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Changes in a Chinese interior design firm due to the development and use of a blog-based reflective practitioner knowledge management system inspired by Chinese philosophy: An autoethnographic case study

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Doctorate of Business Administration (Information Systems)

**Changes in a Chinese Interior Design Firm Due to the Development and Use
of a Blog-based Reflective Practitioner Knowledge Management System
Inspired by Chinese Philosophy: An Autoethnographic Case Study**

Chun Kwan LAW

BSSc (Hons), MeBus

*"He who learns but does not think is lost! He who thinks but
does not learn is in great danger."*

Kung Tzū (Confucius), Analects, translator not known

A Thesis Submitted in Partial Fulfillment of the
Requirements for the Award of
Doctor of Business Administration (Information Systems)

DBA (IS)

May 2007

At the School of Management Information Systems,
Faculty of Business and Law,
Edith Cowan University, Perth, Australia

DECLARATION

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ABSTRACT

Dao (Way)

The Way that can be experienced is not true;

The world that can be constructed is not true.

The Way manifests all that happens and may happen;

The world represents all that exists and may exist.

To experience without intention is to sense the world;

To experience with intention is to anticipate the world.

These two experiences are indistinguishable;

Their construction differs but their effect is the same.

Beyond the gate of experience flows the Way,

Which is ever greater and more subtle than the world.

Lao-Tzū, TaoDeChing, tr. Peter A. Merel

This thesis is a reflective practitioner autoethnographic account of the way in which a Chinese interior design firm, through inspiration from Chinese philosophy (as exemplified in the beginning quotes), developed and used a reflective practitioner knowledge management system, called **kBlogCentral**, based around web-based blogs. The objective of setting up **kBlogCentral** was to build a simple, low cost knowledge management system for managing knowledge regarding various projects among the staff. All members of the firm

are encouraged to perform reflective practitioner research and publish their knowledge as part of virtual teams regarding their professional practice.

This reflective practitioner study depicts the rationale, process, and implications of building the system especially regarding inspiration from traditional and contemporary Chinese philosophy as this is seen as a culturally appropriate philosophical underpinning. The research outcome, presented throughout the thesis, is a rich description and reflections of employing action reflective practitioner research and a Web technology on the Internet, called *Blog*, to manage knowledge in the interior design company in the light of Chinese thinking. Blog technology is mainly manifested in interactive websites that allow for rich Web based interaction and communication.

The research question is: “How did the process of developing and using a Blog-based reflective practitioner knowledge management system, through inspiration from Chinese philosophy, change the professional practice of members of a Chinese interior design firm?” As part of answering this question, I report on my attempts to inspire change in the purpose, behavior and underlying culture of a Chinese design firm aspiring to transform its management and practice. The major arena for this transformation is the **KBlogCentral** knowledge management system. The “*Dao*” (way) to such transformation is the members of the firm employing heuristic, self-reflective action research to 'find its future', with and through its people. In this process I have reported on innovative and, to my mind,

valuable discoveries in knowledge elicitation and methods of integrating the views of my colleagues. This doctoral thesis, reporting on my finding of these discoveries, is my contribution to knowledge within the academic, information systems, design, and management fields.

The research reveals that knowledge, as a social product of human interactions, does not exist outside an agent – human beings. Thus the main role of knowledge management is to support social human interactions instead of just employing information technology to manipulate data, information and explicit knowledge as advocated by the functionalist approach. Knowledge management practices in China are found to be highly influenced by the contemporary interpretations of strands of traditional Chinese philosophy. The existence of a linguistic divide, resulting from some obsolete or misinterpreted doctrines of traditional Chinese philosophy, impedes the processes of creating and sharing knowledge in China. This thesis is a beginning endeavour to critically examine these obsolete and distorted doctrines as a contribution towards a modern form of Chinese philosophy revitalizing Chinese to meet the challenges of a growing knowledge economy. Thus an undercurrent of heuristic hope runs through this thesis in that, within technology originating from and dominated by the West, this thesis reveals how knowledge management practice in China can be inspired by Chinese philosophy.

DEDICATION

Tsze-yu asked what filial piety was. Confucius said, "The filial piety nowadays means the support of one's parents. But dogs and horses likewise are able to do something in the way of support; without reverence, what is there to distinguish the one support given from the other?"

The Analects (Chapter 2, Verse 7)

I dedicate this thesis to my remarkable Mother, the late Law Chan Ching Ping, who instilled in me a love of knowledge. Born in the unstable economic and political upheavals of China in World War II, she had no chance of going to school given the prevailing prejudice against women. Widowed when I, the youngest of eight children, was only seven years old, she worked dauntlessly even in the face of disasters to raise a good and loving family. Although illiterate, late in life she steadily learnt how to write her name. Humbled and intrigued by her fortitude inspired love of knowledge, I resurrected my Master of eBusiness study after she passed away in 2001. Thank you Mother.

ACKNOWLEDGEMENTS

I would like to thank my supervisor Professor Craig Standing for his patient guidance, advice and encouragement throughout this journey. Your dedicated mentoring is greatly appreciated.

I would also like to thank Dr Mark Campbell Williams, the original supervisor of this thesis, for his contributions. With “all your heart”, you led me crossing “the heuristic gap, which lies between problem and discovery”.

To all the “Tzŭ”s in this study, I am particularly grateful for all your valuable time and assistance.

Final thanks go to my wife Suphaluck and my two vibrant, diligent and perceptive daughters Akira and Sirilux, this DBA(IS) could not have happened without your support and sacrifice.

GLOSSARY

Action Research: Action research simultaneously assists in practical problem-solving and expands scientific knowledge as well as enhances the competence of the respective actors being performed collaboratively in an immediate situation using data feedback in a cyclical process aiming at an increased understanding of the totality of a given social situation primarily applicable for the understanding of change processes in social systems undertaken within a mutually acceptable ethical framework.

(Hult & Lennung, 1980)

Blog: Web site that contains an online personal journal with reflections, comments, and often hyperlinks provided by the writer.

(Merriam-Webster online dictionary)

Critical Theory: Critical theory is primarily a way of doing philosophy, integrating the normative aspects of philosophical reflection with the explanatory achievements of the social sciences. The ultimate goal of its program is to link theory and practice, to provide insight, and to empower subjects to change their oppressive circumstances and achieve human emancipation, a rational society that satisfies human needs and powers.

(Cambridge Dictionary of Philosophy, pp. 278-79)

Explicit Knowledge

Explicit knowledge refers to the knowledge that can be expressed in symbolic forms or in natural language.

(Nonaka and Takeuchi, 1995)

Ideal Speech Situation

Ideal speech action refers to a speech situation which “excludes all force-whether it arises from within the process of reaching understanding itself or influences it from the outside-except the force of the better argument (Habermas, 1984, p.25). Under ideal speech situation, all participants are free from any kind of distortion, coercion, manipulation and distorted ideologies.

Knowledge: Knowledge is the individual capability to draw distinctions, within a domain of action, based on an appreciation of context or theory, or both.

(Tsoukas and Vladimirou, 2001)

Knowledge Management: Knowledge management refers to those processes that acquire, organize and communicate knowledge between employees for the sake of enhancing their productivity at work.

(Alavi and Leidner, 1999)

Knowledge Management System: Alavi and Leidner (2001) put forward that knowledge management system refers to a class of information systems for

managing organizational knowledge; they further that knowledge management systems are IT-based systems for supporting the processes of knowledge creation, storage/retrieval, transfer and application.

Knowledge Warfare: Knowledge warfare aims at attaining knowledge superiority over the adversaries; it consists of any actions to protect one's own or attack adversaries' processes of applying expertise.

Tacit Knowledge: Tacit knowledge is hard to be codified or communicated in symbolic form or natural language (Alavi and Leidner, 2001) because tacit knowledge is personal and context specific in nature (Nonaka and Takeuchi, 1995).

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CHAPTER ONE INTRODUCTION

“Wheresoever you go, go with all your heart.”

Confucius, Analects, translator not known

Adept Kung asked: "Is there any one word that could guide a person throughout life?"

The Master replied: "How about 'shu': never impose on others what you would not choose for yourself?"

Confucius, Analects XV.24, tr. David Hinton

The tree which needs two arms to span its girth sprang from the tiniest shoot. Yon tower, nine storeys high, rose from a little mound of earth. A journey of a thousand miles began with a single step.

Lao-Tzū, Tao Te Ching, tr. Lionel Giles

Everything has its beauty but not everyone sees it.

Confucius, Analects, translator not known

PRELIMINARY COMMENTS

Inspired by arguably the greatest of the Chinese philosophers, Lao-Tzū and Kung Tzū (Confucius), I begin this “journey” looking for the “beauty” within this research. “With all my heart”, I address the question: “How did the process of developing and using a Blog-based reflective practitioner knowledge management system, informed and inspired by Chinese philosophy, change the professional practice of members of a Chinese interior design firm?”. In this thesis I have different ways of writing. In keeping with a reflective practitioner research approach I write mainly in the first person active voice. This is aligned with Confucius’s teaching regarding ‘shu’ in the quote at the beginning of this section. I have recommended my colleagues to write in this manner when using the **kBlogCentral**. We find it adds impact and immediacy to our postings in the knowledge management system. So having imposed on others this style of expression, I now choose it for myself.

At times I write in a straightforward style. Short sentences are the norm. Things are described as they are stated and commonly understood to be. There is little ambiguity. This style allows me to write about “organizational reality” (Hassard & Pym, 1990, p. 16).

At other times I write with a heuristic style that allows me to express doubt and my own uncertainty. While being honest, I respect the uncertainty that comes with learning. Here, I am working within both interpretivist and radical humanist perspective. I write about "the social world primarily from the point of view of the actors directly involved in the social process" (Burrell & Morgan, 1979, p. 227). I respect my emotions as well as my mind. I use reflection to aid my own personal growth. I pause and write while I am being interdependent with what I am endeavoring to understand (Willis, 1999, p. 25). I share "narratives of the self [and] make a point without tedious documentation" (Richardson, 1994, p. 521).

As part of my writing style, I incorporate the management planning approach known as *Soft Systems Methodology* (SSM) (Checkland & Scholes, 1990). I use *rich pictures* to serve as aids in investigating ill-defined, real-world problems (Hicks, 1994; Standing & Williams, 1993a & b & c). Rich pictures often incorporate symbols or cartoon-like representations. Rich pictures point to key factors in the systems under investigation and give a sense of the multi-faceted richness which usually occurs in human situations.

Hicks (1994, p. 235) explains that rich pictures are suitable for showing patterns, arrangements, connections and relationships. In this way, one can see a perspective of the whole to gain a feel of the overall shape of complex situations. According to Hicks, pictures, rather than written descriptions, often are more concise and easier to share with others. They can more easily show vital links and interactions that may give rise to unexpected or unintentional consequences that deepen the research. For example consider the rich picture of Figure 1.1.

