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Ravishankar N. Mayasandra

*National University of Singapore*, [mayasand@comp.nus.edu.sg](mailto:mayasand@comp.nus.edu.sg)

Shan Ling Pan

*National University of Singapore*, [pansl@comp.nus.edu.sg](mailto:pansl@comp.nus.edu.sg)

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# CONSEQUENCES OF IMPLEMENTING KNOWLEDGE MANAGEMENT INITIATIVES IN DIFFERENT ORGANIZATIONAL SUBCULTURES

Mayasandra N, RaviShankar, Department of Information Systems, School of Computing,  
National University of Singapore, 3 Science Drive 2, Singapore 117543,  
mayasand@comp.nus.edu.sg

Pan, Shan Ling, Department of Information Systems, School of Computing, National  
University of Singapore, 3 Science Drive 2, Singapore 117543, pansl@comp.nus.edu.sg

## Abstract

*Organizations implementing knowledge management (KM) initiatives are concerned with promoting sharing and transferring of knowledge, within and across different organizational units. Thus, gaining a deeper awareness of the diverse viewpoints and attributes of the various organizational units is one of the important challenges facing organization-wide knowledge management (KM) interventions. It is imperative for large organizations to be sensitive to the inherent differences within different units and align their KM strategies so that the differences are suitably reflected and accommodated in the organization-wide KM strategy. In this context, this paper focuses on the KM strategies of Infosys Technologies, a leading Indian software services and products company recognised globally as a successful KM exponent. Adopting the case study methodology, we conducted an intensive two-month study at Infosys and looked at the consequences of initiating organization-wide KM in two different organizational Business units (BU). Evidence from the case highlights the unfolding of unintended and intended consequences in the two units, and organizational efforts to reconcile them. Taking a subcultural perspective of the two units offered useful insights into the consequences. The Theoretical and managerial contributions of the study to the KM arena are discussed.*

*Keywords: Information Technology (IT) strategies, Knowledge Management (KM), Subcultures.*

## **1 INTRODUCTION**

Organizational interventions bracketed under the rubric of knowledge management (KM) usually involve the implementation of an IT-based system designated as a knowledge management system (KMS) (Alavi & Leidner 1999, 2001). With rapid advancements in Information Technology (IT), initiating an organization-wide KM program has become relatively easier, and studies have examined the organizational factors considered vital for realizing desired benefits from KM. The position taken by such studies generally adopt a macro level perspective of the organization, and argue that in the presence of certain important factors, KM interventions produces intended results (Davenport et al. 1998, Holsapple & Joshi 2000, Gold et al. 2001). They also note the factors, which pose barriers to the success of KM initiatives (Fahey & Prusak 1998, Ruggles 1998, Walsham 2001). The socio-cultural differences in the immediate environment of such organizations, however, are extremely conspicuous and complex and therefore, it may not be reasonable to always anticipate straightforward consequences of organizational IT interventions (Robey & Boudreau 1999). In other words, given that a strategic initiative such as KM is often a top-down intervention and open to varied interpretations, it stands exposed to the possibility of producing consequences that are not entirely intended or expected. Against this background, this study attempts to examine the diversity in interests, viewpoints and worldviews of different organizational members that underpin the varied interpretations and the resulting clash with the dynamics and demands of KM. In particular, the study focuses on three questions. (1) How do consequences of KM interventions unfold in organizational constituencies that display varied cultural attributes? (2) What are the main factors behind the consequences? and (3) What are the organizational implications of the consequences?

We adopted the case study methodology to study the organization-wide KM implementation at Infosys Technologies, a reputed Indian IT organization. In Information Systems (IS) research, the case study method remains one of the frequently adopted research methods, and the appropriateness of the method is well documented (Benbasat et al. 1987, Myers 1994). This paper is organized as follows: After a brief introduction, we review the existing literature on the perspective of knowledge management and subcultures adopted in our study. A note on the research methodology and the case description follows. In the subsequent part of the paper, we discuss and present the case findings. Finally, we present the conclusions, and highlight the theoretical and managerial contributions, and future research plans.

## **2 KNOWLEDGE MANAGEMENT AND SUBCULTURES: THEORETICAL FOUNDATION AND REVIEW**

KM in organizations typically involves the implementation of one or more IT-based systems called knowledge management systems (KMS), which are equipped to capture, store and disseminate various forms of organizational knowledge (Alavi & Leidner 1999, 2001, Massey et al. 2002, Newell et al. 2003). A typical KMS takes the shape of an intranet portal that acts as a window to an organization's specialized knowledge found in repositories, and includes various initiatives such as discussion forums, newsgroups etc., which promote greater meaningful interaction among employees (Ruppel & Harrington 2001). The underlying focus of a KM initiative or a KMS is the creation of a dynamic platform that systematically collates expert knowledge, and enables and ensures that organizational members draw on the pooled expertise (Grover & Davenport 2001, Von Krogh et al. 2001). As part of internal IT strategy, KM is shown to derive both direct and indirect strategic benefits to organizations (Hansen et al. 1999, Zack 1999, Pan & Leidner 2003).

