite of applications for County Police Force. These applications had arisen from discussions between the head of the IT department and XYZ. This suite of applications was the precursor to a system that was to be known as the TOTAL system within the Force. The nature of the agreement between the Force and XYZ was described as a developmental relationship whereby a quarterly fee was paid to XYZ for development of systems, the intention being that XYZ could then sell these systems on to other Police Forces. There was no written contract between the Force and XYZ, and consequently no enforceable deadlines or penalty clauses. The exact nature of the agreement between the Force and XYZ was to cause concern throughout the life of the project. Although one of the key benefits alluded to in project documentation was a cost saving relative to other Police Forces amounting to "hundreds of thousands of pounds" (County Police Force, 1993) no savings were ever identified.

The period from 1992 onwards was described as a time of crisis management in relation to IT, as frustration with the TOTAL system led to numerous meetings which were held to decide whether to abandon the project. A civilian IT manager was appointed in October 1993, although the TOTAL project was kept separate from the IT department. With control residing with two Police officers in the project team, this provided a source of ongoing tension between them and the IT department. This tension was never resolved, and only ended when the project team was eventually disbanded in 1995. This then meant that the staff in the IT department felt that they then had the TOTAL system dumped on them.

The IT manager then sought to establish a group to address strategic issues associated with IT, although this took some time to set up. It was not until March 1995 that a new IT related strategy group convened, with the group meeting approximately every two months for the next couple of years. However, the TOTAL project sat outside the responsibility of the IT strategy group, and was overseen instead by a separate project board, albeit that one member of the strategy group sat on this project board as well. The Police officer who had overall responsibility for the IT department at this time was eventually able to persuade senior officers that the TOTAL project should be under the remit of the IT strategy group, and not separate from it. It was not until January 1996 that this happened. This was at the same time that the project board and the project team were disbanded.

The operation of the strategy group in 1995 was described by one of its members as having only a "sub-conscious idea of what the strategy is". This sub-conscious idea of strategy was alluded to by all of the senior staff involved in the strategy group. Since the published IT strategy in 1992, nothing further had been published as an IT strategy for the Force. That said, each member of the group said that they felt that each of others would agree with them as to what the strategy was for IS, even though they had never set it out formally. One reason given for this by a member of the group was that no business plan had been produced for the Force, and hence this made it very difficult for an ISS to be produced in relation to something that was not there. As one senior member of the IT strategy group commented, "we haven't yet at a senior level managed to get that message across, that there's no point us writing an IS/IT strategy that sets the agenda for the next

five years if it conflicts with the business plan. But we haven't got a business plan ... in any formal sense, so it's difficult for us to have a formal IT strategy".

While the TOTAL system continued to be developed, a lot of the work of the strategy group was concerned with addressing the problems being experienced with TOTAL. 1996 and 1997 saw IT developments continue, as outlined previously, while strategy was driven by circumstance, in particular, the need to ensure that systems were year 2000 compliant. Throughout 1996 and 1997 the IT strategy group continued to meet every three to four months, although no formal strategy was produced. A meeting of the IT strategy group in September 1997 agreed that the TOTAL system was inadequate for the needs of the Force and that a new ISS was required. The IT staff said that the development of the new ISS had to await the release of a new business strategy for the Force. Unfortunately, the production of the latter was delayed until September 1998, which meant that it was not expected that the ISS document would be produced until the early part of 1999. This meant that the Force continued to operate without a formal ISS. By mid-1998 the IT staff were of the view that TOTAL would be retained after all, probably for at least another five years until applications from the National ISS became available.

Most of the IT staff commented in mid-1998 that the IT department continually responded to initiatives as they arose rather than operating in pursuance of any particular strategic aims. The ISS amounted to a concept of maintaining TOTAL until such time as application modules became available from the National Police ISS. This continuing lack of formal strategy was commented upon by Her Majesty's Inspectorate of Constabulary (HMIC) in a visit, who noted the pressures upon the IT staff as a consequence of the absence of formal strategy. This situation had by and large existed for the majority of the decade, during which time the TOTAL system had formed the basis of IS development in the Force. Nonetheless, throughout this period, senior staff were satisfied that there was a clear ISS, albeit not formalised in documentation.

MICRO-POLITICAL ACTIVITY IN ISS FORMATION

Our discussion is based upon a consideration of micro-political activity utilising the four conceptualisations of power discussed above. This enables us to address a range of issues which are embedded in a broad stream of organisational practice (Mintzberg, 1978; Johnson, 1997), and which we must examine if we are to better appreciate the intricate micro-political nature of ISS formation.