RESEARCH ENVIRONMENT

Introduction: Conrad Interior Design (CID)

This thesis is a reflective ethnographic autobiographical account of the way in which my colleagues and I developed and use a reflective practitioner knowledge management system based around web-based blogs in China. I took over as Managing Director of Conrad Interior Design (CID) limited company in the middle of 2003. At that stage CID employed 6 full-time interior designers, 4 part-time designers, and 2 full-time secretarial staff. The founder of the firm, whom I will name Zhao, had previously carried out all the senior management and the senior

designer duties. He was to stay with CID for half a year before the present Design Director, Je-Tzū, took over his share of the company and became my business partner.

Zhao was responsible for liaising with customers. After listening to the descriptions of customers, Zhao searched through piles of design books with the latest interior design cases by famous interior designers to find suitable photos. Without considering the issue of intellectual property rights, Zhao showed the books to the customers and told them that they would get a similar design. Once customers agreed with the design in the photos, Zhao asked his designers to design according to the photos in the books with minor modifications.

Initial Problems with the Company

I quickly became dissatisfied with the low level of efficiency, effectiveness and empowerment of the firm given that all the employees were talented in their areas. I perceived that the major problems when I joined the company were:

- Staff were educated but passive with no ambition and an avoidance of responsibility.
- The design strategy was an uncritical and uncreative design-by-copy

methodology.

- Knowledge creation and management were ignored.
- Mutual trust was low.
- Communication was inefficient.
- Productivity and efficiency were low.
- Earnings were low (that's the reason why I was invited to join the company).

These problems were endangering the firm's survival in a constantly changing market environment. I represent these and other concerns in the rich picture of Figure 1.1.

What is going on in this picture? I, Fergus, am represented at the bottom left of the picture wanting to use my recent master's learning as a knowledge warrior to emancipate the company. My partner, Je-Tzū, in the middle looking like a Chinese sage, is managing with the Taoist "Wu-Wei" strategy of waiting patiently and intervening in things as little as possible. The customer, computer aided designer (we name the position as CAD operator), and the designer all have concerns which I address in the following sections.

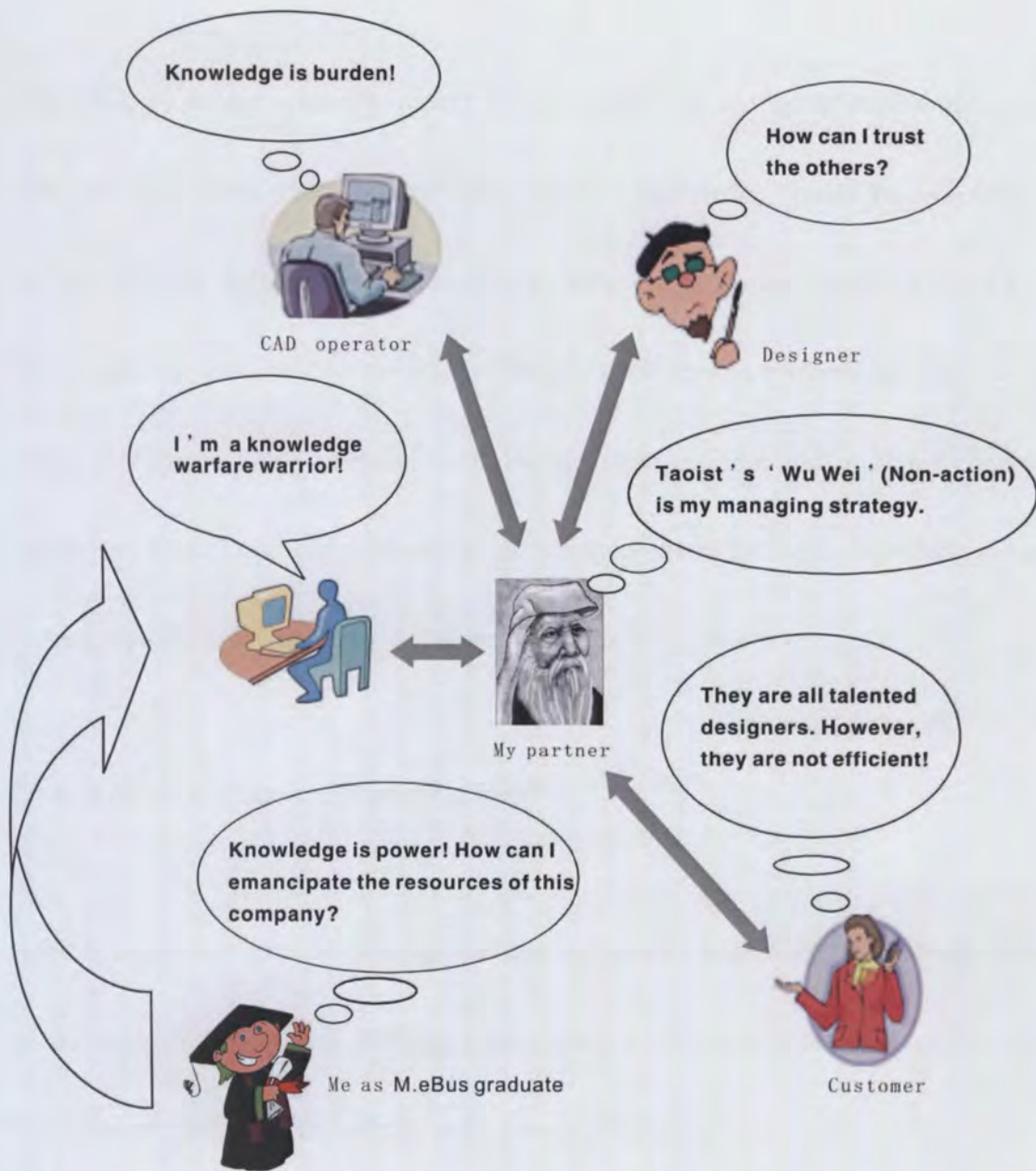


Figure 1.1 Rich picture showing the status of the

Interior design firm when I joined it in 2003

Lack of knowledge management mechanism

There was no proper system to record the knowledge created by the staff within the firm and this meant that both explicit and tacit knowledge would be lost when anybody left the firm. In addition, staff were hoarding their own knowledge out of a false sense that they would be replaced if others knew how to perform their job. As a result, there wasn't any mechanism to validate, store, retrieve and share knowledge within the firm. This was problematic as the mechanism to create knowledge is a crucial process in the long term development of the firm.

Low level of mutual trust among staff

Another major barrier of knowledge building and sharing within the firm was the lack of mutual trust among staff. Without mutual trust, it would be impossible for them to communicate and share knowledge with a sense of security.

Low level of awareness on knowledge warfare

The level of staff' awareness on knowledge warfare was extremely low in the firm.

The cost of such ignorance would be extremely high because insiders and infiltrators

were very common in the industry. There were occasions that internal design concepts and documents were leaked to competitors.

Unused and misplaced resources due to distorted assumptions

There were misplaced, wasted and unused resources due to taken-for-granted assumptions of staff in their professional practice. Without critical reflection to unveil any distorted assumptions; customers' preferences and market conditions would be wrongly perceived, business processes would be inefficient and as a result, the firm would fail to deliver satisfactory results.

Contrary to my partner's Taoist non-interventionist approach, I adopted the Confucian interventionist approach in managing my business (Ho, 1992). In order to emancipate the unused and misplaced resources, I decided to build a knowledge management system in the firm to address the problems. The rationale and underlying theories for building the knowledge management system is shown in Table 1.1.

Problems within the firm	Possible solutions	Rationale/Related Theories
Lack of knowledge management mechanisms	Installing a web-based Blog in the firm's Intranet	Blog provides an efficient platform for easy publishing, storing, accessing, retrieving and sharing of knowledge. However, the blog only provides a necessary platform for organizing knowledge; it is not sufficient to guarantee the knowledge posted is genuine and free from strategic action.
Unused and misplaced resources due to distorted assumptions	<p>(1) Employees are encouraged to perform action reflective practitioner research.</p> <p>(2) Employees are encouraged to understand the concepts of Critical Theory</p>	<p>Action Research enables the employees to have a better understanding of their work environment when taking action. The reflection phase of Action Research requires employees to critically reflect on their actions and environment to unveil any unused and/or misplaced resources due to distorted ideologies and/or decisions based on wrong assumptions.</p> <p>Critical Theory advocates people to free themselves from manipulation and distortion by critical reflections</p> <p>Critical reflections advocated by the two theories above also lead to the conversion of tacit knowledge to explicit knowledge</p>
Low level of awareness on knowledge warfare	Employees are encouraged to understand the concept of Critical Theory and Habermas' Theory of Communicative Action.	<p>(1) Critical Theory advocates people to free themselves from manipulation and distortion by critical reflections. This constitutes an effective defensive measure of knowledge warfare.</p> <p>(2) Habermas' Theory of Communicative Action enables users of kBlogCentral to detect any strategic action by validating the claims made by other users.</p>
Low level of mutual trust	Employees are encouraged to	Habermas' Theory of Communicative Action enables employees to validate others' claims according to the

among staff	understand the concept of Habermas' Theory of Communicative Action.	claimers' objective, subjective and inter-subjective worlds. With this tool in hand, employees can dissolve their over protective interpersonal distrust. When all users of kBlogCentral understand and adopt the principles of Action Reflective Practitioner Research, Critical Theory and Habermas' Theory of Communicative Action, kBlogCentral will provide an ideal speech situation and platform for users to create, store/retrieve, share and apply knowledge through inner and open discourse.
-------------	---	--

Table 1.1 Rationale and underlying theories of **kBlogCentral**

CREATION OF THE KBLOGCENTRAL

Inspired by Dr. Williams (my supervisor at the time) and with my new business partner Je-Tzŭ, I began to address these problems by creating a knowledge management system by inviting staff to write weekly reflective practitioner reports. Apart from the objectives of creating and managing knowledge, it is intended to allow staff to critically reflect on their assumptions in order to free them from distortion and coercion.

In late 2003, I told our staff in a meeting that we were going to change in order to survive. I briefed them with some basic ideas of copyrights, knowledge, knowledge management, information technology etc. In concluding the meeting, I told them that

we were going to change our strategy and do something to manage our knowledge. In the question-and-answer session, Chi-Tzū asked me why we needed to manage knowledge. That was a strange question to me, he thought that his only responsibility was to wait for Je-Tzū's instruction (Je-Tzū was Chi-Tzū's lecturer during his undergraduate study), and he could fulfill his task even without any changes to his daily life. (I later found out that other designers shared Chi-Tzū's view that interior design was a kind of fine art which needs nothing but intuition. Je-Tzū and Ni-Tzū were the only two who agreed with me.)

Workshop on the Knowledge Management System

After completion of a design project, we organized a 2 days 1 night workshop on our proposed knowledge management system, it was held at a spring resort hotel in early 2005. The objective of the workshop was to address the problems on the knowledge management system based on reflective practitioner reports. We did not want to coerce our staff to write their reports; they were encouraged to participate in the program in a voluntary basis. However, it turned out that the program was not successful; seldom staff wrote their reports and the reports submitted were not

reflective in nature, they just wrote down something on what they did in the previous week.

