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The Effect of Organisational Culture on Knowledge Sharing: A Comparison of United Kingdom, United States and Australian Behaviour

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Abstract

Collaborative research is being undertaken to examine the role that organisational culture plays in determining an individual's attitude towards knowledge sharing, and how these cultures might impact on knowledge sharing behaviour in different organisations. The international scope of one of the project's provided an opportunity to collect data from organisations spanning national boundaries comprising of various organisational types. Findings from the combined research indicate that it is organisational type rather than national identity that appears to have the most significant impact on knowledge sharing behaviour.

Keywords

Culture, Knowledge Sharing, Projects, Empowerment, Risk

Introduction

This paper has developed from the amalgamation of findings from two concurrent research projects being conducted by researchers from the United Kingdom and Australia. Although each separate project originally set out to investigate completely different issues subsequent collaboration between the researchers involved resulted in a realisation that their projects had a common and significant theme. Organisational culture was indicated as having a significant impact on an individual's attitudes towards knowledge sharing. A comparison of the two research findings indicated certain commonalities in knowledge sharing behaviour, whilst highlighting differences in knowledge sharing behaviour that might be attributed to organisational cultural differences.

Achieving any quality product or service requires that knowledge workers share data, information, and experiences, and in order to optimize knowledge sharing, an organisation must possess both a supportive culture and a suitable infrastructure (Gross 2001). Organisational culture is often seen as a key inhibitor of effective knowledge sharing (McDermott and O'Dell 2001) with Walczak and Zwart (2003) suggesting knowledge sharing cultures are created through both management practices and organisational structure. Examining the significance and role that organisational culture plays in determining attitudes towards knowledge sharing behaviour would appear to have important practical implications, with Schein (1985) noting that:

> *"The only thing of real importance managers do is to create and manage culture", (p2).*

In the United Kingdom, within a large UK Government IS project, a single interpretive, longitudinal ethnographic case study was conducted that concentrated on identifying how civil service issues associated with bureaucratic cultures affects a Rapid Application Development (RAD) approach in a large and complex development environment. In the United States a series of interviews was conducted within a multinational organisation prominent in aerospace, defence and commercial airline development and construction, which aimed to supplement responses from a survey questionnaire of that organisation's knowledge sharing behaviour. In Australia, a recently 'privatised through regulation', electricity generating organisation was the subject of one of the investigatory case studies undertaken to better understand both the dynamics of knowledge sharing behaviour and factors contributing towards an individual's intentions to share knowledge.

When the findings from these three independently researched and documented case studies were compared, there was a clear indication of a common theme regarding knowledge sharing behaviour that transcended their diverse

organisational forms. Although each researcher had used different terms to describe the phenomenon, two themes emerged as being both common and significant to the three case studies:

- Genuine user empowerment, as distinct from user authority, to act; and

- Acceptance of 'risk-taking' as a necessary factor in planning, which does not punish failure.

How these themes were identified and the subsequent implications for organisations in better understanding the role that organisational culture plays in developing an individual's attitude towards knowledge sharing, is the focus of this paper.

Literature Review

For our purposes, culture in organisations can be thought of as the beliefs, values, and meanings shared by members of an organisation (Hodges and Hernandez 1999) although Hofstede (1998) notes that there is no consensus about its definition; the term organisational culture having believed only to have entered the U.S. academic literature as late as 1979. Bliss (1999) describes corporate culture as the sum total of values, virtues, accepted behaviours and the political environment of a company, but warns that the 'desired' organisation culture and the 'actual' organisation culture may often be worlds apart, so it is important to understand how each are playing out in the workplace. Culture is reflected in both the visible aspects of an organisation, (e.g. mission and espoused values) as well as at a deeper level, rooted in the organisation's core values and assumptions. Invisible to organisational members, these layers of culture may, McDermott and O'Dell (2001) believe, be inconsistent with the articulated mission and values, but consistent with its underlying or core values. These visible and invisible dimensions of culture, and how they might relate to knowledge sharing, are described in Table 1.

Table 1 Visible and Invisible Dimensions of Culture

Visible	There is a visible link between sharing knowledge and solving practical business problems.
	The approach, tools and structures to support knowledge sharing match the overall style of the organisation.
	Reward and recognition systems support sharing knowledge.
Invisible	Sharing knowledge is tightly linked to a pre-existing core value of the organisation.
	Networks for sharing knowledge build on existing networks people use in their daily work.