While KM initiatives indeed promises to be a source of creating and sustaining fast-paced organizational innovation, a greater understanding of the drivers and limitations of managing

organizational knowledge will be gained by a closer examination of the unique embedded socio-cultural contexts (Cohen & Levinthal 1990, Blackler 1995, Pentland 1995). Thus, while IT is seen to play the role of an enabling agent in the process of managing organizational knowledge, researchers bestow more attention upon the intricacies of the subtle exchanges and transfer of knowledge taking place informally within and across different communities of practice (Wenger & Snyder 2000, Pan & Leidner 2003).

One way of understanding the consequences of implementing IT strategies is by examining their linkages to the underlying organizational culture (Romm et al. 1991, Klein & Sorra 1996, Robey & Boudreau 1999, Cabrera et al. 2001). In the specific case of KM implementation also, studies have emphasized a relationship between organizational efforts to manage knowledge and the prevailing organizational culture (Davenport et al. 1998, Ruggles 1998, Gold et al. 2001, Ruppel & Harrington 2001). Ruppel and Harrington (2001) studied the different dimensions of organizational culture that supported the creation of an effective knowledge culture with respect to intranet implementation projects, while De Long and Fahey (2000) emphasize the cultural barriers to organization-wide KM initiatives. Robey and Boudreau (1999, p175) bring out three perspectives of organizational culture, namely "Integration" "Differentiation" and "Fragmentation". They explain the consequences of IT by identifying opposing cultural forces underpinning each of these perspectives. In their work, while the "Integration" perspective identifies culture as a unified force that opposes IT driven change, "differentiation" focuses on conflicts within subcultures and "fragmentation" highlights the inherent ambiguity in viewpoints across different subcultures, which clash with the dynamics of the desired change.

Further building on this culture angle of the KM strategy, organization-wide KM can be accorded the rubric of what some researchers refer to as a "culture change initiative" (Wilkins & Dyer, 1988, Harris & Ogbonna 2002). Thus, where KM is a vehicle that has to continuously drive the desired change, the response of different organizational subcultures and the temporal consequences of initiating the culture change initiative (in this case, organization-wide KM) assumes importance. The consequences can be both intended and unintended as illustrated by Harris and Ogbonna (2002), who in a study across different organizations brought out eight unintended consequences of such initiatives. Thus, a very interesting way of understanding the consequences of KM from the end-user responses would be to borrow concepts from the organizational subculture literature, which is fast emerging as an important concept that can effectively characterize diversity in organizations (Sackmann 1992, Hofstede 1998). Underlying the concept of subcultures is the idea of people in specific organizational units sharing common values and assumptions, and the manifestations of such values and assumptions in the form of unique artifacts and behavioural patterns (Jermier et al. 1991, Schein 1996). While Jones (1983) saw subcultural differences getting manifested tangibly in the different practices of the organization, Martin and Siehl (1983) bring out three possible subcultures within a dominant organizational culture – a "enhancing" subculture where the values of the dominant organizational culture predominate, a "orthogonal" subculture where the values of the dominant culture co-exist with values and assumptions unique to the subculture and a "countercultural" subculture whose behaviours and artifacts reveal values and assumptions that directly pose a challenge to the dominant organizational culture. In his study of a Danish insurance company, Hofstede (1998) identified three different subcultures and called them "professional", "administrative" and "customer interface" subcultures. He also proposed six opposing dimensions of subcultures (visible in practices that were, for example, process oriented or results oriented, normative or pragmatic etc.) along which organizational units differed. Thus, the notion of subcultures which opens up the possibility that people identify more with their immediate environment and therefore may not be always guided in their actions by common organization-wide shared values and assumptions, is both relevant and has vital implications for the implementation of organization-wide KM. In organization-wide KM research, few empirical studies have attempted to understand how KM interacts with different subcultures, leading to different consequences. In this paper, to get a practical and fuller picture of the consequences of an organization-wide KM initiative, we attempt to delineate the subcultural alignment of two

organizational units and examine the role played by cultural predispositions of the units in shaping post-KM events.

