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The Culture of Paper, Information and Power: an Irish Example

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ABSTRACT : The analysis of electronic versus paper documents, especially in the context of computer-supported cooperative work (CSCW), has often focused on affordances, issues of design and implementation and work practices. Issues of culture are often understated in such studies. Yet, like any object of material culture, the use of paper files, as well as an aversion to electronic information sharing, is conditioned by the cultural and political background of a society. This article will suggest that the persistence of paper files in a section of the Irish civil service during the 1990s had much to do with issues of accountability and a cult of expertise, in which papers files, as material objects, were deployed on behalf of claims of expertise and power. This intertwining of power, politics and information is a feature of Irish society, and the discourse of expertise and power is a theme that permeates many aspects of Irish culture.

KEYWORDS: computer-supported cooperative work, information systems design, Ireland, paperless office, political clientelism, public administration, workplace ethnography

Introduction

The analysis of electronic versus paper documents, especially in the context of computer supported cooperative work (CSCW), has often focused on affordances, issues of design and implementation, and work practices. Issues of culture are often understated in such studies. Yet, like any other objects, the use of paper documents as well as an aversion to sharing electronic information, is conditioned by the cultural and political background of a society. This article will suggest that the

persistence of paper files in a section of the Irish civil service during the 1990's had much to do with issues of accountability and a cult of expertise, in which papers files, as material objects, were deployed on behalf of claims of expertise and power. However, this discourse of expertise and power was a theme that permeated many aspects of Irish society during this time. Rather than being solely a consequence of organisational factors, the persistence of paper files and the aversion to sharing or recording tacit knowledge in this organisation can also be seen as the intertwining of power, politics, and information that is a characteristic of Irish society.

There has been a significant amount of research to improve the effectiveness of computer supported co-operative work (CSCW), and much of this research has emphasised individuals' work practices and the difficulties of duplicating those work practices with electronic systems (Suchman 1987; Hughes, Randall et al. 1991). Such research takes normal work practices as its starting point and then explores the difficulties of mirroring work in any CSCW system, often by documenting staff's response to inappropriate information systems. Explanations of problems usually focus either on design issues (e.g. is the software appropriate for tasks?) or organisational issues (e.g. are there rewards for individuals who use new systems?). These have been such rich sources of explanation that it is understandable that the notion of culture, the 'bread and butter' of anthropological research, has been underplayed in such research. This paper will suggest that culture, in its traditional sense as the social practices, values and traditions shared by a group of people living in the same geographical area (see Hannerz 1992 for a discussion of the complexity of culture definitions), can reveal another dimension to the description and analysis of work practices and information systems in an organisation.

The anthropological study of material culture was revitalised when attention turned to the objects and artefacts produced through technological development. Appadurai (1986) helped re-legitimise such concerns in anthropology, with scholars such as Kopytoff (1986) providing a 'roadmap' for anthropologists when he described how the biography of a car in Africa would reveal a wealth of cultural data: for example, the way it was acquired, how and from whom the money was assembled to pay for it, the relationship of the seller to the buyer, the uses to which the car is regularly put, the identity of its most frequent passengers, and in the end, when the car collapses, the final disposition of its remains. All of these details would reveal an entirely different biography from that of a middle-class American, or Navajo, or French peasant car.

Such fine-grained ethnographic analysis has become integral to the study of technological objects as well, including studies of paper and electronic documents (Harper 1998; Brown and Duguid 2000; Sellen and Harper 2002). Often, these objects have been framed within the context of Computer Supported Cooperative Work (CSCW) since the production and use of electronic documents usually takes place in this context. Studies of documents and computer supported cooperative work originally focused on design issues and human computer interfaces, but have also included social and organisational issues over recent years (Schmidt and Bannon 1992; Bullen and Bennett 1993; Orlikowski 1993; Kling and Allen 1996). The social context, especially in terms of the organisation in which a CSCW system is embedded has been a crucial element of any analysis of the design, implementation or use of a CSCW system, and ethnographic analyses of social practice and technological objects have led to productive insights (Suchman 1987; Jordan 1996; Orr 1996).