Adapted from McDermott and O'Dell (2001)

Pfeffer and Veiga (1999) drawing on extensive empirical research, believe an irrefutable business case can be made that the culture and capabilities of an organisation are derived from the way it manages its people and is the real and enduring source of competitive advantage.

The Importance of Culture in Managing Knowledge

In stating that organisational culture is increasingly being recognised as a major barrier to leveraging intellectual assets De Long and Fahey (2000) consider four ways in which culture influences the behaviour central to knowledge creation, sharing and use:

- Culture, and particularly subcultures, shape assumptions about what knowledge is and which knowledge is worth managing.

- Culture defines the relationships between individual and organisational knowledge, determining who is expected to control specific knowledge, as well as who must share it and who can hoard it.

- Culture creates the context for social interaction that determines how knowledge will be used in particular situations.

- Culture shapes the processes by which new knowledge, with its accompanying uncertainties, is created, legitimated and distributed in organisations.

In identifying that an inhibitor to sharing knowledge was a 'cultural barrier' McDermott and O'Dell (2001) through the American Productivity & Quality Center (APQC) conducted a study of companies known to have a corporate culture that supported knowledge sharing. Their central finding was that however strong the commitment and approach to knowledge management is, culture is stronger. Taking a more pragmatic view

Kouzmin et al (2002) claim that knowledge management is not about managing knowledge at all, but about changing culture to one that values learning and sharing — it is about facilitating the learning process.

Empowerment

The literature appears to emphasize the importance of user empowerment in the structure and maintenance of corporate cultures. In defining true empowerment as resulting in an internal as well as an external commitment by employees, Argyris (1998) believes that despite all the talk and the change programs, regretfully, empowerment is still mostly an illusion.

Recognising that people are fallible, and when allowed to make choices often make mistakes, management behaviours are often, according to Pope (1996), directed towards preventing employees from making those mistakes. Using administrative systems (rules and roles) in an attempt to reduce probabilities of human error removes also the individual's ability to make decisions in a work environment. While providing a psychological 'safety net' for individuals in the organisation by:

- Pre-defining multiple independent tasks

- Pre-determining organisational decision points; and

- Pre-assigning scarce or valuable resources

organisations are acting to restrict the necessity for individual decisions (Duvall 1999).

> *"Empowerment, a term often misunderstood, is a synergistic process of individual development through which the base of influence in an organization is enlarged", (Duvall 1999, p204).*

Environments need to be created in which individuals voluntarily commit to both individual and organisational success. Fostering interactions among individuals directed intentionally at accomplishing successful outcomes is the management challenge. Balancing top-down control with bottom-up empowerment, in order to provide the right conditions for both individual empowerment and an empowered workforce will be a central issue for modern organisations (Malone 1997).

Knowledge Sharing & Risk

The complexity of problems in our knowledge society requires that problem solving activities be shared across disciplinary, cognitive, geographic and cultural boundaries (Leonard-Barton 1995). However, employees may or may not be willing to share information as much as managers might desire or as widely as technology makes possible (Constant et al. 1994). Sharing and using knowledge are often unnatural acts, suggest Davenport and Prusak (1998) stating:

> *"To enter our knowledge into a system and to seek out knowledge from others is not only threatening, but also just plain effort-so we have to be highly motivated to undertake such work", (p5).*

Core competencies, or core capabilities, are described by Leonard-Barton (1995) as those that constitute competitive advantage for a firm and are organic systems of independent dimensions built up over time which cannot be easily imitated. Because an organisation's core competencies are deeply entrenched in organisational practices Bhatt (2001) suggests that only by gradually changing organisational culture can organisations change patterns of interaction between people, technology and techniques. Yet as Yourdon (1998) points out, even though hardware and software might change at lightning speed in the IT field, management and organisational culture can change very slowly.

Organisations that operate with a philosophy of failure prevention may tend to enact policies and procedures designed to conserve (control) scarce or valuable resources. Knowledge resources are of course one of the most valuable of these resources with Toffler and Toffler (1995) claiming that while land, labour, raw materials and capital were once the main factors of production in the industrial age, knowledge is now the central resource of the new information age. Conserving resources by avoiding risks that might result in failure is described by Duvall (1999, p206) as "playing not to lose" rather than "playing to win".