### **3 RESEARCH METHODOLOGY**

The study adopts the interpretivist paradigm, which argues that access to reality is contingent upon social attributes such as language, shared meanings and artifacts (Orlikowski & Baroudi 1991, Walsham, 1995a, 1995b, Klein & Myers 1999). As Klein & Myers (1999, p.69) note, interpretive research “attempts to understand phenomena through the meanings people assign to them”. Following the traditions of the interpretivist research in the IS stream, we conducted our study over a two month period at Infosys Technologies, India. We utilized different sources of evidence. The main source of evidence was the 25 open-ended interviews and follow up discussions conducted with developers and middle level managers from 2 different organizational constituents or strategic business units (BU), which we shall refer to as BU-1 and BU-2. The interviews also covered the nine-member central KM group (the KM implementation team).

Each interview lasted on an average about 90 minutes, and was conducted at the Bangalore headquarters of the company, which is home to more than 8000 employees. All the interviews were taped with prior permission and transcribed. The interview questions typically concerned the role of the interviewee, his/her understanding of, and responses to, the KM initiative. Many interviewees engaged in enthusiastic discussions even after the taped interview sessions ended; notes of such discussions were made at the end of the day. While some of the informants preferred to be interviewed in their offices, others chose to meet in the informal environs of the different cafeterias at the company headquarters. All the interviews were one-to-one, face-to-face interactions; follow-up discussions were conducted via telephone and e-mail. Most of the interviews were conducted in the late afternoon and evenings; this arrangement gave us the opportunity to utilize a good part of the mornings, interacting and meeting people informally without any appointments. Such interactions gave an ethnographic touch to the study, and allowed us a firmer grasp over the issues at hand, as we spent a considerable amount of time observing the employees from the two units participating in work and non-work related activities. Further, we also accessed artifacts related to the evolution of KM at Infosys and documents of seminars conducted by the central KM group to market KM internally to the various BU. The head of the organization-wide KM initiative at Infosys was also invited to our campus to deliver a ‘practitioner talk’ on their KM implementation. We utilized the occasion to discuss with him our findings, and develop a shared common understanding of the main issues. The multiple data collection methods followed enhances the validity of the findings, and also serve the important methodological requirement of multiple interpretations (Klein & Myers 1999). Qualitative data that assisted the case analysis included the transcripts of the taped interviews, follow-up discussions via email and telephone, notes made during and after informal interviews, and the KM artifacts.

### **4 THE CASE**

Infosys Technologies Limited is a software services and products company headquartered in Bangalore, India. Infosys provides consulting and IT services and products to more than 350 clients worldwide and employs more than 19,000 people. Infosys’ offerings to clients include software development, maintenance, package implementation projects, reengineering, testing, consulting, banking products, and engineering services. Infosys offers solutions to customers via a distributed project management framework, which involves project teams at both on-site (customer site) and offshore locations (Infosys development centers). Usually, all projects that Infosys handles are broken down into on-site and offshore components. While the initial planning, high-level design, acceptance testing and the implementation aspects of a project usually take place at the customer site, the prototyping, coding, detailed-design, system testing, documentation, application maintenance and technical support components of a typical project are handled at the Infosys development centers (DC)

in India. At present, Infosys administers an organization-wide KM initiative and is recognized the world over as successful KM exponent. As a testimony to its status as a KM pioneer, Infosys recently won the global Most Admired Knowledge Enterprises (MAKE) award for the year 2003.

#### 4.1 Knowledge Management Systems (KMS): Kshop

Knowledge shop (Kshop), the internally developed knowledge portal, was rolled out in early 2000; it now represents the platform for Infosys' KM initiatives (see Figure 1). Kshop is built on a platform of Microsoft suite of servers (IIS, Site Server and SQL Server). Since the launch of the central KM portal, a nine-member team called the KM group has been formed to drive the organization-wide KM program. The KM group is a blend of senior managers, software engineers, research analysts and marketing professionals who are also known as KM brand evangelists.

The content in the Kshop repository is classified along four dimensions, namely 'knowledge area' (there are about 1600 knowledge areas and this taxonomy of knowledge areas is proprietary to Infosys), the nature of knowledge (Case studies, Project snapshots, Publications/White papers, Tutorials, experiential write-ups etc.), target audience (managers/developers/sales personnel etc.) and 'source of knowledge' (internal/external). Employees are encouraged to contribute assets to the various knowledge areas via a content submission interface on Kshop, which is reviewed by a KM content editor for compliance with Intellectual Property Rights (IPR) policies, and by identified experts for relevance and quality. Kshop is also equipped with a powerful search engine with possibilities for both free text search and navigation-based content retrieval. Infosys also administers a KM related rewards scheme, where Infosians (as all Infosys employees are known) accumulate KCU (Knowledge Currency Units) by contributing, reviewing and re-using Kshop assets. A KCU is a notional currency, and upon reaching some threshold value, they can be converted into rewards. One person in each project team is identified as a 'KM prime' who facilitates KM activities at the project level and encourages colleagues within the project team to participate in organization-wide KM. At the development centre (DC) level, there are 'DC KM champions' who interact regularly with the central KM group and co-ordinate activities at the DC level. The nature of the responses to the organization-wide KM and their manifestation as tangible organizational consequences in the two business units we studied are discussed below.