At the workshop, I briefly introduced the concept of Knowledge, Knowledge Management, Knowledge Management System, Intellectual Property, Reflective Practitioner Research, Critical Theory, Theory of Communicative Action, traditional Chinese Philosophies and Confucianism. Results of the workshop were fruitful (I think some of them were drunk, they asked/challenged me some questions boldly without the worry that I am their superior; I like that kind of atmosphere of free discussion); I got the following insightful questions from the staff:

- “I am afraid that you don’t understand the characteristics of the Chinese market, everybody is copying here. If clients like the designs in the books, we can fulfill their needs promptly.”
- “The ‘knowledge economy’ you mentioned only affects countries that produce IT products! China is an agricultural and industrial country, we won’t be affected anyway.”
- “We were quite busy and writing with a pen is too time-consuming for us.”

- “We are in the 21st century, we seldom use a pen already. We always forget how to write some Chinese characters when writing.”
- “I think more staff members are willing to write their reflective accounts if we don’t need to write difficult and complex Chinese characters. Is there any way to make it easier for us to write our reflective accounts and to read others’ reflective accounts?”

I considered these opinions carefully. In response to the first two opinions, I quote from the publication “China and the Knowledge Economy: Seizing the 21st Century” by the World Bank Institute (Dahlman and Aubert, 2001). I agree with their findings:

- China is at a critical juncture in its development strategy, caught between daunting internal challenges and a demanding external environment driven by rapidly expanding knowledge
- For a long part of history China was the largest and most advanced economy
- [China] must seize the 21st century – exploiting knowledge to regain its place in the world economy

Internal challenges that China is facing include: unemployment, declining international competitiveness, income and regional inequalities and pollution. The two authors urged the Chinese government to build solid foundations for a knowledge based economy by: updating the economic and institutional regime, upgrading education and learning, and building information infrastructure. China must also raise the technological level of the economy by: diffusing new technologies actively throughout the economy, improving the research and development system and exploiting global knowledge.

In response to the third, fourth and fifth opinions raised by staff, I considered that, given that Chinese scripts are complex, it is comparatively difficult to memorize and write in Chinese. Philip Vernon, quoted in Bond (1991), asserts that “Chinese, however, represents every different word by an ideograph, or pictorial character ... there are some 3,500 of these characters ... and far more for uncommon words.”

I observed that most of our staff seldom use a pen in their working environment. They use a computer to draw sketches, to type words etc. Fortunately, I discovered that all of them type very quickly when they use QQ (a popular online instant messaging service in China) in networking with their friends. They use the pin-yin

(pronunciation) inputting method when writing Chinese characters; i.e. they write “naturally”, they don’t need to recall how to write the complex Chinese characters.

We need to solve the difficulty in writing Chinese characters in our knowledge management system; it came to my mind that a Blog provides an easy way for staff to publish their opinions. A Blog has the following features that I think are suitable to be adopted to build our knowledge management system;

- Easy publishing for our staff that are proficient in inputting Chinese characters by the Pin-yin method.
- Provides the comment function for others to engage in dialogue.
- Systematic classification of entries for easy searching.
- Search functions.
- RSS functions for tracing certain topics.
- Trackback function for easy reference to other entries.

A Blog provides features that enable users to publish, refer, track, search entries easily, it is suitable to be used by our staff as a platform for dialogues and discourse.

Building the system

We had two choices in building the knowledge management system; one is to use the services provided by the online blog service providers, the other is to build our own system. In a consultation with our staff, all rejected the first options because they don't want people other than company staff to see their blog entries. So the second choice was chosen although the first choice is easier and faster to implement. After searching through the Internet, we sorted out four popular blog applications in China as follows, and Pe-Tzū evaluated them as shown in Table 1.2;

1. oBlog: <http://www.oblog.cn>: This application is developed by Chinese software developers.
2. DotText: <http://dottext.cnblogs.com>: This application was originally developed by an American, Scott Watermasysk, and was localized by a Chinese developer called Dudu.
3. Misslog: <http://www.misslog.com>: Developed by local developers.
4. LifeType: <http://www.cnblog.com>: This application was named Plog before and was changed to the current name.

	oBlog	DotText	misslog	LifeType
Operating System	Windows	Windows	Windows	Windows/Linux
Web Server	IIS	IIS	IIS	IIS/Apache
Programming Language	ASP	ASP.NET	ASP	PHP
Database	Access	MS SQL	Access	MySQL
Open Source	No	Yes	Yes	Yes
Install	Easy	Normal	Easy	Difficulty
Maintenance	No	Easy	Normal	Normal
Efficiency	High	Highest	Normal	Normal
Encoding	GB2312	Unicode	Unicode	Unicode
Multi-User	✓	✓	✓	✓
Category	✓	✓	✓	✓
Comment	✓	✓	✓	✓
Skin Template	✓	✓	✓	✓
Upload Images	✓	✓	✗	✓
Upload Files	✓	✓	✗	✓
RSS	✓	✓	✓	✓
Static Page	✓	✗	✗	✗
Other	Album/ Accessing Password	Album	-	-

Table 1.2 Comparison of four different blog applications

oBlog and Misslog were not chosen because they are not open-source applications.

We preferred open-source applications so that we could have more flexibility in developing the knowledge management system. Finally, we chose DotText as the platform for developing our **kBlogCentral**. DotText is based on ASP.NET which suits our IT staff who are familiar with ASP instead of PHP. Another criterion for

screening these four products is the support of English, Traditional Chinese and Simplified Chinese. We need an application that supports all three languages simultaneously in order to support our users from mainland China and Hong Kong. Multi-language support is important to virtual team structures where professionals with different backgrounds can collaborate as a team seamlessly.

The system specifications of our **kBlogCentral** are show in Table 1.3. It can be seen that Microsoft Windows Server 2000 is the operating systems using Microsoft SQL Server 2000 as the database. Security is good as we use internal office servers as the system environment. The full name of the blog platform is *CNblogs Dottext 1.0 Beta* 2.

Operating System	Microsoft Windows Server 2003
Web Server	Internet Information Services 6
Database	Microsoft SQL Server 2000
Blog	CNblogs Dottext 1.0 Beta 2
Environment	Office Internal Servers

Table 1.3 System specifications of **kBlogCentral**

A diagrammatic representation of the system architecture of the **kBlogCentral** is shown in Figure 1.2. Note the way in which requests and responses are sent to and from the client (Windows XP) to the Server comprising the Web Server and the SQL Server for the database. Within Windows Server 2003, DotText communicates with other web files within Internet Information Services 6.

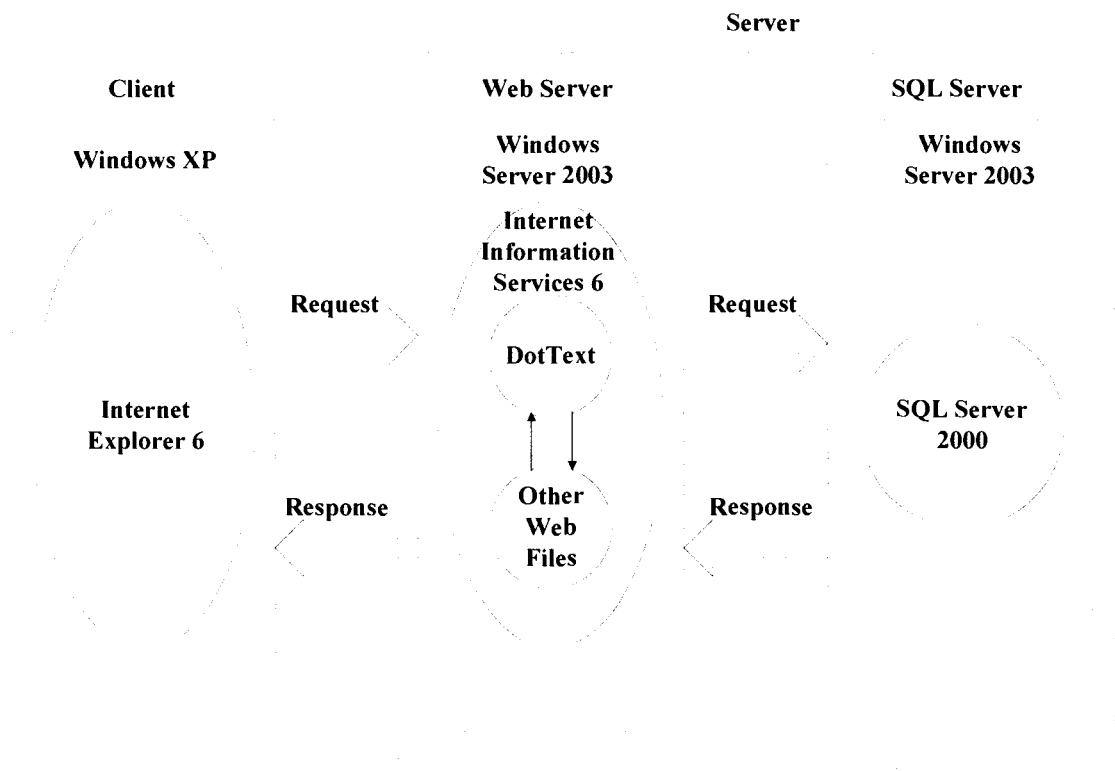


Figure 1.2 Diagram showing the system architecture of the KMS. Note that it is a client-server system.

Hosting of the Server for the kBlogCentral

Of immediate concern was the hosting of the server for our **kBlogCentral**. We had three options for this crucial decision:

1. **Host the server within the company:** This option for hosting the knowledge management system server is diagrammatically represented in Figure 1.6.

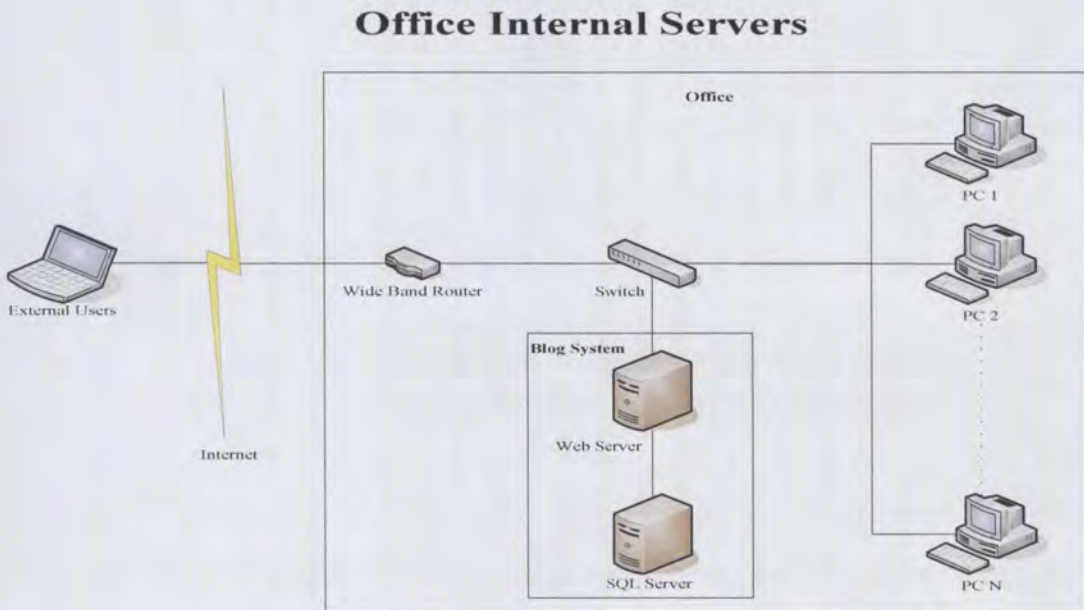


Figure 1.3 Diagrammatic representation of the option of hosting the KMS within the information systems structure of the company

Note that in this option the user who is outside the office links with the knowledge management system through the Internet by accessing the Wide Band Router which is switched through to the Blog system. Note that the PC

users are also linked in via the Switch.