Ethnographic description and analysis has often been identified as a core theme of anthropological research; but ethnographic

analysis has been used to identify design, and organisational, individual or social factors. Culture, another core theme in anthropology, has less frequently been identified in these studies of documents and CSCW. While the topic of culture has not been absent from studies of organisations, it is often considered in terms of organisational culture, or the cross-cultural problems that emerge when individuals from different cultures try to work together using a CSCW system (Ishii 1993; Fussell and Zhang 2007) or culture as a factor in the design of CSCW systems (Heaton 1999). Culture, as those traditions, practices and values characteristic of society rather than an organisation or a community of practice, has rarely been used as a factor in explaining issues in the use of paper and electronic documents. In the post-industrial and transnational global village, cultural analysis frequently focuses on de-territorialised cultural flows and ethnoscapes (Appadurai 1989; 1996; Hannerz 1996). However, there is some benefit in remembering that, intermingled with these flows, there also remains the shared traditions and practices of those who inhabit a common place. The imagined community of Anderson (1991), combined with Giddens's admonition that '[e]veryone still continues to live a local life, and the constraints of the body ensure that all individuals, at every moment, are contextually situated in time and space' (Giddens 1991: 187), reminds researchers that 'place' remains significant (Mitchell 1997; Featherstone, Phillips et al. 2007). Culture, as social practices and values shared by individuals in a locality, still retains explanatory benefits. As will be shown, the implementation and use of Lotus Notes in a section of the Irish civil service can be described and explained in the context of work practices and organisational structures. However, the practices in this section of the Irish civil service are also echoed through Irish politics and administration, and so can also be understood as manifestations of attitudes and practices characteristic of Irish society. In short, the paper argues that, in addition to tasks, work practices, and organisational

structures, broad social and cultural factors also provide useful insights for the study of material objects, even in organisational contexts.

The Research Setting: the Section

The use of paper documents versus electronic files in a section of the Irish civil service provides an useful instance of links between work practices, organisational structures and society. The setting of this research is a small unit within the Irish Civil Service (which I shall refer to here as 'the Section'), which is mandated to examine disagreements between citizens and other parts of a civil service department regarding claims by citizens for various services or benefits. In this organisation, information used by civil servants in this section was duplicated in both electronic and paper documents, and civil servants used both media. Staff had free choice which system to use as their primary system, so their choice between electronic or paper media was a consequence of their own evaluation of each media, on an issue by issue basis. The benefits of studying such situations have been illustrated in other research. For instance, Bowers (1995) discussed 'some of the issues raised when a paper-document-intensive work site faces the possible automation of its document production practices'. He traced the development of two concurrent document systems, one paper and the other electronic, because the electronic system could not provide all the organisational and individual benefits already provided by the paper system. Bowers noted that, when users do not use features of a CSCW system, it is not always because such features are unfamiliar or threatening. They may understand the features, but judge them unsuitable for specific work practices in that organisation. Such choices may also, however, reflect broader cultural influences. In the case reported here, individual choices demonstrate design issues,

organisational context issues, issues of expertise, but also, it is suggested, cultural themes widespread throughout Irish society.

The work of the 'Section' was quasi-judicial, organising its work in terms of cases; each case was a disputed decision regarding state benefits for citizens. Each case was handled by an examiner, who may have had a number of cases 'on hand' at any given time. Clerks took details of disputes, and looked for further information, as directed by examiners. Examiners decided what material was necessary for decisions about disputes to be made. When a resolution of a case was arrived at, the case was passed to one of the senior examiners who, having looked at it, passed it on to the Head of the Section for final approval. Usually, the civil servants who had made the original decision would abide by the recommendation that emanated from the Section. In the early 1990s, when this research was carried out, the Section comprised about thirty-five civil servants, who were on three different floors of the same building. There was ample opportunity for face to face interaction, for both work and social purposes, in a relatively small area. Middle and higher level staff (examiners and senior examiners) had private offices; there were about three to five clerical staff in large open offices. The Section was structured vertically, with three separate sub-groups, each dealing with a different kind of service or benefit about which disputes arose. For each area, there was one senior examiner, with about three to five examiners reporting to the senior examiner. Supporting the work of the examiners were about three to five clerks, whose work was largely determined by requests from examiners for further information. There were general procedures for investigation, but each examiner worked largely on his/her own, and only consulted with other examiners, or with the senior examiner in the sub-section, as he or she desired. Senior management consisted of the three senior managers and the overall Director of the Section.

About one year prior to the research, a review of office procedures by senior management had identified a number of key organisational improvements which an information system could provide for the work of the Section. Primarily, the information system was to provide a workflow system which would permit individual cases to be tracked and atypical cases to be identified. In addition, the information system would provide management with information on numbers of cases per examiner, length of time to make determinations on cases, and other statistical measures of efficiency. All aspects of a case were to be available via the information system, including material received from outside the Section. Cases that would have significance for future cases that might come into the Section should be highlighted, and the information should be in a format which made it accessible to all staff in order to assist them in researching new cases. The system would include a keyword search facility. Any specialist information used by the Section (journals, reports, general office procedure information) would also be available through the system. The system would provide word-processing, spreadsheet facilities, internal and external electronic mail, access to a fax from a staff computer/workstation, appointments scheduling, calendar and phone directory (internal and selected external). The system would facilitate communication both internally and externally by the provision of an internal bulletin board and by allowing links to be established with other sections of the civil service and external commercial databases. Senior management then sought to identify an information system which would meet these requirements. Nearly one third of lower and middle level staff were also involved in this selection process, as they evaluated a variety of different information systems with work-flow capabilities, to see which was most suitable for the requirements identified.