#### 4.2 Weak alignment with objectives of organization-wide KM - The BU-1 response

A senior project manager with BU-1 noted: "The main feature of our BU is that we interact with the client on a daily basis. So we need to be really on our toes all the time. As far back as 1998, we had initiated strictly need based knowledge web pages, newsgroups etc., which dealt with specific client issues, and were unlike Kshop. Kshop has a jazzy and attractive looking GUI (Graphical User Interface) while our initiatives just serve our purpose without being too stylish. So people have grown accessing our own systems. At a fundamental level, I think it has become a habit for people to contain themselves within the unit, and not get involved with organizational issues."

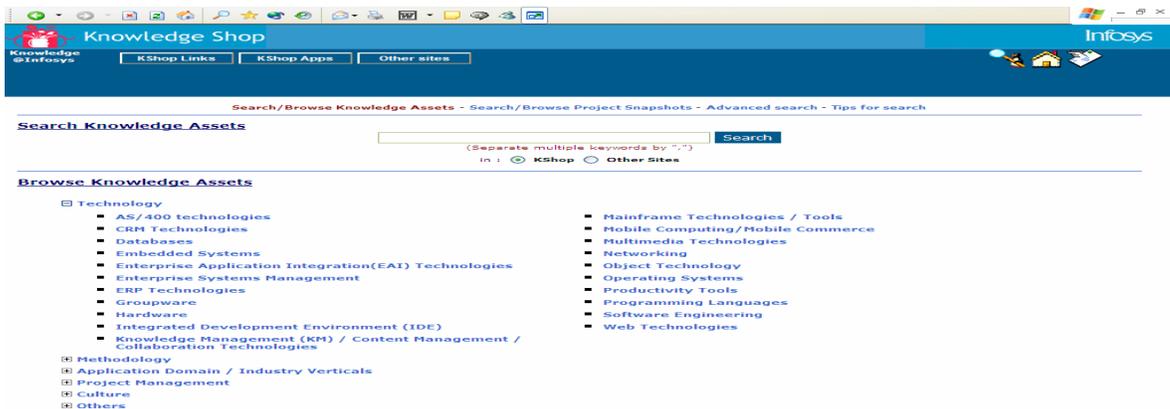


Figure 1. A Snapshot of the knowledge assets in Kshop

A number of comments from developers and managers emphasized the quality of their own initiatives and showed a strong sense of autonomy and pride in owning these initiatives. In the post organization-wide KM phase, many technology-driven initiatives sprang up in BU-1 and the existing informal systems were refined and upgraded. These initiatives were primarily bottom-up driven, with a few developers and middle level managers taking up responsibility for them. Live web pages that showcased the domain knowledge and expertise of individual project teams were set-up; portals, new newsgroups and BU specific discussion forums catering to the knowledge needs of the developers were also introduced. A software engineer in BU-1 explained: “After organization-wide KM came in, I could appreciate the importance of KM, and I saw that a KMS per se could be really useful. Some really great things happened at our BU level because of the emphasis on KM. For instance, one of the project managers came up with a page on network security, updated it continuously, and made sure that it was live. It was really helpful.” Another software engineer said: “One of the senior project managers in our group set up a wonderful Linux website, and our clients were very impressed by the quality of what the site offered. From what I have heard from my senior colleagues, that site was the main reason why we were able to bag a couple of new projects from our clients.” In the light of their internal focus, most interviewees from BU-1, though aware of the organization-wide KM initiative, rarely contributed to or utilized any asset on Kshop. From the project viewpoint, rather than participating in typical one-off projects, BU-1 played big roles in the functioning of the client organization. For instance, a few dedicated teams in BU-1 were exclusively coordinating with client project teams and were involved to a greater extent, in the maintenance of the client software infrastructure and in the release of co-developed software. A KM brand evangelist explained that in spite of these difficulties, they are slowly making inroads into BU-1: “The awareness, I think, is slowly spreading in these units that the company will benefit hugely from organization-wide KM. A few project managers have come forward to share their team’s repositories. I think they are letting go of their possessiveness, and this can only benefit Infosys in the long run.”

#### 4.3 Strong alignment with objectives of organization-wide KM – the BU-2 response

A software developer in BU-2 with four years of experience said: “In our unit, Kshop caught the imagination of people around mid 2001, when they started making Kshop more attractive, with customizable home page etc. Typically, the projects that we handle are all very similar to each other, and we are really not working on cutting edge technologies. I would say that we do the routine, but, bread and butter stuff. So Kshop, with rewards and all that, was a very pleasant addition when it was introduced. It was also a great way to get in touch with people and know what’s happening in other units. Mind you, no one considered it very seriously at that time.”