In researching the concept of strategy within a Police Force, we must recognise that the terminology of strategy is relatively new to many of those working within the Police service. Traditionally, the quasi-militaristic command structure had been focussed upon undertaking policing through the tried and tested practices developed over decades. From the mid-1980's onwards, several papers were produced by groups allied to the UK Home Office governmental department which began discussing strategy in terms of police use of IT. Several Officers commented that they had never had to think about the concept of strategy until the early 1990's, but now they had to have 'a strategy for everything'. The introduction of strategic concepts into cultural settings such as the Police makes the research setting interesting, particularly given a cultural distinctiveness in the Police service where people like to see themselves as pragmatists who will just get on and do whatever needs doing (Holdaway, 1989), albeit in something akin to a firefighting mode of operation.

Thinking about the exercise of power in terms of the manipulation of resources provides a useful means of understanding the role of the Officer leading the IT Department from 1992 to 1994, and from 1996 until 1998. The person in this role had been a member of the Research and Development unit responsible for IT, before moving to lead the newly formed IT Department. This

person demonstrated a combination of interest in IT, was perceived as having a high level of knowledge about IT, and also had authority to develop IT. This person had authority over IT because the management levels above were not interested in taking responsibility for IT. The Chief Constable was effectively appointed to lead the Computer Strategy group by this Officer, although in addition to attending less than three of the meetings, the Chief Constable made it clear the IT was the responsibility of the Officer heading that department. Persuading the Chief Constable to agree to chair the Computer Strategy Group can be seen as an exercise of power by the Police Officer leading IT, in that this was possible through the Officer's perceived knowledgeability of IT which gave credence to his insistence that the Chief Constable chair the group. The appointment of the Chief Constable to the group was to add a symbolic weight to the role of IT in the Force, and also to demonstrate to outside bodies such as the HMIC that IT was being taken seriously. This latter point can be seen in the light of the exercise of power through the manipulation of perception, in this case manipulating symbols for internal and external consumption.

The appointment of a civilian IT manager in 1993 could also be seen in terms of symbolism, in this case for the benefit of the HMIC that a civilian was now leading IT, and for internal staff that there was now an expert in place. However, in practice, the appointment of this person again demonstrated the exercise of power through the manipulation of resources, in this case in terms of authority, and also in dominating decision making processes. The IT manager was actively managed by the Police Officer leading the IT department, which caused tension between the two people. This was because the IT manager had been recruited to lead IT but found he was being expected to take orders from the Police Officer heading IT, and also because the Police Officer heading IT now found someone who had expert knowledge in the area which was a challenge to his own position.

In addition, in terms of exercising power by controlling decision making processes, the Police Officer leading the IT area was able to filter materials coming into the IT department, so that he was able to control responses and actions, passing on material as he deemed appropriate to the IT manager. This element of control did little to foster a sense of having authority to match the responsibility for IT which other Officers in the Force took the IT department to have. This sense of authority not residing with the IT experts was exasperated by the influx of problems that were occurring with the TOTAL system - which everyone took to be the responsibility of the IT staff.

Between 1994 and 1996 the situation for the IT Manager changed when the Officer leading IT took a secondment with the Police Advisory Group on IT (PAGIT) in London. The Chief Inspector who took his place encouraged the IT manager to take authority and responsibility for IT, and to attend meetings with other senior managers in the Force, which had not happened previously. This also demonstrates an exercise of power through the use of authority, but in a positive sense - the exercise of power as emancipation rather than as oppression (Clegg, 1989; Hardy, 1996). The return of the Officer from secondment in 1996 saw the IT manager leave the Force. A new IT manager was recruited and worked under a similar relationship to the first civilian IT manager.

Throughout the course of ISS formation, relations with several agents were found to be important. The combined presence of groups such as the Home Office, the HMIC, and the Audit Commission were perceived to be important in shaping the views of senior Officers regarding the concept of strategy. Continual reference was made to these bodies in discussions about strategy, and ISS in particular. One of the surprising aspects here is that despite criticism by the HMIC regarding the lack of an up to date ISS, the problems with TOTAL, and the limited role given to the IT Manager, very little was done to address these concerns. By 1998, there was still no ISS, it was decided that TOTAL would remain in place until SPISS applications became available, and the role of the IT

manager was 'under consideration'. Whilst our argument that we can think of the relations with the HMIC in terms of the exercise of power through the manipulation of resources, this is not a one way relationship by any means. If, as in this case staff in the Force did not do anything to respond to the comments, this is less a demonstration of perversity on the part of the Force, but rather an indication of the dialectical nature of such relations.