- 2. Virtual hosting:** This option for hosting the knowledge management system server is diagrammatically represented in Figure 1.4.

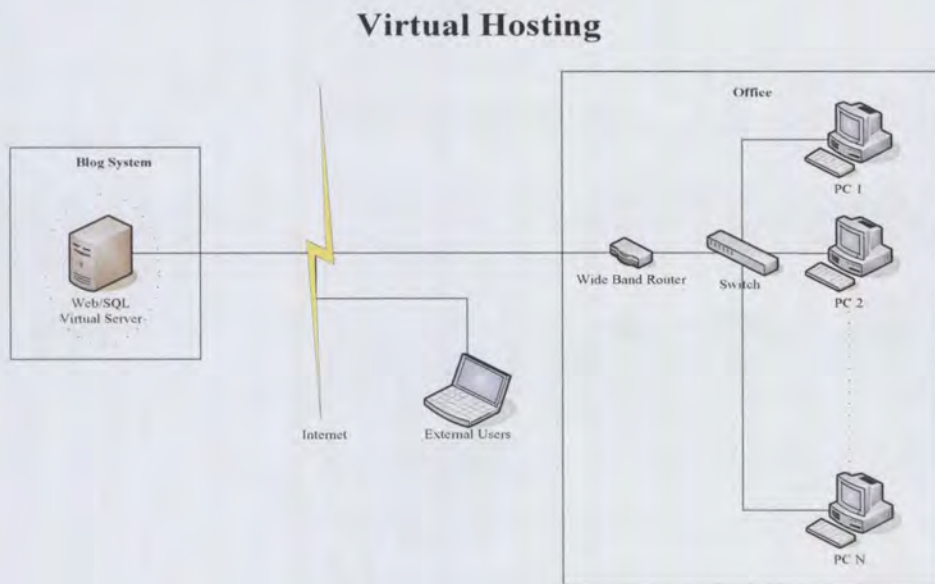


Figure 1.4 Diagrammatic representation of the option of hosting the KMS virtually over the Internet

Note that in this option the knowledge management system is hosted as a Blog System on a Web SQL Virtual Server. All users link with the knowledge management system through the Internet.

- 3. Dedicated server hosting:** This option for hosting the knowledge management system server is diagrammatically represented in Figure 1.5.

Note that in this option the knowledge management system is hosted as a Blog System on a *dedicated* Web SQL Virtual Server. As in the previous option, all users link with the knowledge management system through the Internet.

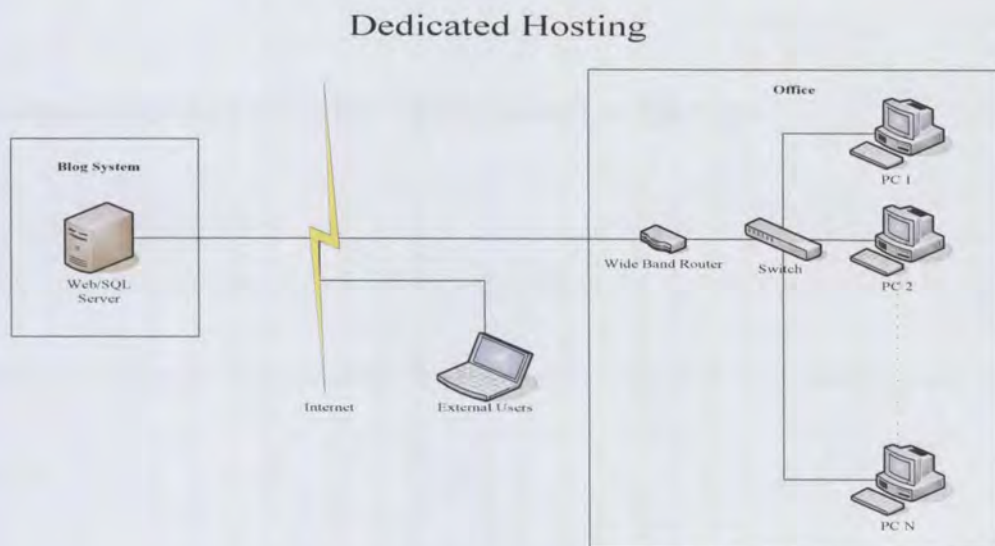


Figure 1.5 Diagrammatic representation of the option of *dedicated* hosting the KMS virtually over the Internet

Decision on Hosting of the Server for the kBlogCentral

As the business broadband connection charge is relatively high in China, we need to consider options other than having our own business dedicated broadband connection in our company. After due consideration, we decided to host the server within our

company without a dedicated broadband connection. We implemented a DDNS (Dynamic DNS) service in our router so that external users can access the system through our ADSL connection which is relatively cheaper. The decision is justifiable in view that most users use the knowledge management system while they are at the office.

Changes Resulting from the Development of the KMS

There were many changes that have resulted from the development of the knowledge management system. For example, the latest methodology for our design practice is as follows.

Methodology of Design Practice

- (1) Listen to the client's needs and try to find out who the final users are.
- (2) Present and explain a report of our understandings to the client in order to avoid any misunderstanding; clarify with client if there is any misunderstanding.
- (3) Form a virtual team for the project, one of the team members is designated as the team leader whose responsibility is to ensure authentic consensus among team members, clients and outsourcing partners.

- (4) A new blog entry is published for the project; the blog will be the base for the project, stakeholders along the value chain can keep track and contribute to the project through discoursing in the **kBlogCentral**. The whole process of the project will be documented in this blog.
- (5) Team members critically reflect on the project to find out the needs and preferences of the final users.
- (6) Within the framework of the final users' needs, client's needs, client's investment budget, client's expected return on investment, corresponding design codes and regulations etc., the team delivers an interior design that is beautiful, functional, sustainable and ethical.
- (7) Once the design is completed and drawings are delivered to the client, team members reflect on the whole process for learning.
- (8) Once the project is commissioned, team members visit the site and reflect on the project for learning.

DEVELOPMENT OF MY RESEARCH INTERESTS

Figure 1.6 shows the major four stages of the metamorphosis towards my doctoral research, below is my autobiographic account on how my research rationale, research

areas, research questions, research title, research methodology and research philosophy emerges in each stage.

Stage One

After four years of fruitful university life, I was awarded a Bachelor degree of Social Science by the Chinese University of Hong Kong in 1988. My major and minor subjects of study were Economics and Computer Science respectively. In those four years of study, I was trained to be an empiricist and my rationality was mostly instrumental in nature. The term '*Ceteris Paribus*' was ubiquitous in my textbooks and assignments. Based on the economic theories, we were trained to make generalizations, predictions and explanations on economic phenomena.

Reflection: At this stage, I naively thought that I was able to make generalizations, explanations and predictions in all aspects of the world. When I tried to make such explanations and predictions, I made ridiculously assumptions that human beings and social settings could be controlled as in laboratory experiments. At this stage, I was influenced by Chinese ancient Yin Yang and Wu Hsing (Five Elements) philosophies, Confucianism, Taoism and Marxism. I was interested in using computer systems to

automate everything and my personal vision was to help in eradicating computer illiteracy in Hong Kong.

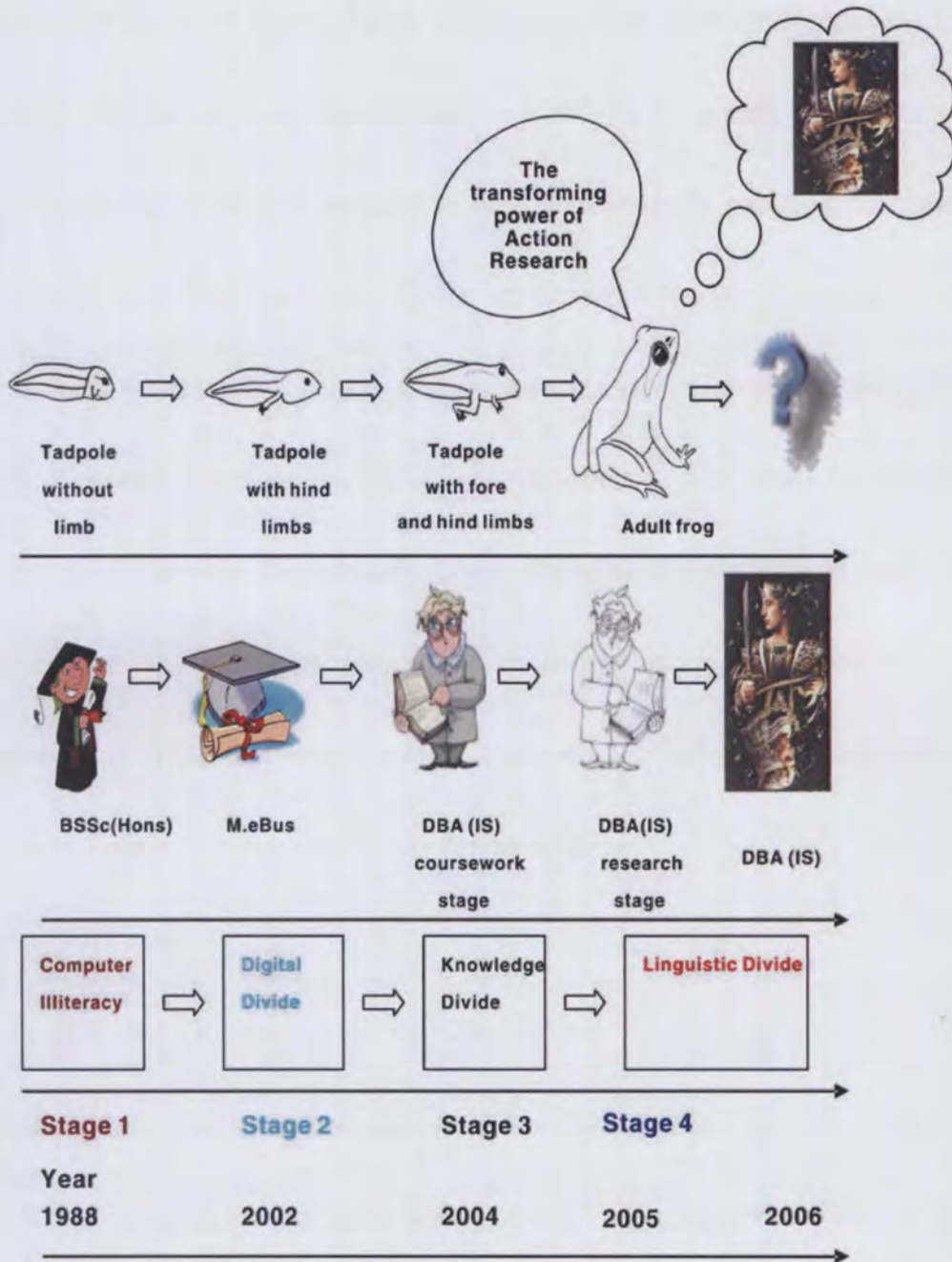


Figure 1.6 Rich Picture showing the metamorphosis towards my doctoral research

In September 1988, I joined the Hong Kong Government as an Executive Officer and started the first full time employment in my career. Without any training, I was deployed to a department in the northern district of Hong Kong. It was raining heavily on the next day after I reported duty; major areas of the northern district were flooded severely. One of my subordinates rang me up early in the morning and told me that I was, according to my post, required to head an emergency coordination center. My colleagues were busy answering hotline telephone calls when I reached my office. With the 'Disaster and Emergency Coordination Center Operations Manual' in my hand, I started coordinating the Police Department, Fire Services Department, Community Services Department, Land Department, Agricultural and Fishery Department, etc., to offer assistance to those victims who phoned in for help. After I went back to my home late at that night, I was still wondering how I could handle all the work I did in that day without any formal training.