In consultation with the Centre for Management and Organisation Development (a central government department specialising in information technology and management), senior management chose a groupware product, Lotus NOTES (see Komito 1998 for further details). Lotus/IBM NOTES appears on the user's screen as a set of separate boxes; each 'box' is a flat (rather than relational) database, into which a variety of information (text, graphics, sound, scanned documents, links to other files) can be input. Information is input through customised 'forms', and displayed through customised 'views'. It provides secure access to shared documents along with an integrated electronic mail system, and the potential for bulletin board style electronic discussion lists and distribution lists.

Although customisation is relatively complex, there is great flexibility in the ways in which Lotus NOTES data can be input, recorded, and displayed. For instance, fields in a form could inherit characteristics from previous records; this was usually used to pre-populate fields with the name of the examiner, name of the citizen who brought the case, case reference number and so on.

This potential flexibility of Lotus NOTES was seen by senior management as its major advantage, and most staff in the Section participated in, or made suggestions regarding, the design of the 'cases' database, which was the core database in the Section. Senior management later said, in interviews, that the NOTES database was chosen because this enabled an information system that mimicked traditional paper-based work processes. There was no attempt to alter or 're-engineer' existing work structures; management said, in later interviews, that they preferred to avoid changes to existing procedures in order to reduce the need to learn new systems or processes. Where possible, electronic forms were created that duplicated the previous paper forms (see Table 1). A menu system provided a range of possible forms, for different types of data entry (e.g. comment, phone

conversation, new written submission from an external source) and a different possible views of existing data (e.g. all entries for a case, all cases being supervised by a particular examiner, all cases completed in a particular month, and so on, as illustrated in Table 2). Each view displayed a single record on each line, providing different summary information of each record and enabling records to be ordered according to different criteria. For instance, in Table 3, the highlighted line is a single record, but is presented as one record within the case of Khan, Genghis. If a new form were composed, as indicated in the menu, it would be pre-populated with data from the highlighted case. The templates for different forms and views were created by local support staff, based on requests from anyone in the Section.

After Lotus NOTES was introduced, the existing system of paper files was maintained, as the Director of the Section doubted that electronic files could be used as evidence, in the event of court proceedings. One year later, when research was being conducted, the Section continued to operate two concurrent systems, one paper based and the other electronic. Individuals could use either system, as long as the results were duplicated in the other. Although not all paper documents that arrived into the office were scanned, all documents created by staff members were duplicated in both electronic and paper form. In addition to the database of cases, an electronic notice board database was created, as were databases for a discussion list and a notice board for cases that were deemed useful for guidance when future cases arose. Finally, there was a general 'knowledge based' bulletin board, where ideas, suggestions and so on about the work of the Section, or specific sub-sections, could be posted and discussed.

The Research Agenda

In 1992, about a year after the introduction of the new information system, I was conducting research on the impact of new technologies on communication patterns in organisations and contacted senior management in the Section about examining communication patterns in the organisation. At this time, senior management was interested in seeing whether Lotus NOTES had enabled the organisational improvements which had been expected. They were satisfied that it provided a better system of monitoring and managing case loads of examiners and tracking progress of cases, but wondered if there were possible benefits from Lotus NOTES that were not yet being achieved. A joint research agenda was agreed between myself and senior management; I would conduct my research on the impact of new technologies on communication patterns in organisations and would also provide a report to senior management on the impact of Lotus NOTES. The terms of reference for these report were very loosely defined; as far as senior management was concerned, any opinions from an outside academic would be of interest. Data for the research was obtained through three months of ethnographic participant-observation, involving observation of work practices and social interactions. In addition, interviews of about one hour duration were conducted with each staff member, and staff members also completed two surveys: one was a survey of work and social communication with other workers, in terms of face to face, electronic mail, and telephone, and the other was used to create a ranked list of fellow employees, in terms of workers perceptions of social and work contacts. In addition, logs of email traffic over a two month period were examined. Both the survey data and email logs were used for social network analysis (Killworth, Bernard et al. 1984; Bernard 1988; Wasserman and Galaskiewicz 1994).

Organisational Impact

By management standards, the introduction of Lotus NOTES was judged to be successful, since the primary goal of introducing a system to manage and monitor workloads for individual cases was achieved. A number of the other desired improvements had also taken place. For instance, now that staff had an email system that was an integral part of the information system (rather than the previous stand alone system), email usage had increased. It provided a current phone directory, shared access to electronic documents, and other improvements.