We can also think of these agents in terms of the exercise of power through the power of the system, in that there is a sense of acceptance that these agents are part and parcel of the system, the web of relations within which the reality of organisational practice is constructed and reconstructed. The operation of these agents is out of the control of any of the people in the organisational setting, but should not be thought of as being in the hands of others either. Instead, it is the position and operation of these institutions of practice relative to one another through which a web of power relations can be considered operational.

Although officially a supplier / customer relationship between XYZ and the Force, the consensus view was that the relationship was conducted on a personal basis between the Officer leading IT and the owner of XYZ. The lack of formality in the relationship, can be seen in relation to the exercise of power through the manipulation of resources, as XYZ were able to utilise their control of development of and project management for the TOTAL system to influence the relationship in their favour. This was evidenced by their ability to secure a seven year maintenance contract in 1996, a decision which seemed odd given the continual problems with TOTAL and the impending arrival of applications for the National ISS. There was no contract specifying what XYZ would deliver, although there was what was termed a developers contract, although what would be developed remained unspecified. The nature of this relationship, and the level at which it was undertaken, without formality in negotiations or project managing on behalf of the Force, meant that XYZ played a key role in influencing what happened with TOTAL. We can see this in relation to the exercise of power through the management of resources, for example where XYZ kept control of the data model by not issuing documentation for TOTAL, and where they controlled project management through their expertise. Given that both the TOTAL system and the relationship with XYZ was subject to criticism from many senior staff in the Force, the ability of XYZ to sustain the relationship can be seen to rest predominantly with the authority of the Officer leading IT, a further exercise of power through the management of resources, namely his authority as a senior Police Officer, but also through perceptions of expertise in relation to IT.

We have already commented upon the role of the Officer leading the IT Department in controlling decision making processes within the IT Department. However, we can see the exercise of power in relation to the manipulation of decision making processes more generally regarding ISS. Initially, the IT strategy in 1992 was written solely by the Officer leading IT. After this the structuring of formal committees and groups was enacted officially for the development of ISS. These groups acted as rubber stamping groups to proposals put forward by the Officer leading the IT department, together with the project team. In practice, decision making was undertaken at informal meetings between the two Officers in the project team, and the Officer leading IT, although it was this Officer who also sought to set up formal decision making processes for ISS. While final authorisation for decisions in relation to ISS took place through the formal structure, the decisions regarding the nature of ISS, in practice through the development of TOTAL, had already been taken. ISS was thus dominated by a small group of people, in particular from 1993 to 1995, the project team and the head of IT, where decision making was largely informal, albeit that most of the same people participated in formal decision making structures. The setting up of formal processes can be seen in relation to the exercise of power through the management of process, whereby the actions of the Officer leading IT can be seen as having influenced ISS by managing the access to the processes, as well as the process itself. This supports a political view of strategic

decision making (Pettigrew, 1977; Mintzberg, 1978), and can be viewed as demonstrating the problem of formal rational views of participation and consensus in decision making.

In addition, the management of these processes, with informal and formal processes in operation, can be seen as a means of providing an illusion of formality for the benefit of both senior managers, and the HMIC, which suggests the exercise of power through the manipulation of perception. Here, we can see the use of formality to mask the actual decision processes, highlighting what Gouldner (1954) terms mock bureaucracy.

If we continue to think in terms of the manipulation of perception, this brings to our attention further aspects salient to ISS formation. For example, the use of consultants in 1988 and 1990 to report on IT in the Force could be seen as a means of seeking to increase the legitimacy of IT, that is, seeking to manipulate the perceptions of senior officers. This could be viewed as a means of securing spending on IS within the Force, both for an audience external to the Force as well as internally. The way in which groups can seek to legitimise their demands through the manipulation of perception has also been noted elsewhere (e.g. Pettigrew, 1977). In considering the socially constructed views that shape action, we cannot ignore the symbolic aspects associated with ISS formation. There was perceived symbolism surrounding the IT disaster of the 1980s, with symbolic perception developing over time without the active participation of anyone in seeking to render symbolic meaning to that event. The use of consultants was viewed as an attempt to demonstrate to the HMIC that ISS was being addressed within the Force. Similarly, we found that people perceived the Force to be lagging in use of IT, which could be seen as rendering a subjective, symbolic aspect to IT. These then become a part of the accepted cultural fabric of the institutional context within which people operate. Such symbolic aspects are not manipulations as we see them, but rather can be seen as contributing to the shaping of the mental constructs (Jayaratna, 1994) of those involved.