The KM reward scheme had created a few problems in the initial stages, where there were cases of people submitting content to Kshop and asking their close colleagues to give a high rating to their submissions, so that they could easily obtain rewards. Such cases were detected by the KM group and people were gently warned to refrain from treating Kshop related activities as a frivolous exercise. A software engineer said: "I think Kshop in a way strengthened my sense of belonging to a large organization. I get a great kick from submitting a document, which is going to be read by someone in some other BU, and the rewards are not too bad either." Currently, statistics collected by the KM group, show that there are more than 6000 knowledge assets/documents in Kshop. Around 2500 Infosians have authored papers and submitted assets, and two documents are now downloaded from Kshop every minute. A good percentage of these submissions and downloads are from developers in BU-2.

The organization-wide KM portal has come to be accepted and utilized as a prominent knowledge resource in BU-2 over the last two years. Many developers have come to believe that Kshop is a very useful addition in terms of providing resources helpful in their work. A developer with BU-2 who was quite recently rewarded with gift coupons redeemable at a prominent bookstore for submitting a white paper to Kshop said: "After I published my document on K shop, I got many phone calls from various people from different units across the organization, who wanted to discuss my documents and clarify some of their doubts. That is a great feeling, a feeling that you are a part of this big organization. Also, after discussing my document with people from various BU, I probably now know three times more than what I did, when I published that document. I now try to keep my document up to date with whatever I have learnt, so that it helps anyone who comes in and looks. I also realized that I reach a big audience – Infosys-wide – on Kshop." A research analyst with the KM group felt that the stock of Kshop as a knowledge resource had gone up significantly in the eyes of the developers in BU-2: "People's attitude in the way they seek knowledge has changed for the better in the last couple of years. People are beginning to explore what is available on Kshop before shooting off a mail to someone. Some have also become strong advocates for Kshop by telling people who shoot off impatient mail, to go and look at the bulletin board, where their query would have probably been answered already."

## **5 DISCUSSION**

The open ended interviews with the central KM group and software developers and middle level managers across BU-1 and BU-2 shed light on the events that followed organization-wide KM implementation. We discuss the important findings of the study below.

### **5.1 Twin impact of organization-wide KM implementation**

The qualitative data from the one-to-one interviews clearly point to two inherently different consequences of organization-wide KM implementation at Infosys. From the perspective of the central KM group, the main theme of the organization-wide KM initiative was the effective integration of the specialized knowledge distributed across various business units (BU). Yet, deviating from the anticipated straightforward organizational consequences, our study elicited an interesting set of responses to KM, pointing to dual consequences of organization-wide KM. The responses to organization-wide KM bring into the limelight the socio-cultural contexts of the units that formed a part of our study.

Specifically, the distinctive worldviews projected by members of the two organizational units in the interviews provides a clearer picture when seen through the theoretical lens of organizational subcultures (Duncan 1989, Jermier et al. 1991, Sackmann 1992, Hofstede 1998). According to Jermier et al. (1991, p172), an organizational subculture refers to "shared understandings about the organization's mission and conduct as well as the corresponding organized practices that emerge in a group of employees." In BU-1, in the light of organization-wide KM, there was a reassessment of the

existing technological infrastructure and practices for managing knowledge. This reassessment culminated in localized initiatives, which though proved useful in the context of the BU, diverged from the aims of the organization-wide structure created for KM. But BU-2 appeared more receptive to the KM initiatives. Over a period, BU-2 responded favourably to the objectives of organization-wide KM. This contrast between the consequences in BU-1 and BU-2 is what we refer to as the 'twin impact'. We utilize the concepts of "enhancing" and "countercultural" subcultures provided by Martin and Siehl (1983), to explain the cultural underpinnings of BU-1 and BU-2 and their roles in the post organization-wide KM phase. Specifically we take up the argument of Martin and Siehl (1983, p54) that an "enhancing" subculture adheres to the core organizational values in its artifacts and behaviours, while a "countercultural" subculture, sometimes take positions that oppose the values espoused by the dominant organizational culture. The main thrust of our argument here is that the "counterculture" and the "enhancing" subculture of BU-1 and BU-2 respectively, underlay the KM consequences observed.

## 5.2 Unintended consequences of organization-wide KM – The Client-centric counterculture

The organization-wide KM initiative at Infosys began with the implementation of Kshop – the KM portal. The unintended consequences of KM implementation, namely the emergence of new localized initiatives and the strengthening of the existing unit-level initiatives for managing knowledge in BU-1, can be explained effectively by considering the strong clash between the perceived demands of organization-wide KM and the "client-centric counterculture" of BU-1.