It was accepted by the users and satisfied the monitoring requirements of senior managers. Middle- and lower-ranking members of the organisation had acquiesced in the introduction of the new information system, partly because the program had been localised to provide the functionalities that the users wanted and needed. One year on, staff considered Lotus NOTES to be beneficial to their work, even though few members of staff had experienced any difficulties with the previous system. In interviews, users professed themselves satisfied with the change, and considered themselves to be doing a better job than previously. In the context of system design and implementation, it provides an example of the effective matching of information system and work practice by understanding work practices and then customising a flexible information system so as to accommodate those work practices.

Interestingly, as the new system was integrated into work practice, workers discovered unexpected benefits of the system which provided additional incentives for using it. At lower levels of the organisation, those who had to deal with queries from the public were fervent in their appreciation of the new system. Previously, trying to find out the status of a case was time-consuming and frustrating; often, they could offer no satisfactory answer to the query posed. With the new system, instead of trying to find someone else, they had instant

access to all cases and could easily provide a satisfactory answer to any query. Passing messages to other members of staff, via email, was also much easier than previous procedures. Clerks reported that they were now doing less typing of examiner's reports, although they were inputting more data into electronic files. On the whole, though, they found their work was now slightly less repetitive and more interesting.

The middle grade of examiner reported that Lotus NOTES had a significant impact on their work practices. Examiners now did a lot of their own word processing and, rather than dictate letters (to be typed by clerks), they looked after their own correspondence. This meant a lot more time spent typing and, especially for those who needed to improve keyboard and computer skills, this was time-consuming. However, even those who found the typing to be time consuming preferred the increased control over work processes (content of work, scheduling of work, as well as greater autonomy and independence vis-à-vis others) that Lotus NOTES provided: 'You can control exactly what you're doing all of the time. You don't have to part with any of your work to anyone else, to do anything with it -- to file it, or type it, or photocopy it, or ... you just do it all yourself'.

Although interviews were carried out individually, there was a general agreement that their work has improved in quality, even if it was difficult to demonstrate a decrease in the amount of time taken to process a case.

One of the greatest unexpected benefits for examiners was a seemingly minor one. Once an examiner was finished with a case, it went to first to the Senior Examiner, and then, eventually, to the Director for final decision. It was often some time before that decision was made and examiners sometimes received a phone call from the Director, with no advance warning, asking about specific aspects of the case. At that point, the examiner was not likely to remember specific details, and the paper file was now sitting on the superior's

desk. With Lotus NOTES, the examiner could refresh his or her memory by accessing the electronic file, even though the superior had the paper version. Interestingly, this was not always seen as a reciprocal benefit -- that is, some senior examiners were lukewarm about being asked, themselves, to look at electronic versions of files when the paper files were still held by examiners.

One year on, then, all members of the organisation were satisfied that they were able to use the new information system and that their work had improved. Senior managers were equally satisfied that their objectives had also been met. However, it was also clear that there were capabilities that Lotus NOTES could have provided for work that were not being exploited. The Director of the Section had required that paper records be maintained, as conjunction with electronic records. However, it was clear that, despite the benefits that electronic records afforded, and despite the acceptance, and even enthusiasm, evidenced by staff for the new system, paper records continued to be viewed by most members of staff as central to their work.

Paper Documents as Artefacts

Despite the pervasive use of electronic documents, observations of work practices and discussions with members of the Section indicated that the paper file, containing all documents relevant to a case, remained crucial to the work of the office. When this issue was raised during interviews, the common explanation put forward by examiners revolved around the perceived benefits of paper as a means of interpreting information. As noted, the work of the Section was defined in terms of 'the case' - a complaint made by a member of the public regarding services provided by another section. Each case was, by definition, a dispute between two parties, and examiners were trying to arrive at 'the truth', which was somewhere between two different

versions of events. Examiners depended on the paper file to imagine or visualise the conflict between appellant and the relevant section or body, and to make decisions about what was 'really' happening in a disputed reality. In order to do this, examiners looked for meta-information, and derived contextual meaning from file attributes -- how the papers were ordered, what kinds of paper were used, were comments typed or scribbled, notes in margin, and so on. In this way, they deduced the 'hidden' story or narrative, which was vital to their work. During interviews, examiners would often hold up a file, to explain how the actual appearance of the file, and the order of papers in that file, gave them insight into what had been happening in a case. As one examiner said: 'there are certain kinds of cases where it is only by going through the file ... being able to flick back and see the pattern of what has gone wrong. ... Over the years, you get to know how a ... file is even put together. You'd know if something was missing off it.'