This brings us to another aspect of perception, which concerns the role of language. None of the interviewees thought that the word strategy was even a part of the vocabulary used within the Force prior to 1990. Language can be viewed as an important aspect of the manipulation of perception (Morgan, 1986; Choo, 1998), and has also been recognised in relation to ISS (Bloomfield & Coombs, 1992; Jones, 1995). The introduction of language that used the term strategy in relation to IS was seen as being an attempt to demonstrate the seriousness with which IS was now being addressed. On the one hand, the role of senior officers was considered to be influential in shaping a degree of interest within the organisation in developing IS, and in particular in affecting the perceptions of other people where senior management were seen to actively engage with IS (Levine & Rossmore, 1995). On the other hand, the publications emanating from Governmental sources could be seen as coming to constitute a part of the system within which those considering ISS then came to be operating. We could see this purely as interesting context, or we could instead consider this in terms of the power of the system – part of the pervasive network of influences which help to shape the micro-political practice within what we term ISS formation.

CONCLUSION

The argument advanced here has been that in seeking to better understand ISS formation we have found that thinking explicitly about the dynamics of power has enabled us to uncover a range of micro-political practice which we consider to be central to such activity. We therefore contend that developing yet more techniques to aid strategy formation would seem to be of little value if we do not address such micro-political practices that may be at the heart of what actually happens during

such processes. We continue to see work on ISS that pays little if any attention to micro-political activity (e.g. Gottschalk, 1999; Doherty et al, 1999).

What we have seen from our case study supports other authors (e.g. Walsham, 1993; Jones, 1995; Brown, 1998) in highlighting that if we want to understand ISS formation then we must engage with the micro-political activity which constitutes so much of organisational practice. We have argued that addressing power explicitly is one way of doing this, and we have illustrated a framework which enables us to think about the exercise of power in several dimensions. Such a perspective draws our attention to a number of issues. Firstly, it highlights that a significant proportion of ISS formation literature has tended to take a somewhat one-dimensional view of power, for example tending to concentrate upon participation in decision making, and upon the roles of individuals. The development of tools and techniques to assist ISS formation reinforces the agency view of this process. Secondly, it would seem that we do not yet have a particularly good understanding of what does actually happen when we think people are engaged in ISS formation, although we are seeing more work in this area (e.g. Horton, 2000). The use of four conceptualisations of power is but one means of attempting to shed further light upon such processes. However, such work is not without its difficulties, not least in seeking to research a socially constructed concept which can be conceived in so many different ways. In addition, attempting to research issues of power in organisational settings may be met with hostility or evasiveness by those who may feel threatened by such work. These are not however good enough reasons to avoid issues of power, as we seek to improve our understanding of micro-political activity. More work is needed in this area, and in particular investigating ISS formation in other sectors would provide a valuable comparison. Information system strategy is too important to be left to the mercy of formulaic prescriptions that ignore the political aspects of organisational practice.

REFERENCES

- Bloomfield B.P., Coombs R (1992) Information Technology, Control and Power: The Centralisation and Decentralisation Debate Revisited; *Journal of Management Studies*; vol.29, 4, pg.459-484.
- Brown A (1998) Narrative, Politics and Legitimacy in an IT Implementation; *Journal of Management Studies*; vol.35, 1, 35-58.
- Cavaye A.L.M. (1996) Case Study Approach: A Multi-Faceted Research Approach for IS. *Information Systems Journal*; 6, 227-242.
- Chaffee E.E (1985) Three Models of Strategy; *Academy of Management Review*; vol.10, 1, 89-98.
- Checkland, P.B. (1981) *Systems Thinking, Systems Practice*; Wiley, Chichester.
- Checkland, P.B., Holwell, S. (1998) *Information, Systems and Information Systems: Making Sense of the Field*; John Wiley & Sons, Chichester.
- Choo C.W. (1998) *The Knowing Organisation: How Organisations Use Information to Construct Meaning, Create Knowledge, and Make Decisions*; Oxford University Press, New York.
- Clegg, S.R. (1989) *Frameworks of Power*, Sage, London.
- Davies, L.J. (1991) Researching the Organisational Culture Contexts of Information Systems Strategy: A case study of the British Army, in: Nissen H.E., Klien H.K., Hirschheim R., *Information Systems Research: Contemporary Approaches and Emergent Traditions*, Elsevier Science, North-Holland. 145-167.
- Doherty N.F., Marples C.G., Suhaimi A (1999) The relative success of alternative approaches to strategic information systems planning: an empirical analysis; *Journal of Strategic*