Reflection: It was shown in the incident that knowledge on how to handle hotline telephone calls was written in the operations manual. There was also some sort of knowledge residing in my brain unconsciously. The unconscious knowledge was probably generated from my participation in Boy Scout activities during my primary and secondary school life. Until I reached stage 3 in Figure 1.6, I was not aware that

the knowledge in the operations manual and my brain is categorized as explicit and tacit knowledge respectively according to Nonaka's classification (1994).

Stage Two

The rich picture of Figure 1.6 shows my metamorphosis in my higher educational career which has led up to this DBA thesis. I envisage myself to evolve from a tadpole through to an adult frog and then being "kissed" by action research to become a knowledge warrior splendid prince. Having completed all the required coursework units and fulfilled all the prescribed requirements in late 2002, I was awarded a Master of e-Business degree by Edith Cowan University in early 2003.

In the period 1994 to 2002, which is considered as the information and network centric eras, I found that I couldn't explain and even understand some economic phenomena through the lens of economic theories I knew. The situation climaxed in year 2000 where most economic phenomena of the dot.com boom couldn't be explained by the economic theories I knew and the so-called conventional wisdom. Hence, I decided to enroll in the Master of e-Business degree program offered by Edith Cowan University in 2001 for the sake of learning new theories in the electronic

business field. Despite this, I was still unable to make explanations and predictions on most dot.com related economic phenomena at the end of my Master's study, but there was an unexpected positive outcome. My previous doctoral thesis supervisor, Dr Mark Williams taught me the 'Information Management' unit of the M.eBus program in 2002. During the recess of a lecture, he introduced the concept of action research to us. I was inspired by the power of Action Research which subsequently led me to pursue my current doctoral study.

Reflection: Action Research allows me, as said in the title of Dr Williams' recent book (2004), to write a doctoral thesis about work. I was inspired by the power of Action Research that allows researchers to improve their problematic areas at work and contribute to the body of knowledge concurrently. At this stage, I was influenced by Chinese ancient Yin Yang and Wu Hsing (Five Elements) philosophies, Confucianism, Taoism, Marxism and the Action Research paradigm. I was interested in information warfare and network security; my personal vision was to help in eradicating the digital divide globally.

In 1994, I started my own business in mainland China. It was a joint venture with a local telecommunication company to manufacture telephone sets in Guangdong

province. But the joint venture ended up in failure because of improper management. Nevertheless, I was exposed to the distinctive culture of mainland China and starting to understand the different mindsets of the local people there in those two years. In addition, I built up certain Guangxi (networks and relationships) in mainland China. Starting from 1996, I shifted to a new business of selling telecom infrastructure products in mainland China. In 1999, I started another business to provide interior decoration services to major telecom companies in China. The economy of mainland China was growing rapidly in last decade; local people are building up their wealth as a result of the rapid economic growth.

Reflection: As China is opening up its market, large numbers of foreign investors are flooding into this huge market. Despite the promising future of the Chinese market, any endeavor to enter the Chinese market wouldn't be successful without knowing the distinctive culture and different mindsets of the people there. Moral crisis and in turn lack of mutual trust among Chinese people are the major problems to be dealt with at the moment. Figure 1.7 shows a sign at the entrance of a foreign fast food restaurant at Guangzhou warning its customers to beware of strangers. Because thieves and swindlers are ubiquitous in mainland China, people there tend not to believe in others out of a sense of self protection.



Figure 1.7 Warning sign at the entrance of a Foreign fast food restaurant at Guangzhou

Stage Three

I was inspired by the power of Action Research to pursue my doctoral study in 2003. During the coursework stage, I was intrigued to learn about the critical role that knowledge plays in the information economy. I learned about the concept of virtual organization which enables us to focus on our own core competencies and leverage the scarce resources among business partners. At this stage, I also reviewed different research philosophies and methodologies. Qualitative, ethnographic research, reflective practitioner action research, case study research, critical theory especially Habermas' theory of communicative action (1984, 1987), attracted my attention.

Reflection: I was intrigued to learn about the significant role played by knowledge in information economy. I also learnt that virtual teaming structures would enable us to optimize resources within our organizations. However, I was still looking for ways to emancipate the misplaced resources due to our distorted ideologies and/or assumptions when we made decisions in allocating our limited resources. Following my previous doctoral thesis supervisor, Dr. Mark Williams, I adopted Critical Theory and Habermas' critical social theory as the underlying philosophies for my research. At this stage, I was influenced by Chinese ancient Yin Yang and Wu Hsing (Five Elements) philosophies, Confucianism, Taoism, Marxism, Critical Theory especially Habermas' Theory of Communicative Action, qualitative research, case study research, ethnographic research and reflective practitioner action research. I was interested in knowledge management and knowledge warfare at this stage and my personal vision was to help in eradicating the knowledge divide globally.

Stage Four

In early 2004, I restructured the firm's organizational structure from hierarchical to virtual team based. The remuneration structure was also realigned to award the employees according to their performances and contribution to the firm's knowledge

base instead of the number of hours they spent in the office. In a meeting on evaluating the results of the changes in late 2004, it was agreed unanimously among employees that the changes in organizational and remuneration structure were satisfactory in terms of the firm's efficiency and staff morale. In view of the scale of the firm and limited budget available, I decided to develop our own knowledge management system instead of buying expensive, complicated and often overshooting solutions in the market. In early 2005, I intended to build a knowledge management system by inviting all employees to write weekly reports on their professional practices. However, the endeavor was found to be unsatisfactory; employees were just reporting their routine activities without any critical reflection. Responding to the situation, a few workshops on action research and Habermas' theory of communicative action were held for the employees. Starting from July 2005, all employees within the firm can publish their reflections regarding their professional practices on a reflective practitioner knowledge management system based around web-based blogs, the **kBlogCentral**.

Reflection: At this stage, I am influenced by Chinese ancient Yin Yang and Wu Hsing (Five Elements) philosophies, Confucianism, Taoism, Marxism, Critical Theory especially Habermas' Theory of Communicative Action, qualitative research,

case study research, ethnographic research, action research and reflective practitioner research. I am interested in developing a low cost reflective practitioner knowledge management system based around web-based blogs. Besides, I am intrigued by the important roles played by language and consensus-seeking discourse in the knowledge management process. However, it is found that Chinese are reluctant to get into discourse with others to seek authentic consensus. My personal vision is to help in eradicating the linguistic divide in China. Figure 1.8 shows the initial model of my research of employing action-reflective practitioner research and Blogs to manage knowledge in China while Figure 1.9 shows the evolution of my research title. A blog was included into the research to provide an efficient platform for easy publishing, storing, accessing, retrieving and sharing of knowledge; employees are encouraged to perform action-reflective practitioner research to ensure that their knowledge published in the knowledge management system is critically reflected and examined; Habermas' Theory of Communicative Action was introduced to ensure the users are in an "Ideal Speech Situation" and all users' claims are subject to validation in a dialectic process. Figure 1.10 shows the initial model of the reflective practitioner knowledge management system based around web-based blogs. As shown in the model, reflections of individual action-reflective practitioner research cycles get into

discourses with other users of the knowledge management system. The reflections are then subject to validations within the knowledge management system.

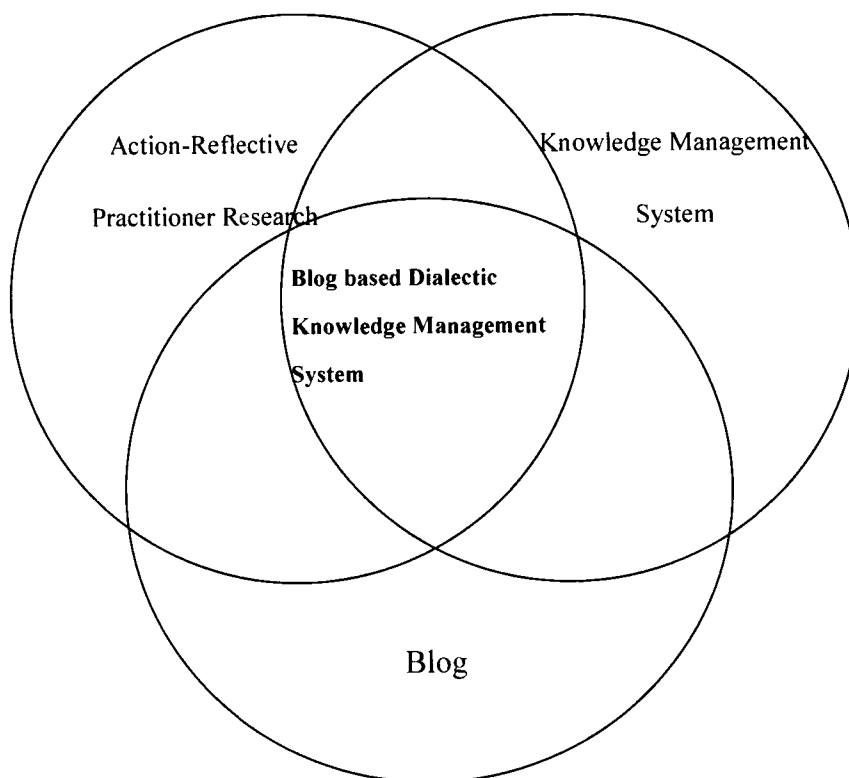


Figure 1.8 Initial model of employing reflective practitioner research to manage knowledge