Case Study Details

The United Kingdom Case Study

The case study concerns the development of a new IT system aimed at improving the effectiveness and efficiency of the administration of the European Community (EC) Common Agricultural Policy (CAP) scheme

managed by a UK Regional Government department. The new system moves away from the former individual scheme administration procedures towards a Generic Process (**Figure 1**) that integrates the core processes of the common activities of the separate schemes.

Receive & Lodge Claim	Validate Claim	Calculate Payment	Authorise Claim	Notify Claim	Make Payment

Figure 1 New System Generic Process

In May 1999 under the UK Government's Devolution legislation a Regional Government Department took on the devolved functions that were previously carried out by a former Government Department. It became an independent body accountable for administering all aspects of the EU's Common Agricultural Policy (CAP) schemes across the region. As an accredited EU Paying Agency the Department has a legal obligation for administering the European Agricultural Guidance and Guarantee Fund (EAGGF) grants and subsidy payments to customers across the region through a number of CAP schemes. It is responsible for making these payments within a specified timeframe and must ensure that all EC regulations and compliance issues have been met before payment is made. The CAP Management (CAPM) Division of the Regional Government Department is run from a number of locations throughout the region, and consists of approximately 540 staff dealing with 100,000s of scheme payments totalling approximately £200m ($AUS480M) annually. Headquarters is centrally located and there are 3 Divisional Offices (DOs) acting as powerhouses of CAPM functions, together with 7 Area Offices (AOs) spread across the region.

Previously, the CAP scheme administration had been organised into different departments that dealt with specific CAP schemes discretely. These were the responsibility of individual managers and teams attending to their separate business needs and administration. However the new Generic Process requires an integrated team approach that necessitates changes in the working culture of the organisational workforce. Additionally due to the nature of the EC's agricultural policy, the CAP schemes are frequently changed with new schemes being drafted as required such that the nature of the business environment is both evolving and dynamic.

Analysis for this study was drawn from both primary research and secondary research practices. The primary research concerned direct non-participatory observation, indirect observation, informal/formal semi-structured interviews, shadowing of key informants and spontaneous conversations, while the secondary research reflects an analysis of published literature from both academic and practitioner perspectives and examination of project documents, discourse and artefacts. The objective of the research was to investigate how a Rapid Application Development (RAD) type methodology might be applied to what was a large, complex Information Systems (IS) development.

A common view of limitations of RAD type methodologies are that they are generally restricted to projects that have the following features:

- Empowered End Users

- Use of Existing Architectures and Technology

- Proven Methodology

- Highly Motivated Team

- Low Application Complexity

(Beynon-Davies et al. 1999; Boehm 1999; Schwalbe 2004)

Although this 3 year UK project, with a budget of >£10M ($AUS2.4M) and a core project team of >50 members, did not comply with all of these criteria, the developers adopted their own in-house commercial Iterative Application Development (IAD) approach which they believed would offer all the main benefits of RAD and was appropriate for the uncertainty and continually changing business requirements.

The IAD approach relies heavily on the ability of those concerned to make empowered decisions in a timely fashion, without having to resort to higher management for guidance or control. However, the organisational culture typical of most UK government departments i.e. a hierarchical line management structure where people reported directly to line managers working within a perceived 'blame culture' environment (Claver et al 1999), made this approach very problematic. Bureaucratic cultures are associated with centralised decision-making where it is the cultural time horizons inherent in an organisation that determine the speed of decisions-making

that is therefore culturally rooted. The UK case study project was affected by the attitudes and behaviour of the key decision makers that were tied to the previous working culture. For example one Business Manager commented the difficulty was:

> "that people didn't want to make decisions or couldn't."

Although business managers were authorised to make decisions they found it difficult to change their traditional working patterns. The impact of ineffective decision making which manifested itself in examples such as the inability to prioritise development work and disagreements as to what was core and secondary development, was severe enough for the role of 'Business Champions' to be introduced as a potential solution, but this was unsuccessful. Key decision makers remained reluctant to make decisions. For example a developer commented:

> "...everybody was still saying 'my priority is first, mine's the first', from 5-6 different Business Leaders."