BU-1 operated as a client-centric culture that prided on its functioning almost as an extended client enterprise that took up cutting edge co-development projects and maintenance projects with client teams. Taking note of its countering or opposing (Martin & Siehl 1983, Duncan 1989) an artifact (Kshop) that represented a cherished organizational value, we call it the "client-centric counterculture". Within Infosys, BU-1 had come to be recognized as a special unit that worked for very important clients who were on the threshold of technological innovations of far reaching global implications. The causes for the origin of the BU-1 subculture can be found in the work of Jermier et al. (1991) who point out that the occupational specialties and the task exigencies of different sub-units (in this case, BU-1) underlie the creation of subcultures. As a project manager with BU-1 put it: "Our BU somehow maintains its own identity in every aspect. People here tend to contain themselves within the BU. So in that sense, you can say that we are a little isolated from the rest of the organization."

Thus although BU-1 derived its larger identity from Infosys, in all its behavioural manifestations and responses to organization-wide KM, the focus was predominantly client-centric. Therefore the demands of organization-wide KM were perceived to be infringements on the "client-centric counterculture", and so were required to be countered or opposed. With their cultural frame of reference being mostly at the unit level, they did not perceive a direct benefit from KM to the members in their BU and were not too enthused by the idea of sharing knowledge with members of other units. The client-centric counterculture was best defined and its response to organization-wide KM well summed up by a software engineer who said, "If you ask me where I work, I would reply "Infosys", but on a day-to-day basis, I feel that I am working for the client. So whether it is getting involved in organization-wide KM or any other practice at an organizational level, I ask myself, "Is this going to help my client?" and if it does, then indirectly it also helps Infosys doesn't it?"

The most important implication of the client-centric counterculture for organization-wide KM was the weak alignment with the objectives of organization-wide KM. Rather than utilizing the Kshop platform, which opened a knowledge window to the rest of the organization, BU-1 members continued to focus entirely on the BU-level knowledge resources. Interestingly, however, the client-centric counterculture, in the case of organization-wide KM, was cushioned by the overwhelming buy-in in BU-1, to the overall concept of managing knowledge at their unit level. Viewing the KMS implementation as a specific case of strategic IT, the work of Robey & Boudreau (1999), provides theoretical insights that explain the unintended consequences of KM at Infosys. In particular, the

“differentiation” paradigm of organizational culture (Meyerson & Martin 1987) which emphasizes the differences among various organizational sub-units and focuses on the role of opposing subcultures in producing contradictory consequences of IT, is reflected in the client-centric counterculture’s response to KM. The “We” in the “We should manage knowledge better” message given out by the KM implementation team was interpreted in BU-1 to refer to their BU alone. In other words, BU-1 was concerned solely with deriving KM benefits from a client centric viewpoint, rather than an organizational viewpoint. While they came out with bottom-up driven initiatives, they still operated from an ideological position that merely reinvented and reaffirmed their client-centric subculture orientation, though it was in response to the top-management mandated KM initiative (Harris & Ogbonna 2002).

### 5.3 Intended consequences of organization-wide KM – The Organization-Centric Enhancing Culture

Organization-wide KM met with an organization-centric enhancing culture in BU-2, which explains the intended consequences of KM. By “organization-centric enhancing culture” we refer to the consistently closer organizational identification of members in BU-1 and their active involvement in formal KM activities. This led to KM practices that ‘enhanced’ and supported the objectives of organization-wide KM.

BU-2, handling projects and relationships of a relatively straightforward and routine nature, had come to be recognized as a typical Infosys BU by organizational members. In other words, members of BU-2 identified themselves consistently with the larger organization-Infosys, on a day-to-day basis. The dominant organization-centric subcultural lens, through which organizational members in BU-2 viewed themselves, underlay the smooth and unobtrusive channelling of KM into their everyday work. BU-2 was more receptive to the top-down KM interventions since the interventions did not create any conflict with the existing cultural mindsets in the unit as in the case of BU-1. In other words, KM did not meet with a strong opposing subcultural force in BU-2. In fact, the absence of a potent countering subcultural driver, and the presence of an enhancing subculture (Martin & Siehl 1983, Duncan 1989) improved the receptiveness of employees to organization-wide KM, which they saw as a logical response to their ever-increasing knowledge needs. Over a period of time, they perceived a direct benefit from organization-wide KM, and operating in an “enhancing” cultural environment, were attracted by the idea of sharing knowledge and interacting with people from different units. Thus, the superimposition of a top-down KM intervention promoted intended consequences in BU-2 where the cultural mindsets were predominantly organizational rather than unit-level.