Examiners found it difficult to visualise information about a case from the electronic files. Paper files were seen as documents which, layer by layer, had a history, while electronic files had been stripped of their uniqueness. In electronic files, all entries look the same and all forms look the same; there is no sense of history in how the papers are ordered, there are not even scribbles in the margin. Information entered into the Lotus NOTES database is too 'clean'; there is no way to compare different entries and the examiner is denied contextual information. Electronic data is sanitised and emptied of significance; the end product may be available, but there is no means by which the process can be deduced. Even when examiners used both the electronic and paper files together, the paper file still took priority. As one examiner said, holding the paper file in his hand, '... this would be my guiding star.'

The approach of examiners to the text, whether electronic or paper, was the opposite of the hermeneutic interpretation, which

depends on creating a distance between the text and the authors of the text, so that the text can be analysed as a separate entity (Lee 1994). Instead, there was an interrogation of textual data, much as a solicitor/lawyer reviews evidence for a case. In practice, the text was more often examined for evidence of falsity and lack of completeness as opposed to truthfulness and completeness. In terms of the 'information-rich' debate: paper documents are 'richer' in information content than their electronic equivalents, and workers are using the system best suited for the tasks at hand. Thus, if one wanted to discuss a case with another member of staff, both would want to see the paper file, which meant that the members of staff have to be in the same place, and probably at the same time, in order to collaborate.

The significance of context for the interpretation of paper files, as well as the importance of the actual characteristics of physical documents has been noted in other studies (Sellen and Harper 2002 summarizes these). In this case, the electronic documents do not provide such information. However, in the Section, the significance of the paper document went even further. Responsibility, or 'ownership', for a case rested with the holder of the physical file. The process by which the case moved through the Section was marked by the physical passage of the paper file. To discharge responsibility for a case, one passed on the paper file. To claim responsibility, one possessed the paper file. Although it was possible to transfer responsibility for a case from one person to another by changing a field in the electronic file, responsibility did not actually transfer until the paper file arrived on the other person's desk: 'The physical file still has to go... Certainly my experience of it is that people are more inclined to deal with the physical file.'

One examiner discussed a case in which she asked for comments from a superior: 'I have asked him to advise me what to do next.... He hasn't come back to me -- but if he does and says 'what

have you been doing', I can say that I sent him a message Yesterday, in fact, I sent him the file, as well. I've still heard nothing, but I'm covered.'

She later emphasised that file was sent to ' ... emphasise that this was his problem, not mine, and if the file was sitting there, it could still be mine.'

The paper file had an authenticity, as an artefact, which the electronic version lacked. The paper file embodied both the case and the individual who has brought the case. When talking to an examiner, if I asked how many cases he or she had on hand, they would gesture to the stack of paper files scattered on their desk to indicate their work load. In discussing cases, one respondent said that the only loyalty she had was 'to people on her desk', gesturing to the files. For her, the files were the people. For examiners, there is little reward for increased productivity, in either salary or promotion. Examiners work in isolation, and obtain job satisfaction from solving the problem. There was emotional investment in particular cases, which may take months to solve, and the paper file is the physical talisman of that investment of time and emotional energy.

Sharing Information

The conviction that paper files were more informative than electronic records meant that the potential advantage of Lotus NOTES' capacity for shared access to information was not being utilised. Since shared access to paper files is more difficult than shared access to electronic records, many of the collaborative features of Lotus NOTES were not exploited. In addition, however, other facilities for sharing information that were available in Lotus NOTES were not exploited by staff in the Section. In most CSCW systems, electronic mail is usually a highly prized function (Bullen and Bennett 1993). In the initial enthusiasm for

electronic mail, it was suggested that electronic mail would reduce organisational hierarchy and cut across boundaries within organisations (Sproull and Kiesler 1991). While conscious of the restrictions of the medium (a lack of non-verbal information, and a tendency to disassociate the messages from the people sending them), there was the hope that increasing the 'richness' of the medium would also increase its effectiveness, as a complement, or perhaps replacement, for face to face communication. In more recent times, the different modes of communication are seen as complementary: there are some things best suited for face to face communication, while other tasks can be effectively carried out via electronic mail (Steinfeld 1986; McKenney, Zack et al. 1992; Markus 1994; Mantovani 1996).