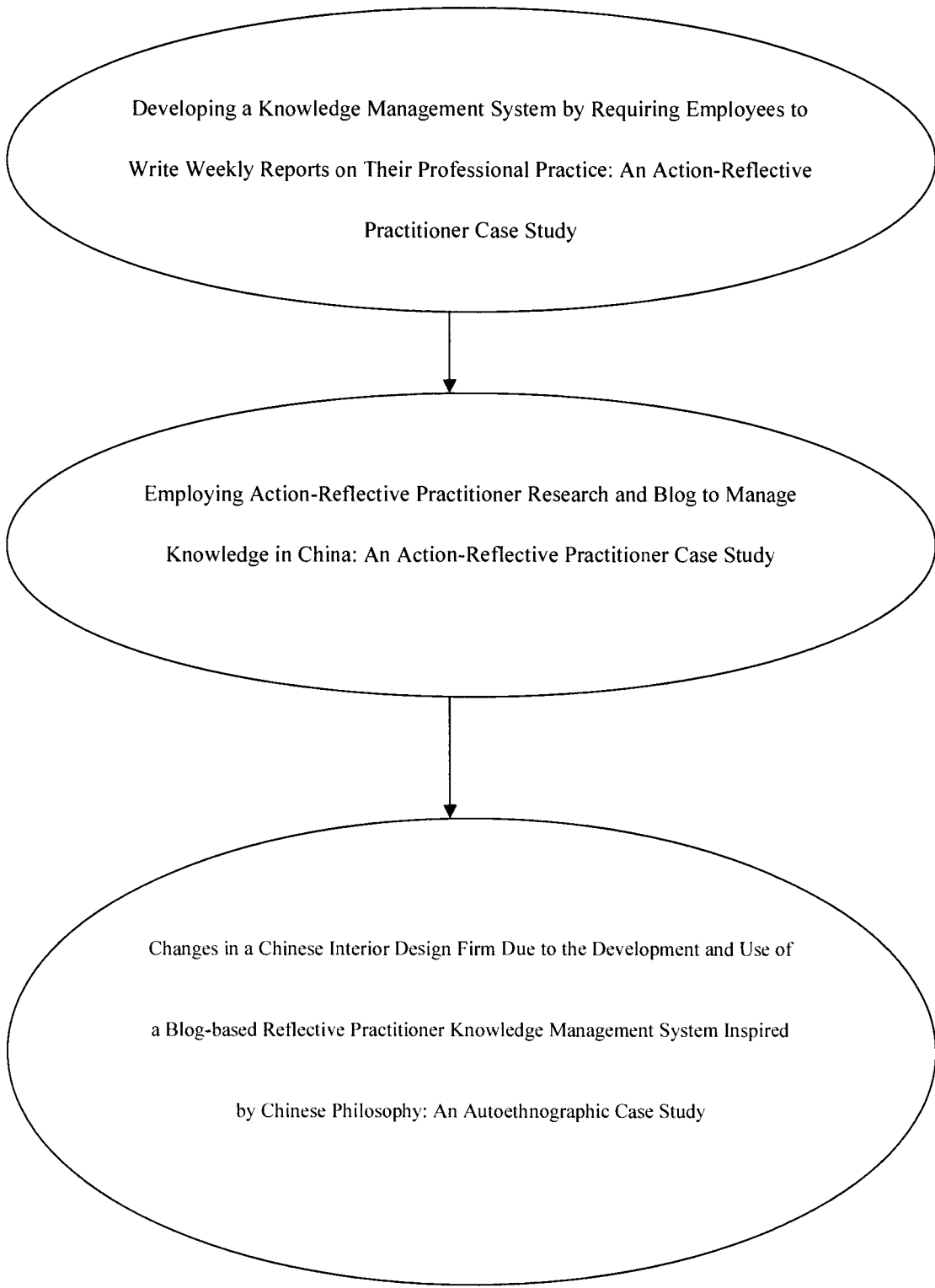


Figure 1.9 Evolution of my research title

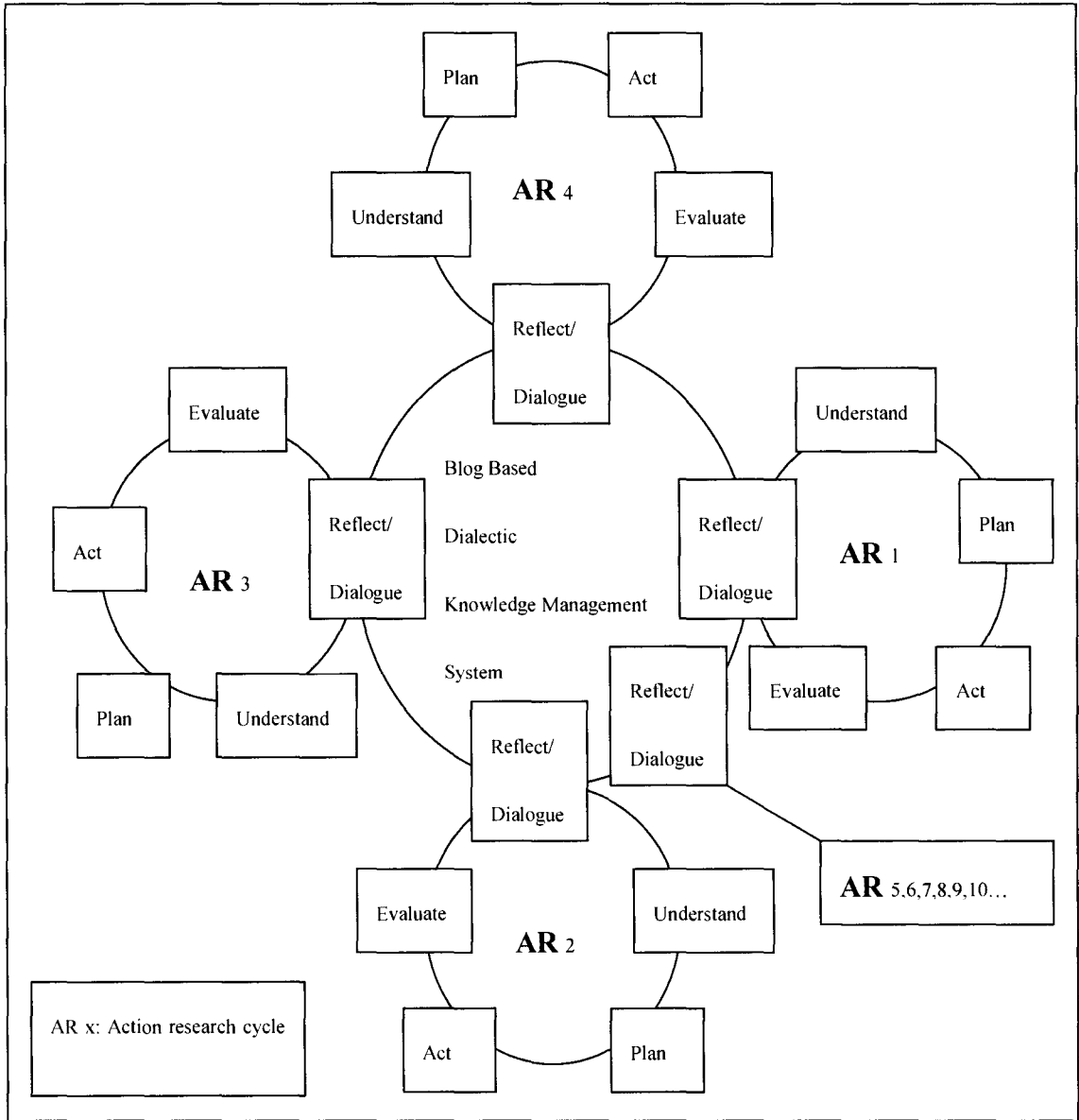


Figure 1.10 Initial model of the Blog based dialectic knowledge management system

SUMMARY

In this chapter I provide an introduction to this thesis. After preliminary comments including introducing the research writing style, I give an account of the research environment by describing the company and the initial problems when I became a partner in 2003. The way in which these problems were addressed by the development and use of the **kBlogCentral** is described in general. An overview of the development of my tertiary education and research leading up to the research presented in the thesis concludes the chapter.

In the next chapter, I describe the research methodology in detail. I describe the major strands or paradigms of information systems research and give a justification for my use of the reflective practitioner approach with elements of autoethnography and heuristic inquiry. Of particular importance is my account of ethics and research writing style.

CHAPTER TWO

RESEARCH APPROACH AND METHODOLOGY

Superior leaders get things done with very little motion. They impart instruction not through many words, but through a few deeds. They keep informed about everything but interfere hardly at all. They are catalysts, and though things would not get done as well if they were not there, when they succeed they take no credit. And, because they take no credit, credit never leaves them.

Lao-Tzū, Tao Te Ching, tr. Lionel Giles

By three methods we may learn wisdom: First, by reflection, which is the noblest; second, by imitation, which is the easiest; and third by experience, which is the bitterest.

Confucius, Analects, translator not known

INTRODUCTION

According to Lather (1992), research methodology not only concerns the way data are collected and interpreted, it also presents the philosophical foundations and theoretical framework within which the research project develops. I dare to hope that the major philosophical foundation behind my research approach relies on the seminal inspiration of Confucius on this research, the “noblest” he says, “by reflection”. Fortunately or unfortunately, a lot of my learning has been the “bitterest” of ways, the third way of experience. But whether by experience, imitation, or reflection, as Lao-Tzū advises, I try to keep informed of everything and make sure that when I do interfere it is necessary.

In this chapter, I describe major research methodologies and the methodology used in this study in the philosophical and theoretical dimensions to add depth to my account of the data collection and interpretation. I conclude with an in-depth account of the reflective practitioner research methodology used in this study which incorporates insights from critical theory, interpretivism, action research, heuristic inquiry and traditional Chinese philosophy.

RESEARCH PHILOSOPHY

Basically, research methodology refers to the study of methods employed in research as an essential part of the quest to find solutions to the research questions. To a large extent, methods determine the various ways in which data about a phenomenon are collected and analyzed in research. Sayer (1992) contends that the choice of methods must be appropriate to the purpose of the inquiry and the nature of objects under study or otherwise the research results could well become meaningless. Philosophy is defined as “critical examination of the rational grounds of our most fundamental beliefs and logical analysis of the basic concepts employed in the expression of such beliefs” (Encyclopedia Britannica Online, <http://www.britannica.com/eb/article-9375138/philosophy>, viewed on 7 August 2006).

Research philosophy may be conceived of as fundamental beliefs held by researchers in conceptualizing the nature of inquiry and the objects under study. Influenced by the underlying assumptions of the philosophy subscribed to, researchers formulate research strategy and adopt appropriate methods to quest for solutions to the research questions in order to achieve the research objectives. Therefore, philosophy is intimately related to the conceptualization, practice and outcomes of research (Irwin,

1997). Walsham (1995) advocates researchers to reflect on and explicitly define their philosophical stance when writing up their research reports.

INFORMATION SYSTEMS RESEARCH

Information Systems research is a relatively young field of study which deals with computer systems, people and their interactions, often in complicated social contexts.