### 5.4 Moving towards reconciliation

When KM initiatives are used to integrate large enterprises, which hitherto functioned as autonomous powerhouses within the organization, there could be situations, as encountered in this case, when such autonomy breeds unique subcultures that oppose the integration (Ghoshal & Gratton 2002). The ostensibly irreconcilable positions of the unintended and intended consequences is misleading, for they actually led to a better shared understanding of the unique local contexts, specifically the client-centric and organization-centric subcultures, thus preparing a common ground for future knowledge management strategies at Infosys. As the units responded to the KM message, albeit in different ways, the top management has now stepped in to reconcile the differences. Discussions between BU-1 and the KM group are underway to integrate some of the internal knowledge repositories of BU-1 with the organization-wide KM portal. A senior project manager with BU-1 hinted of things to come in the near future: “Currently our Kpage is available only internally. We started off at our BU level because, we felt that others would not be really interested in our BU. Now after the recent discussions and interaction with the KM group, we intend to merge it with Kshop so that anybody can access it.”

Further, this movement towards reconciliation also has an important lesson to practitioners planning strategic IT interventions. In its attempt to reconcile the twin impact, Infosys has become sensitive to the simultaneous evolution within the organizational hierarchy of dual cultural predispositions, with some units having a strong identification with the organization and others operating as strong inward looking autonomous entities with a predominantly client orientation.

## 6 CONCLUSIONS

This study has addressed the consequences of initiating an organization-wide knowledge management (KM) program, a popular strategic IT initiative. We have studied the implementation of an organization-wide KM initiative at Infosys Technologies, a leading Indian IT company. The study answered the research questions we set out to answer, by recreating the unfolding of KM consequences in view of its clash with the dynamics of two different subcultures. The portrayal of the cultural settings and reconciliation strategies underway at Infosys helped us understand the factors underlying the consequences of KM and the organizational implications of the consequences.

### 6.1 Theoretical, Managerial Contributions and Future Research

Our study fills a gap in the existing IT implementation literature that has tended to view IT implementation consequences as either successful or unsuccessful. The case has shed light on the evolving nature of such outcomes, and revealed the unfolding of consequences that cannot be inherently classified as successful or unsuccessful. Specifically, our study links the consequences of KM implementation, both intended and unintended, to the subcultural attributes of organizational units. Thus, this study has enriched the KM literature by providing empirical insights into how two different subcultural milieus become rallying points for organizational units and shapes the internalization and interpretation mechanisms of members in these units. By bringing to the fore the vital and conclusive roles that organizational subcultures play in shaping responses to strategic IT initiatives, the study makes an incremental contribution towards extending our theoretical understanding of the organizational implications of the notion of subcultures.

The empirical support for the connection between organization-wide KM initiatives and subcultures emerging from this study will help managers relate better to the established subcultural patterns of organizational units. Rather than simply view end user responses as antagonistic to the objectives of formal KM, examining the responses as a natural fallout of embedded cultural predispositions would help managers frame KM practices that takes cognizance of cultural uniqueness. More research needs to be conducted in greater detail on the relationship between strategic KM interventions and organizational subcultures. Specifically, intra unit subcultures based on work practices and functional areas within a single unit, and their interplay with KM offers exciting potential for future research.

## References

- Alavi, M. and Leidner, D.E. (1999). Knowledge management systems: Issues, challenges and benefits. *Communications of the AIS*, 1(7), 2-35.
- Alavi, M. and Leidner, D.E. (2001). Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*, 25(1), 107-136.
- Benbasat, I., Goldstein, D.K. and Mead, M. (1987). The case research strategy in studies of information systems. *MIS Quarterly*, 11(3), 369-386.
- Blackler, F. (1995). Knowledge, knowledge work and organizations: An overview and interpretation. *Organization Studies*, 16(6), 1021-1043.
- Cabrera, A., Cabrera, E.F. and Barajas, S. (2001). The key role of organizational culture in a multi-system view of technology-driven change. *International Journal of Information Management*, 21(3), 245-261.