In the case of the Section, electronic mail, telephone, and face to face contact were available to all. Based on survey data, the pattern of work communication was hierarchical, going up and down within sub-group in the Section, but rarely across sub-group boundaries. Social communication, on the other hand, was horizontal, linking people of equivalent work status, regardless of which sub-group they were in. This pattern of hierarchical work communication versus horizontal social communication was replicated in phone, face-to-face, and electronic mail communication. More significantly, the preferred mode of contact (as stated in interviews and survey responses, as well as demonstrated by email logs) was face to face or phone; electronic mail was simply not seen to be as effective, for work or social purposes. This is not a self-evident finding, since electronic mail has many advantages over face to face contact in some contexts - it is not intrusive, it can be used to control and restrict the content of communication, it constitutes a record of contact, and so on. It might be expected that people would choose one versus another mode of communication, based on the particular situation. Yet, in the Section,

email was not just secondary, it was virtually non-existent. An examination of email logs over 12 weeks showed an average of only 2.5 email messages per person per week. Even that small amount was deceptive, since, out of about 30 staff in the Section, one individual accounted for twenty percent of all email messages sent, and three other members of staff received, between them, 50 percent of his messages. Eight pairs of staff were responsible for nearly 30 percent of messages. The majority of email messages were confined to a group of eight junior members of the Section. This group existed as a small social clique, with shared understandings and contexts, and short one line messages were both a way to enhance that in-group membership, and also were more easily understood because of that in-group membership. The email was used for social purposes (jokes about other staff, arranging to meet for lunch) and not for work. For work, email was not simply an inferior but acceptable alternative to face to face contact; it was unsuitable and was avoided. Work related communication, it was thought, required face to face communication, or, at worst, phone communication. There may be good organisational reasons for avoiding the use of electronic mail -- for instance, a fear of documenting informal discussions. However, this lack of sharing information extended to other work practices as well, suggesting that the aversion to email was one manifestation of a wider issue.

One of the benefits of Lotus NOTES is its functionality as a means of making individual expertise and experience available to others. Management had created a 'precedents' database to share expertise and experience. Noteworthy cases, which established precedent or which revealed something of use to other examiners, were supposed to be marked in the database system. Management felt such a database would be useful because individuals, in the process of interpreting cases, learned about the individuals and procedures of the civil service departments they were examining. The

Section was in a semi-adversarial relationship with these departments, and the knowledge gained from cases helped examiners deal with similar cases both more efficiently and also more effectively. They knew who to contact, they knew what procedures were actually followed in a case (as distinct from 'official' procedures, and so on). More importantly, they also learned the social implications of the language in the documents they received. As Brown and Duguid (1996) note: 'Documents are ... used to patrol and control. ... [D]ocuments can patrol community boundaries rather than cross them. Strange formats, unexplained generic conventions, jargon, abbreviations, allusions, as well as private languages are all examples of ways in which documents keep people out as much as bring them in.'

The documents which examiners looked at were not necessarily made with the intention of misleading outsiders, but the notation systems were most meaningful to the community sharing a common strategy of interpretation. Examiners learned the system of practice in the particular department they dealt with, or they could not interpret the documents. Management recognized that sharing this expertise would increase the effectiveness of other members of staff, especially new members of staff, in future dealings with the departments being examined.

However, not enough individuals entered information into the database to make it useful. Not only was there little use of the 'precedents' database, there was also little the use of the database for documents or comments of general office interest. Ethnographic observation and interviews indicated that relatively little information was shared amongst members of the Section, and, in so far as information was shared, it was done on a personal, one to one basis. One examiner noted that people were quite 'custodial', with sharing of knowledge on a 'need to know' basis. Such information was never entered into any public database; as result, if someone left the Section,

their replacement had to go through a long process of 'reading into' their new job, to learn the people and the language of the section they must now deal with and slowly accumulate the expertise and experience that the previous incumbent took with them with they left. Management was aware of the benefits of documenting such knowledge so that it would be available to new staff, but had been unable to achieve this.

Studies have suggested various reasons why such sharing of private 'intellectual capital' or experience might not take place. One of the early studies of CSCW systems indicated that such sharing would only take place if the organisational structure rewarded individuals who made such private intellectual capital publicly available (Orlikowski 1993). Certainly, in the case of the Section, there was clear evidence that the minimal use of discussion lists was not related to training or interface issues: when the Section was undergoing a review of organisational structures, staff were invited to participate in an electronic discussion using a public database. It was possible to make anonymous, as well as attributed, comments. The database was widely used by staff, with anonymous contributions outweighing attributed ones. The minimal use of public databases to share information in other contexts was the result of disinclination, not inability. The issue is whether the approach used by Orlikowski explains the pervasive disinclination found in the Section. An unwillingness to lose the profit being gained from private knowledge makes sense in a commercial organisation; it is less convincing in a civil service department in which job security is a legal entitlement and promotion is more likely to come from pleasing superiors than by hoarding knowledge.