The aim behind the creation of business champions was to move away from the previous situation of authorisation to take decisions, to one of empowering people to make decisions that engendered encouragement and motivation. There is in reality however a fine distinction between being authorised and empowered to do something. Authorisation carries an implied responsibility whereas empowerment reflects the ability to do something because it is possible, the former adhering to the idea of blame, the latter designed to remove the blame issue. These subtle nuances were believed not to have been effectively communicated to those involved and there was evidence of a continued adherence to the blame culture concept, as business managers continued to resist decision-making causing development delays and missed deadlines. This analysis agrees with Morgan's (1997) views that empowered decision making is inhibited by hierarchical cultures, although in this UK case study it pertains to the former culture. He states, "the limits of empowerment are usually quickly felt as people run into the constraints imposed by the existing hierarchy" (p169).

The research concluded that a move away from the former government culture of individual working scenarios towards building collaborative working practices is a challenging concept, and one that proved difficult for this project. It suggests that a RAD-type development approach may not work well in cultures that tend to emphasise hierarchical structures (Jones and King 1998) as there is both an individual ownership rather than stewardship view of knowledge (Kolekofski and Heminger 2003) and the concept of true user empowerment is not fully understood by participants.

The United States Case Study

In a mid Western location within the USA, a department involved in developing advanced aeronautical, aerospace and 'other' systems works somewhat anonymously within its parent company's premises. The nature of the activities being conducted at this facility is associated with the military and is classified; hence the amount of security surrounding the operation is extremely high. Permission was granted, possibly for one of the few times ever, for a non-US citizen to interview individuals in an attempt to understand better the nature of individual knowledge sharing behaviour within the department.

Over a one week period semi-structured interviews were conducted with a range of individuals within the department that attempted to explain both the motivators and inhibitors to knowledge sharing within such a specialised environment. It provided a unique opportunity to interview individuals who may never have been interviewed in this manner before and had subsequently not developed an interview response technique. However, given the nature of their activities, it would be unrealistic to believe that all interviewees were prepared to divulge information as openly as individuals might be from other types of organisation. It was in this case important to actively discriminate between the type of activities that they were involved in, from what the research was interested in, i.e. the systems used in developing the systems that they were involved in.

It was almost immediately apparent that the individuals within the department were highly educated disciplined professionals with highly developed skills in their individual fields. Although there was a range of core disciplines involved, including aeronautical engineers, aerospace scientists, econometrists, industrial engineers and reliability analysts, there appeared to be commonness to the personal qualities of individuals working within the department. This phenomenon was so obvious that it was eventually decided to examine using a convergent interviewing technique whether the human resources department had formal policies to employ people with certain personal qualities, which included a high level of confidence and personal commitment.

There was a general belief that individuals had, within the confines of the work in which they were doing, a high degree of user empowerment. The perceived role of departmental management might best be described by using a quote from an interviewee:

> *"Management's role is in allowing individuals to thrive doing 'their own things' within the objectives of the organisation".*

This user empowerment appeared to be linked in some way to a responsibility to share knowledge appropriately. One individual prophetically suggesting that:

> *"We accept that the wheel needs to be reinvented from time to time as the cost/overhead of sharing too much knowledge is too great".*

He recognised that it was in many cases personal decisions on how and what knowledge would be shared; which would be influenced by the perceived purpose for which it would be used, who could be trusted to use the knowledge and who really needed it. Another interviewee confirmed that knowledge sharing rested on a 'need to know' basis, pointing out that in some situations it became impractical to operate as:

> *" … giving too much information and giving information to the wrong people who do not need it has resulted in too many decision makers being involved (information overload)".*

The inference here was that being empowered in this way also brought with it a sense of responsibility for the empowered individual to share knowledge appropriately, not on management to set guidelines or policies on how knowledge should be shared. The individuals involved were prepared to take on the risk of making mistakes themselves, ranging not merely to what knowledge and who they shared it with, but extending to offering 'out-of-discipline' solutions to problems that they didn't fully understand. One interviewee even suggested that he encouraged 'non-engineers' such as history majors to be involved in particular projects because they brought a diversity to the knowledge sharing process. Tongue in cheek (hopefully) he suggested that sometimes it was just:

> *"Time to shoot the engineers and to get on with it"*

In what was however a contradiction to the reluctance of sharing knowledge externally, it appeared as if 'professional' knowledge of the type that might be expected in academic works was shared openly with even the fiercest of competitors. Although there was an acknowledged responsibility for individuals to share knowledge appropriately internally, this was an example of that knowledge sharing responsibility being extended to outside sources. Thus, while there appeared to be a strong commitment to internal knowledge sharing within this department, there also appeared to be a commitment to share certain types of knowledge with the wider community in order to strategically contribute to the industry at large.