Miles and Huberman (1994) explain that the research context can be understood as not only the relevant aspects of the immediate situation but also the relevant aspects of the social system of the actors in the research. Hirschheim, Klein and Lyytinen (1995) define an information system consists of a collection of people, processes, data, models, technology and partly formalized language to serve some organizational purpose. They further contend that Information Systems research, inherently dealing with the interaction of information technology and people, is thus mainly within the realm of social science instead of physical science. Orlikowski and Baroudi (1991, p.12) argue that the development of information systems is “intrinsically embedded in social contexts, marked by time, locale, politics, and culture”. Khazanchi and Munkvold (2002) opine that Information Systems research is guided by a research paradigm, comprising ontological, epistemological and methodological assumptions

that together frame the nature of the inquiry. They further state that the term paradigm has the following characteristics:

1. Ontology, i.e. the theory or study of existence (being);
2. Epistemology, i.e. a theory of knowledge that deals with the nature of knowledge, its scope, and provides a set of criteria for evaluating knowledge claims and establishing whether such claims are warranted; and
3. Methodology, i.e. procedure by which knowledge is generated.

Myers (1997) states that Information Systems research can be classified into quantitative and qualitative approaches; Quantitative approaches, such as laboratory experimentation, was originally developed in the natural sciences to study natural phenomena while qualitative approaches, such as action research, was developed in the social sciences to enable researchers to study social and cultural phenomena. Qualitative research can adopt positivist, interpretivist or critical philosophical assumptions. Myers (1997) cautions that the word “qualitative” is not a synonym for “interpretative”; qualitative research may or may not take an interpretivist stance. Following the work of Chua (1986), Orlikowski and Baroudi (1991) examine the philosophical assumptions underlying Information Systems research published

between 1983 and 1988. They distinguish that there are three major different paradigms for Information Systems research as follows:

- 1) Positivist paradigm;
- 2) Interpretivist paradigm;
- 3) Critical paradigm.

Khazanchi and Munkvold (2002, p.5) summarize the three different Information Systems research paradigms in Table 2.1.

	Positivist	Interpretivist	Critical Research
Ontological Assumptions	"Naive Realism", in which an understandable reality is assumed to exist, driven by immutable natural laws. True nature of reality can only be obtained by testing theories about actual objects, processes or structures in the real world.	Relativist; the social world is produced and reinforced by humans through their action and interaction.	Historical realist; social reality is historically constituted; human beings, organizations, and societies are not confined to existing in a particular state.
Epistemological Assumptions	Verification of hypothesis through	Understanding of the social world from the participants'	Knowledge is grounded in social and historical

	<p>rigorous empirical testing.</p> <p>Search for universal laws or principles.</p> <p>Tight coupling among explanation, prediction and control.</p>	<p>perspective, through interpretation of their meanings and actions.</p> <p>Researchers' prior assumptions, beliefs, values, and interests always intervene to shape their investigations.</p>	<p>practices.</p> <p>Knowledge is generated and justified by a critical evaluation of social systems in the context of researchers' theoretical framework adopted to conduct research.</p>
Relationship between Theory and Practice	<p>It is possible to discover universal laws that govern the external world.</p>	<p>Generative mechanisms identified for phenomena in the social sciences should be viewed as 'tendencies', which are valuable in explanations of past data but not wholly predictive for future situations.</p>	<p>Generalizations point to regularities of process rather than cross sectional differences.</p> <p>Generalization in critical research focuses on the "totality" of relationships.</p> <p>There can be no-theory independent collection and interpretation of evidence to conclusively prove or disprove a theory.</p>
Role of the Researcher	<p>Objective, impartial observer, passive, value-neutral.</p>	<p>Interactive; the researcher interacts with the human subjects of the enquiry, changing the perceptions of both parties.</p>	<p>Transformative; initiating change in social relations and practices, helping to eliminate the bases of alienation and domination.</p>

Table 2.1 A comparative overview of the key rhetoric of major IS research paradigms (adopted from Khazanchi & Munkvold, 2002). Note that the role of the researcher can range from impartial right through to transformative.

Ontology and epistemology are two major fields of studies in philosophy. According to Khazanchi and Munkvoldand (2002, p.2), ontology refers to “the theory or study of existence (being)” while epistemology refers to “a theory of knowledge that deals with the nature of knowledge, its scope, and provides a set of criteria for evaluating knowledge claims and establishing whether such claims are warranted”.

According to the authors, Positivist research holds the following basic assumptions:

1. Reality is undergirded by immutable natural laws and exists independent to our mind;
2. Knowledge is created only through objective observation and hypothesis/theory testing
3. Major objective of positivist research is to achieve explanation, prediction and control of phenomena.

In contrast, interpretivist research holds somewhat different basic assumptions:

1. Reality is socially constructed and is dependent on our mind to exist;
2. Knowledge is created through interpreting participants’ actions and

understanding participants' own meanings of their actions;

3. Interpretivist research aims at understanding social phenomena through interaction with human subjects of the enquiry.

And critical research has the following basic assumptions:

1. Social reality is historically constructed;
2. Knowledge is created through critical evaluation of social systems in the context of the theoretical framework adopted by the researcher;
3. The main objective of critical research is emancipation through critical self reflections to unveil bases of alienation and domination.

POSITIVIST RESEARCH PARADIGM

The positivist research paradigm is rooted in the natural sciences which has a long historical tradition (Hirschheim, 1985), originating from ancient Greek philosophers like Plato (427-347 B.C.) and Aristotle (384-322 B.C.). Francis Bacon (1561-1626) and Rene Descartes (1596-1650), both seminal founders of the modern scientific method, were two major figures in the positivist camp. Based on Orlikowski and

Baroudi (1991), Somasundaram and Karlsbjerg (2003, p.4) summarize the principles of the positivist approach as follows:

1. The world that we study is objective in that it exists independent of humans;
2. The researcher's duty is to better understand, explain and describe universal laws or principles which govern the physical and social worlds;
3. Deductions made from the laws or principles can be used to explain, predict and control events or actions in the physical and social worlds.

According to Hirschheim (1985) the positivist approach has the following characteristics: (1) unity of the scientific method; (2) search for causal relationships; (3) belief in empiricism; (4) science (and its process) is value-free; (5) the foundation of science is based on logic and mathematics.

Orlikowski and Baroudi (1991) discover that 96.8% of researches in leading US Information Systems journals conform to the positivist paradigm. Hirschheim (1985, p.33) contends that positivism "is so embedded in our society that knowledge claims not grounded in positivist thought are simply dismissed as ascientific and therefore invalid". Although positivism has achieved great success in the physical sciences

where a tremendous growth in knowledge has been experienced, its application in the social sciences has been modest and limited (Hirschheim, 1985). Meanwhile, Walsham (1995) states that non-positivist paradigms are increasingly acknowledged in the Information Systems discipline.

Ontological Assumptions of Positivist Research Paradigm

Positivist information systems research almost always adopts the philosophical foundations of realism. Realist postulates that the universe is comprised of objectively given, immutable objects and structures which exist as empirical entities on their own, independent of the observer's appreciation of them (Hirschheim, 1985).

Epistemological Assumptions of Positivist Research Paradigm

Myers (1997) asserts that positivist studies in Information Systems generally focus on testing theory in an endeavor to increase predictive understanding of events, actions, or other phenomena. Cited in the same paper, Myers states that Orlikowski and Baroudi (1991) classify research as positivist if the study comprises formal

propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inferences about a phenomenon from a sample of a stated population.

Weakness of Positivist Research Paradigm

It was stated in the Newsletter (1995) of UK Academy of Information Systems that research of information systems and their development should ideally be conducted as a multidisciplinary subject addressing all major areas such as the strategic, managerial and operational activities revolving around both organizational and wider societal gathering, processing, storing, distribution and the use of information and related technologies. Orlikowski and Baroudi (1991) argue that the study of information systems and their development is inherently bound up in social contexts which are interwoven with politics, culture, time, and locale. Information Systems research should therefore be considered as a social science that deals with the interplay and interactions of computer systems with people in complicated social contexts. These imply that in Information Systems research, people shouldn't be treated as inanimate objects as in laboratory experiments of positivist research. Schutz (1954) compares physical scientists examining the world of nature, which means nothing to molecules, atoms and electrons, to the observational fields of social scientists, wherein social

reality has vital meanings and relevance structure for living human beings. Galliers and Land (1987) discern that it is difficult, if not impossible, to reproduce a real-world situation under laboratory conditions. Weber (2004) states in his editor's comments of the MIS Quarterly that a positivist seems to actually believe that the world is an objective reality independent of human experience and that this reality provides the foundation for human knowledge. Further, the positivist approach makes the assumption the positivist researcher is a value-free, impartial, and objective observer when observing the data (Khazanchi and Munkvold, 2002). However, it is inevitable that the observation process in social research involves more or less conscious and unconscious judgment by the observer/researcher; put simply, observations are inevitably theory-laden in nature. Furthermore, most positivist research tends to ignore the importance of historical and contextual conditions as possible influences on human actions (Orlikowski and Baroudi, 1991). The interpretivist research paradigm, which will be discussed in the next section, deals with most of the above mentioned weakness of the positivist research paradigm.

Burrell and Morgan (1979) dichotomize the philosophy of science into objective and subjective paradigms in their framework of four paradigms of social and organizational inquiry. The objective stance implies positivist ontology that reality is

independent of human perception while the subjective stance implies interpretivist ontology that reality is socially constructed. Applying Burrell and Morgan's framework to the meaning of knowledge, Schultez (1998) identifies two opposite paradigms towards the meaning of knowledge. According to the assumptions of the objective paradigm, knowledge exists as an object and is waiting to be discovered by the human agent while, according to the assumptions of the subjective paradigm, knowledge has no existence independent of human experience and social practices of knowing. The researcher, in this study, adopts the following definition of knowledge by Davenport and Prusak (1998): "Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provide a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers". Fahey and Prusak (1998) argue that knowledge does not exist outside an agent. Unlike information, knowledge is "about beliefs and commitment. Knowledge is a function of a particular stance, perspective, or intention" (Nonaka and Takeuchi, 1995). Therefore the objective paradigm's view towards knowledge as "separate entity, static property, or stable disposition embedded in practices" (Orlikowski, 2002) is not applicable to this study. As a result, positivist research paradigm is not chosen for this study in view that the choice of methods must be appropriate to the nature of objects under study (Sayer, 1992).

THE INTERPRETIVIST RESEARCH PARADIGM

In contrast to positivism, interpretivist research paradigm emphasizes the social nature of reality. The core objective of interpretivist research is not to generalize findings but to understand the deeper structure of a phenomenon (Orlikowski and Baroudi, 1991). Immanuel Kant (1724-1804), Georg Wilhelm Friedrich Hegel (1770-1831), Karl Marx (1818-1883) and Max Weber (1864-1920) are prominent figures in the interpretivist camp. Following Orlikowski and Baroudi (1991), Somasundaram and Karlsbjerg (2003, p.6) summarize the principles of interpretivist approach, especially in the social sciences, as follows:

- 1) The world/reality is not objective; instead it is presumed to be socially constructed.
- 2) A researcher's role is to understand the inter-subjective meanings embedded in social life and explain the actions of those constructing the reality.
- 3) While this approach is appropriate for studying complex phenomena in depth, it is restrictive regarding breadth/generalizability.