- Information Systems*; 8,3,p.263-283.
- Foucault M (1980) *Power/Knowledge: Selected Interviews and Other Writings*, Edited by: Gordon, C., Harvester press, Brighton.
- Gouldner A (1954) *Patterns of Industrial Bureaucracy*; Routledge, London.
- Gottschalk P (1999) Strategic information systems planning: the IT strategy implementation matrix; *European Journal of Information Systems*; 8, 2, p.107-118.
- Hardy, C (1994) *Power and Politics in Organisations*, in: Hardy, C; *Managing Strategic Action*, Sage, London.
- Hardy, C (1996) Understanding Power: Bringing about Strategic Change. *British Journal of Management*; 7, Special Issue, pg..S3-S16.
- Holdaway S. (1989) Discovering Structure: Studies of the British Police Occupational culture; in: Weatheritt M., *Police Research: Some Future Prospects*; Aldershot, Avebury.
- Horton K.S. (2000) A Critical Study of Information Systems Strategy Formation in a Public Sector Context; Unpublished Ph.D.; Sheffield Hallam University, UK.
- Introna, L.D. (1997) *Management, Information and Power*; Macmillan, Basingstoke.
- Jayaratra N (1994) *Understanding and Evaluating Methodologies. NIMSAD: A Systemic Framework*; McGraw-Hill, London
- Johnson G (1997) Strategy and Everyday Reality: The case for the study of micro-strategy; Plenary address to the 3rd International Conference on the Dynamics of Strategy; University of Surrey, April.
- Jones M.R. (1995) Learning the Language of the Market: Information Systems Strategy Formation in a UK District Health Authority; *Accounting, Management & Information Technology*; vol. 4, 3, 119-147
- Klein H.K., Myers D (1999) A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems; *MIS Quarterly*, Vol. 23, 1.
- Kling, R., Scacchi, W. (1982) The Web of Computing: Computing Technology as Social Organisation; *Advances in Computers*, Vol. 21; Academic Press, New York.
- Knights, D., Morgan, G. (1991) The Concept of Strategy in Sociology: A Note of Dissent, *Sociology*, 24, 3, 475-483.
- Knights, D., Murray, F. (1994) *Managers Divided: Organisation Politics and Information Technology Management*, Wiley, Chichester.
- Knights, D., Vurdubakis, T. (1994) Foucault, Power, Resistance and All That, in: Jermier J.M., Knights D., Nord W.R., *Resistance and Power in Organisations*, Routledge, London. 167-198.
- Levine, H.G., Rossmore, D. (1995) Politics and the function of Power in a Case Study of IT Implementation, *Journal of Management Information Systems*, 11, 3, 115-133.
- Lukes, S. (1974) *Power: A Radical View*, Macmillan, London.
- Markus M.L. (1983) Power, Politics and MIS Implementation; *Communications of the ACM*; 26, 6, 430-444.
- Mintzberg, H. (1978) Patterns in Strategy Formation; *Management Science*; 24, 9, 934-948.
- Mintzberg H (1983) *Power in and Around Organisations*; Prentice-Hall, Englewood Cliffs, N.J..
- Morgan G. (1986) *Images of Organisation*; Newbury Park, California, Sage.
- Myers, M (1997) Interpretive Research in Information Systems; in Mingers, J., Stowell, F.; *Information Systems: An Emerging Discipline?*; 1997; McGraw-Hill, Maidenhead
- Narayanan, V.K., Fahey, L. (1982) The Micro-Politics of Strategy Formulation; *Academy of Management Review*; 7, 1, 25-34.
- Pettigrew A M (1973) *The Politics of Organisational Decision Making*, Tavistock, London.
- Pettigrew, A.M. (1977) Strategy Formulation as a Political Process; *International Studies of Management & Organisation*; 7, 2, 78-87.

- Scott-Morton, M. (1988) Strategy Formulation Methodologies and IT, in: *Earl, M., Information Management: The Strategic Dimension, Oxford University Press, Oxford*, 54-67.
- Sillince J.A.A., Mouakket S (1997) Varieties of Political Process During Systems Development; *Information Systems Research*; 8, 4, 368-397.
- Walsham, G. (1993) *Interpreting Information Systems in Organisations*, Wiley, Chichester.

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