A lack of sharing may also derive from a fear regarding the danger of context-free information. It has become clear that individuals may only wish to share information with others once they can trust other individuals to use the information appropriately (Kelly

2005). Staff preferred to maintain knowledge in their heads rather than impart it to an electronic system and lose control of it. If knowledge that resides in people's heads, based on their own experiences, is encoded into an electronic system, individuals lose control over who has access to it, and how that information is interpreted by others. In which case, the provider of the original may be blamed when the information is used inappropriately. Perhaps examiners were unwilling to risk their reputations, and this explains the unwillingness to share expertise?

Expertise as Power

Up to this point, there have been two capacities in Lotus NOTES that were not exploited in the Section. Firstly, the potential benefits of electronic records were not being realised due to a continued focus on paper files. The explanation provided by examiners was that paper files enabled them to deduce the 'real story' behind decisions reached by other civil servants. The second was the lack of sharing of information by contributing to, and accessing, public databases, which may be explained by a fear of losing control over information. However, there may be an explanation for both issues: a desire to preserve one's own status by restricting information dissemination and thus also restricting the ability to make decisions. By virtue of the electronic information system, junior staff have direct access to information about organisational activities, and participating in procedures and decision making processes makes them part of the knowledge system. Examiners asked junior staff to follow up particular aspects of a case, and often expected them to decide how to proceed on a case. Especially when examiners were overworked, a significant amount of responsibility might devolve to junior staff. This had been the case in the time prior to my research, and it seemed that

the distinction between expertise and experience of junior and middle level staff was becoming blurred. Some clerical staff suggested, in interviews, that they could do the job as well as examiners: 'one of the lads in there, C ... , would be as good as an awful lot of people in dealing with cases'

At least one examiner also commented on this perception that junior staff could do their job; this person emphasised the importance of training and experience, rather than just reading about cases in files. Perhaps there was good reason, as one examiner noted, for people to be quite 'custodial', with sharing of knowledge on a 'need to know' basis: they wish to protect themselves by protecting their knowledge. In this context, the previous emphasis on the need to be able to interpret meta-information in paper files acquires a new significance: experience in the preserve of senior members of staff. It is crucial that such experience, residing in individuals' heads, cannot be encoded into an information system; if it could, then the claim of expertise and thus the claim for higher status and pay, would be in jeopardy. This organisational explanation has an authentic 'ring' and, if true, management should have to alter the organisational structure in order to protect the position of examiners in others ways (or remove the pay and status distinctions between clerk and examiner completely) in order to enable a greater sharing of information and expertise.

A Cultural Perspective: Information is Power

Both participant explanations ('we need paper files to do a good job') and observer explanations ('using electronic records and sharing expertise would undermine the expertise and experience claims that justifies our position and salary') provide useful insights into work practices in the Section. However, I would suggest that they still do not provide a full picture. Organisations, and the individuals who work in

them, are embedded in a broader cultural and historical context. The theme that information and expertise conveys power and status, and so should not be shared, is not unique to the Section that has been described; it finds echoes in other aspects of Irish culture. In Irish society, information has been perceived to be a valuable resource in a zero sum game and this has been a particularly pervasive theme in Irish politics and administration. It is cliché, in the discourse of the Information Society, to say that information is power. In the case of Ireland, information was power long before the introduction of mainframes, personal computers, and the Internet.

In Irish society and politics, information has had a political value as a scarce resource, and that value has been maintained by restricting information distribution. In the early 1960s, Chubb (1963) described politicians as local men who looked after their constituent's interests by 'going about persecuting civil servants'. Chubb suggested that the Irish politician's primary task was to mediate between his local constituents and the state's administrative apparatus. Voters wanted state services, and politicians helped or appeared to help people obtain those services. Irish citizens believed that, in order to obtain a government benefit or service, politicians had to intercede on the citizen's behalf. Citizens, it was thought, did not receive state benefits as their right; they received benefits as personal favours granted by powerful and beneficent politicians as a reward for political support. The tacit exchange of political support for special personal preference has been a cornerstone of Irish politics since independence (Komito and Gallagher 2004). Various factors combine in supporting this exchange of votes for services: lack of administrative information and accountability, distrust of the impartiality of the civil service, lack of confidence in the efficacy of interventions, and a monopoly by politicians on knowledge of the bureaucratic process have been suggested as central (Komito 1984; 1989; 1992)¹. Claims of power by

politicians, with supporting evidence in terms of letters to constituents and public speeches, could not be disputed due to a lack of transparency in the process by which state benefits were allocated. Politicians understood that, as long as they restricted the dissemination of information, their claims could not be tested or disproved.²