The Australian Case Study

An Australian electricity generating organisation was investigating the proliferation and usage of MS Access databases within three locations — two power generating plants and their head office. Over 110 semi-structured interviews were conducted to identify what database applications were in existence, the original and current purposes of each application, the individuals who had created them, whether the database applications had been duplicated, and whether they were still in active use. Although the research was conducted for commercial reasons, the data gathered serendipitously yielded insights into the organisation's knowledge sharing culture.

There was little evidence of knowledge being re-used between locations or even within the same location, employees preferring to create their own knowledge from scratch rather than applying what someone else had already created. There were no detected instances of applications created for one purpose being reused by anyone else in the same or even in a modified form. There was little evidence that the extent of these 'user-developed' data base applications i.e. they were developed independently from the organisation's IT department, was appreciated by anyone in the organisation, or that in fact anyone knew of the existence of any application other than the ones that they had created themselves.

As a result of recent deregulation of the electricity generating industry, a new marketing/trading (M/T) section had been introduced into what, up to that time, had been an engineering dominated organisation. Individuals belonging to this new section exhibited clear evidence of a different organisational culture to that of more established sections with their tradition of a public sector based structure. Though this new section was also not sharing any 'user-developed' data base applications, the obvious reason was that they had developed few of them, choosing rather to purchase software applications from external sources. A sense of urgency was more clearly exhibited by this group who admitted generally that they had neither the time nor the desire to develop applications of this type. Information that individuals were getting from their specialised software applications was however widely shared throughout the section. The engineering based sections had showed reluctance to share with others, even with those individuals working within the same work groups (Markus 2001), knowledge which they believed they owned personally (Kolekofski and Heminger 2003). Often, within the interviews, these individuals openly admitted that there was 'no personal reward' in sharing the types of specialised knowledge that they held, but that there could be adverse consequences if they were discovered to be doing something

incorrectly. This conflicted with what appeared to be a widespread knowledge sharing culture within the new M/T section, whose knowledge sharing behaviour was so embedded within their processes that they failed to even recognise that it was actually taking place. There was an explicit acceptance by many of the M/T members that the nature of their work would involve them in making inappropriate or incorrect decisions 'from time to time', which they accepted as being 'part of the job'. No such *apparent* freedom was evidenced from members of the engineering dominated sections.

It is worth mentioning that although it is believed that this situation might have been a temporary one, the M/T section had even, in a throwback to the days of the mainframe computer isolationists, built a glass partition (with locks) segregating themselves from other members of the community.

Conclusions

Overall, it appeared that an individual's propensity to share knowledge was not a function of geographic location but more a function of the organisational culture in which the individual operated.

Organisations that operate with a philosophy of failure prevention tend to enact policies and procedures designed to conserve (control) scarce or valuable resources. The differences in culture were observed in all cases to be related to tendencies to share (or not share) knowledge. All cases also illustrate, in different ways, how culture can in part facilitate knowledge sharing through the mechanism of user empowerment and a consequent strengthening of intrinsic motivations to share knowledge.

In an environment where rewards are given for the absence of failure rather than for an acknowledgement of success, the concept of risk taking is both difficult to appreciate and difficult to explain to individuals who have developed in risk averse or risk neutral cultures. Fisher Jr (1997) suggests that the working culture has programmed learned helplessness and non-responsibility into workers, where obedience takes precedence over initiative, discipline over risk taking and where showing up for work every day is considered fulfilment of the work contract. Reprogramming workers into a climate of risk taking and contribution remains the challenge that takes intelligence, creativity, patience, time and expert cultural engineering, rather than faddish practices and quick fixes.

Developing a risk culture that encourages employees to share knowledge is inevitably linked with user empowerment and can only be developed once the employee has been truly empowered.

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