- Cohen, W. and Levinthal, D. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.
- Davenport, D.H., De Long, D.W. and Beers, M.C. (1998). Successful knowledge management projects. *Sloan Management Review*, 39(2), 43-57.
- De Long, D. and Fahey, L. (2000). Diagnosing cultural barriers to knowledge management. *The Academy of Management Executive*, 14(4), 113-127.
- Duncan, W.J. (1989). Organizational culture: "Getting a fix on an elusive concept". *The Academy of Management Executive*, 3(3), 229-236.
- Fahey, L. and Prusak, L. (1998). The eleven deadliest sins of knowledge management. *California Management Review*, 40(3), 265-276.
- Gold, A.H., Malhotra, A. and Segars, A.H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185-214.
- Ghoshal, S. and Gratton, L. (2002). Integrating the enterprise. *Sloan Management Review*, 44(1), 31-40.
- Grover, V. and Davenport, T.H. (2001). General perspectives on knowledge management: Fostering a research agenda. *Journal of Management Information Systems*, 18(1), 5-21.
- Hansen, M.T., Nohria, N. and Tierney, T. (1999). What's your strategy for managing knowledge?. *Harvard Business Review*, 77(2), 106-116.
- Harris, L.C. and Ogbonna, E. (2002). The unintended consequences of culture interventions: A study of unexpected outcomes. *British Journal of Management*, 13(1), 31-50.
- Hofstede, G. (1998). Identifying organizational subcultures: An empirical approach. *Journal of Management Studies*, 35(1), 1-12.
- Holsapple, C.W. and Joshi, K.D. (2000). An investigation of the factors that influence the management of knowledge in organizations. *Journal of Strategic Information Systems*, 9(2-3), 235-261.
- Jermier, J.M., Slocum Jr, J.W., Fry, L.W. and Gaines, J. (1991). Organizational subcultures in a soft bureaucracy: Resistance behind the myth and façade of an official culture. *Organization Science*, 2(2), 170-194.
- Jones, G.R. (1983). Transaction costs, property rights and organizational culture: An exchange perspective. *Administrative Science Quarterly*, 28(3), 454-467.
- Klein, H.K. and Myers, M.D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly*, 23(1), 67-93.
- Klein, H.K. and Sorra, J.S. (1996). The challenge of innovation implementation. *Academy of Management Review*, 21(4), 1055-1080.
- Martin, J. and Siehl, C. (1983). Organizational culture and counter-culture: An uneasy symbiosis. *Organizational Dynamics*, 12(2), 52-64.
- Massey, A.P., Montoya-Weiss, M.M. and O'Driscoll, T.M. (2002). Knowledge management in pursuit of performance: Insights from Nortel networks. *MIS Quarterly*, 26(3), 269-289.
- Meyerson, D. and Martin, J. (1987). Cultural change: An integration of three different views. *Journal of Management Studies*, 24(6), 623-647.
- Myers, M.D. (1994). A disaster for everyone to see: An interpretive analysis of a failed IS project. *Accounting, Management and Information Technologies*, 4(4), 185-201.
- Newell, S., Huang, J.C., Galliers, R.D and Pan, S-L. (2003). Implementing enterprise resource planning and knowledge management systems in tandem: Fostering efficiency and innovation complementarity. *Information and Organization*, 13(1), 25-52.
- Orlikowski, W.J. and Baroudi, J.J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research*, 2(1), 1-28.
- Pan, S-L. and Leidner, D. (2003). Bridging communities of practice with information technologies in pursuit of global knowledge sharing. *Journal of Strategic Information Systems*, 12(1), 71-88.
- Pentland, B.T. (1995). Information Systems and organizational learning: The social epistemology of organizational knowledge systems. *Accounting, Management and Information Technologies*, 5(1), 1-21.

- Robey, D. and Boudreau, M-C. (1999). Accounting for the contradictory organizational consequences of information technology: Theoretical directions and methodological implications. *Information Systems Research*, 10(2), 167-185.
- Romm, T., Pliskin, N., Weber, Y. and Lee, A. (1991). Identifying organizational culture clash in MIS implementation. *Information Management*. 21(2), 99-109.
- Ruggles, R. (1998). The state of the notion: Knowledge management in practice. *California Management Review*, 40(3), 80-89.
- Ruppel, C. and Harrington, S. (2001). Sharing knowledge through intranets. *IEEE Transactions on Professional Communication*, 44(1), 37-52.
- Sackmann, S.A. (1992). Cultures and subcultures: An analysis of organizational knowledge. *Administrative Science Quarterly*, 37(1), 140-161.
- Schein, E.H. (1996). Three cultures of management: The key to organizational learning. *Sloan Management Review*, 38(1), 9-20.
- Von Krogh, G., Nonaka, I. and Aben, M. (2001). Making the most of your company's knowledge: A strategic framework. *Long Range Planning*, 34(4), 421-439.
- Walsham, G. (1995a). Interpretive case studies in IS research: Nature and method. *European Journal of Information Systems*, 4(2), 74-81.
- Walsham, G. (1995b). The emergence of interpretivism in IS research. *Information Systems Research*, 6(4), 376-394.
- Walsham, G. (2001). Knowledge Management: The benefits and limitations of computer systems. *European Management Journal*, 19(6), 599-608.
- Wilkins, A.L. and Dyer Jr, W.B. (1988). Toward culturally sensitive theories of culture change. *Academy of Management Review*, 13(4), 522-533.
- Zack, M.H. (1999). Developing a knowledge strategy. *California Management Review*, 41(3), 125-145.