This has some resonances with the 'image of limited good' of peasant culture that is associated with George M. Foster (1965), except that, in the case of Irish politics, losing a monopoly over information actually did mean that another's gain is the one's own loss. If constituents possessed sufficient information to test a politician's claims of 'special access', the system would have collapsed. It is notable that with the government's introduction of Freedom of Information legislation in the late 1990s, which required that procedures and criteria for decisions be recorded and be made available to the general public (Government of Ireland 1997), such transparency was not popular with politicians and there have often been efforts to reduce the ability of citizens to obtain information.³

This restriction on information dissemination and the conviction that too much information is, by definition, a threat, has pervaded the Irish administration as well as Irish politics. This view has been reflected in the answers to Parliamentary Questions prepared by civil servants for Ministers, where only the most carefully phrased question produces the looked for answer. Indeed, when a politician complained, in 1995, that, despite asking Parliamentary Questions on the topic, she not been given relevant information, the Prime Minister admitted having a reply prepared which would have contained the relevant information that the politician wanted, but did not provide the information because 'Deputy O'Donnell and others had not asked it'. As Deputy O'Donnell noted, she 'could only have asked the question if she had already known the answer'⁴. The Prime Minister's response was: 'I am obliged to give facts in reply to questions asked — no more and no less'. Small

wonder that, during interviews with politicians in the 1980s, I was told that one should only ask a Parliamentary Question when one already knew the answer, as this was the only way to ensure properly phrasing the question so preventing misleading answers.

Restricting information dissemination included restricting access to those who possessed information. For instance, in the late 1970s, when conducting research on political clientelism in urban Ireland, I phoned a local official on his direct line to arrange an interview. While I used the conversation to try to arrange a meeting, the official spent most of the conversation trying to ascertain how and from whom I had obtained his phone number, as such information was restricted to fellow officials and local politicians. It was quite revolutionary when, in 1985, John Boland, as Minister for the Public Service, announced that 'Civil servants dealing with the public, whether face to face, by telephone or by letter, are required to have their names and designation typed below their signature on all correspondence and to wear name badges when serving in offices open to the public'.⁵ Up to this point, civil servants, like politicians, preferred to restrict information, even about their own identity. During interviews in the early 1980s, civil servants were quite clear that they preferred restricting information rather than disseminating information (Komito 1985). In large measure, then, the practice of restricting information dissemination by avoiding documentation in electronic form, so evident in this Section, was another manifestation of a general cultural theme: information is too valuable and too dangerous to share.

It is difficult to prove the significance of this cultural theme in the analysis of documents as artefacts in the Section, as compared with the organisational and design factors already discussed. One of the hallmarks of qualitative research is the difficulty in providing proof in the positivist tradition, and it is often possible to find counter examples for any proposition. However, it is not credible that the use and

significance of documents, as a medium by which information is stored, accessed and disseminated, would be immune from values of the wider society. Bowers (1995) reported that, in the UK civil service, spoken interaction was 'cordial, consensual, and less critical than written texts', while writing, because written/printed documents are usually policy, and sometimes governed by legal interpretation, are treated more carefully, with exact wordings being important. In his experience, electronic bulletin boards were treated as formal policy arenas, instead of informal discussions areas. The desire to restrict information dissemination characteristic of Irish civil servants would not be out of place in Bowers' study of the UK civil service. However, in the Irish case, these values are manifest in multiple fora in Irish society. Organisational practices mirror broader cultural values. The defence of expertise, the avoidance of sharing experience, the minimal use of email, are found not only in this Section of the Irish civil service; they are also found throughout the general civil service and political attitudes amongst the wider public. My suggestion is that the values of privacy and the perception of information as threat permeate Irish society, and this alters our understanding of work practices in the Section. Whether the aim is to improve the use of Lotus NOTES or increase the effectiveness of examiners when they investigate disputed cases, culture as a consideration enhances, rather than diminishes, our attempts to understand how information and documents can be understood as social products.

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¹ Other factors include strong party loyalty on the part of voters, the electoral system of single transferable votes and multi-seat constituencies, and cultural traditions developed during colonial domination (sometimes described as a 'dependency culture').

² This is not, by the way, to suggest that Irish politics had no corrupt elements. Evidence is quite clear that many Irish politicians have been corrupt and the process of state allocations of resources were

subject to political influence. However, there is little evidence that this corruption extended to the services and benefits which ordinary citizens sought and which politicians often claimed influence over as well (Komito 1985; 1989; 1993).

³ see press report from the Irish Council for Civil Liberties

(www.iccl.ie/DB_Data/issues/FreedomofInformation_10002_Pressreleases.htm) , as well as Dail Debates (historical-debates.oireachtas.ie/D/0562/D.0562.200303050002.html).

⁴ <http://historical-debates.oireachtas.ie/D/0453/D.0453.199505240008.html>

⁵ <http://historical-debates.oireachtas.ie/S/0109/S.0109.198510170007.html>