Orlikowski and Baroudi (1991) suggest that Interpretivism is an approach that asserts reality and our knowledge are socially constructed and hence must be dependent on social actors, such as researchers, who experience sensations by which they construct and understand their reality. Their reality is communicated and thus checked with other actors and thereby an agreed consensus is reached as to the description of a common understanding of what is reality or the world. Myers (1997) understands this perspective well when she maintains that reality can only be reached through social constructions, such as language, shared meanings and consciousness. Instead of focusing on predefined independent and dependent variables, as in positivist research, the interpretivist approach focuses on understanding and describing the full complexity of human sense making in the social situation, and thus the agreed upon reality, emerges (Kaplan & Maxwell, 1994). Interpretivist researchers and thinkers envisage that reality is socially constructed and the social phenomenon is open to interpretations by actors as well as the researcher (Walsham 1995).

The interpretivist approach has been gaining importance in the Information Systems research community. Walsham (1995) quotes from DeSanctis (1993), the newly appointed senior editor for theory and research of MIS Quarterly journal, that MIS

Quarterly changed its policy in the 1990s' so as to welcome Information Systems research that applies, among others, interpretivist techniques.

According to the subjective stance towards the meaning of knowledge adopted by the researcher in this study, there is “no such thing as disembodied knowledge” (Hassell, 2004). Knowledge is considered an emergent property of purposeful human activity (Checkland and Scholes, 1990) and “knowledge is created through the interactions among individuals or between individuals and their environments” (Nonaka, Toyama and Konno, 2000). Hence the interpretivist research paradigm is employed in this study to understand a deeper structure of “socially shared, historically produced” phenomenon (Orlikowski and Baroudi, 1991; Deetz, 1996) and to ascertain the richness of human activity in creating and sharing knowledge (McAdam and McCreedy, 1999).

Ontological Assumptions of Interpretivist Research Paradigm

Positivism conceives that reality is independent to the individual who observes it, and that the subject and object in social phenomena are treated as two separable and independent entities. On the contrary, Interpretivism understands that reality and the

individual who observes it are in fact inseparable (Weber, 2004). The interpretivist holds the view that the social world is produced and reinforced by humans through their actions and interactions (Khazanchi & Munkvold, 2002). This is in accord with the breakthroughs in philosophy in eighteenth century Europe beginning with Hume and Kant. This approach has percolated through to mathematics and physics in undergirding modern theories of relativity and quantum mechanics including Heisenberg's uncertainty principle.

Epistemological Assumptions of Interpretivist Research Paradigm

The interpretivist approach understands that social reality can only be fully accessed by understanding and describing participants' perspectives; put simply, social reality can only be accessed through interpretation of the participants' meanings and their own meanings of their language and actions (Khazanchi & Munkvold, 2002). Chua (1986, p.615) maintains that "social reality is assumed as emergent, subjectively created, and objectified through human interaction. All actions have meaning and intention that are retrospectively endowed and that are grounded in social and historical practices." Besides, as social reality and the individual who observes it are ultimately inseparable, researchers' prior assumptions, beliefs, values, and interests

always intervene to shape their investigations (Khazanchi & Munkvold, 2002). This is an essential point and is often ignored not only in positivist research.

Positivist research strives to minimize the bias caused by researchers' prior assumptions, beliefs, values, and interests by constructing rigorous experimental design, and using statistical methods. Results are then checked by other researchers.

Interpretivist research takes this form of bias into account by various forms of theoretical and methodological triangulation, rich description to give credibility to the account and disclosing the researcher's possible biases so the reader can take this into account when reading the thesis.

Weakness of Interpretivist Research Paradigm

Based on the work of Fay (1987), Orlikowski and Baroudi (1991, p.18) summarize the criticisms of a purely interpretivist approach as follows:

First, the interpretive perspective does not examine the conditions, often external, which give rise to certain meanings and experiences. Second, research in this perspective omits to

explain the unintended consequences of action, which by definition cannot be explained by reference to the intentions of the humans concerned. These unintended consequences of action are often a significant force in shaping social reality. Third, the interpretive perspective does not address structural conflicts within society and organizations, and ignores contradictions which may be endemic to social systems. Finally, the interpretive perspective neglects to explain historical change: that is how a particular social order came to be what it is, and how it is likely to vary over time.

These criticisms apply to different research to varying degrees and can be overcome to some extent in the conduct and reporting of the research. A purely interpretive research approach is not usual because some elements of positivist and critical approaches are often combined into most interpretivist research studies.

The researcher is operating within both interpretivist research paradigm and critical research paradigm, which will be discussed in the next section, in this study in order to address the shortcomings of the pure interpretivist research approach. Many authors

advocate a pluralistic or a mix of philosophical perspectives to enrich our comprehension and vision of IS phenomena (Lee, 1991; Orlikowski and Baroudi, 1991; Remenyi and Williams, 1996). Through combining interpretivist and critical research paradigms, the researcher emphasizes “not only the importance of subjective meaning for individual actor, but also the social structures which condition and enable such meanings and are constituted by them” (Walsham, 1993) in this study. Adopting such pluralistic research paradigm enables the “full development of all the potential relationships between interpretivism and critical theory as one of the most fruitful avenues for future research” (Klein, 1999).

The Critical Research Paradigm

Cecez-Kecmanovic (2001, p.141) emphasizes that the main objective of critical research paradigm is to “achieve emancipatory social change by going beyond the apparent to reveal hidden agendas, concealed inequalities and tacit manipulation involved in complex relationship between IS and their social, political and organizational context”. Note that this mission of critical research requires the researcher to conduct in-depth investigation to delve deeper than merely quoting superficial statements or counting survey responses. Myers (1997, pp. 241-242)

contends that “the main task of critical research is seen as being one of social critique, whereby the restrictive and alienating conditions of the status quo are brought to light. Critical research focuses on the contradictions, conflicts and oppositions in contemporary society, and seeks to be emancipatory in that it should help to eliminate the causes of alienation and domination”. Schultze (1998) argues that critical perspectives “have hardly been applied in the knowledge management arena and yet they hold much promise in uncovering the kinds of conflicts and contradictions that will prevent a too narrowly focused research scope and premature closure of research topics”. Based on Orlikowski and Baroudi (1991), Somasundaram and Karlsbjerg (2003, p.7) summarize the principles of critical approach as follows:

- 1) Social reality is historically constituted and hence human beings, organizations and societies are not confined to existence in a particular state;
- 2) The role of a researcher is to expose the hidden contradictions and unfulfilled potentiality in the societal order and initiate changes in the social relations and practices;
- 3) Critical theorists do not share common philosophical standards for the evaluation of theories so the standards, norms, or criteria for

evaluating what are acceptable theories or explanations are still in debate.

Ontological Assumptions of Critical Research Paradigm

Most critical theorists adopt a historical realist stance in understanding that social reality is historically constituted. The overriding assumption is that human beings, organizations, and societies are not confined to existing in a particular state but can evolve and change (Khazanchi and Munkvoldand, 2002).

Epistemological Assumptions of Critical Research Paradigm

Critical researchers usually posit that knowledge is grounded in social and historical practices. Thus knowledge is understood to be generated and justified by a critical evaluation of social systems in the context of the researchers' theoretical framework adopted to conduct research (Khazanchi and Munkvoldand, 2002).

Weakness of Critical Research Paradigm

Orlikowski and Baroudi (1991) point out one major weakness of the critical research approach that there are no commonly accepted philosophical standards for the evaluation of theories and no commonly accepted criteria for evaluations what is valid knowledge. What is acceptable theory or explanation is still debatable. For those working with the dominant research traditions, this ambiguity may be difficult to understand and to accept. Positivism has relatively straight forward and unambiguous rules and criteria for what constitutes valid knowledge. Interpretivism has guidelines for evaluation. However, the lack of commonly accepted standards and criteria for evaluation in critical research might be seen to allow space and opportunity for exploration and emergence of new, innovative and insightful investigation in areas not able to be researched by other paradigms.

THEORETICAL FRAMEWORK - CRITICAL SOCIAL THEORY

According to the underpinning assumptions of the critical research paradigm, knowledge is understood to be generated and justified by a critical evaluation of social systems in the context of the researchers' theoretical framework adopted to conduct research (Khazanchi and Munkvoldand, 2002). In conducting this study,

critical social theory is adopted as the central reference for evaluating the social systems within the research context. Social systems within the research context will be examined through the lens of Habermas' Theory of communicative action which will be further discussed in the literature review section.

Critical social theorists seek to understand human social actions within a broad social context through critical examining any unwarranted and inequitable conditions of social situations from which people interact with each others (Hirschheim and Klein, 1989; Orlikowski and Baroudi, 1991). Critical social theory advocates emancipation of human beings from domination and coercion through critical self reflections. Through critical self reflections, human beings can unveil any taken for granted assumptions and ideologies caused by unbalanced instrumental rationality in modernity (Agger, 1991; Held, 1980). Habermas' theory of communicative action (1984, 1987) builds a powerful theoretical foundation for tempering and even balancing the destructive domination of instrumental rationality (Adorno and Horkheimer, 1992) through a balanced rationality, a fully liberating reason, in which technical, ethical and emancipatory human interests are balanced through free interpretation of situation under consideration (Pusey, 1987).

Jurgen Habermas, a leading contemporary thinker in critical social theory (Held, 1980), argues that knowledge can only be constructed in a balanced rationality, which takes accounts of all areas of human interest and action, through open and free dialogue. Habermas (1984) contends that communication is important to the survival of human species; "If we assume that the human species maintains itself through the socially coordinated activities of its members and that this coordination has to be

established through communication – and in certain spheres through communication aimed at reaching agreement – then the reproduction of the species also requires satisfying the conditions of a rationality that is inherent in communication action” (Habermas, 1984, p.397). Habermas (1984) suggests that communicative action, which aims at reaching inter-subjective understanding and true consensus through constructive discourse, “presupposes language as the medium for a kind of reaching understanding, in the course of which participants, through relating to a world, reciprocally raise validity claims that can be accepted or contested” in order to coordinate their actions and pursue their particular aims.

Critical social theory, particularly Habermas’ theory of communicative action, was employed as the theoretical framework for building **kBlogCentral**. Weick and Roberts (cited in Schultze, 1998) argue that “knowledge management must thus create collaborative mechanisms so that when individuals take action, they envisage a social system of joint actions and interrelate their action with this envisaged system”. Employing a blog-based system as a platform, **kBlogCentral** supports self-reflection and multi-vocal dialogue (Boland, Tenkasi and Te’eni, 1994) so that participants can coordinate their actions through communicative action which aims at achieving genuine consensus.

Habermas’ theory of communicative action is also adopted as the central reference for evaluating the social systems within the research context to uncover any kind of coercion, manipulation and distorted ideologies within the process of creating and sharing knowledge. Special focus is given to the issue of the development of language as one of the social systems that guide individuals’ interpretation of communicative

acts (Cook and Brown, 1999) during the process of building and using the **kBlogCentral** in order to emancipate any participant that is marginalized by linguistic incompetence in knowledge management activities.

THE ACTION RESEARCH METHODOLOGY

The term 'Action Research' was seminally defined by American social psychologist Kurt Lewin (1946). Railing against "research that produces nothing but books", he wants to encourage research that leads to social action and tangible results. In the jargon of the time, he refers to "social management" or "social engineering" as positive approaches leading to good social practice. He refers to "research leading to social action" as a "type of action-research".

Rapoport (1970) contends that action research has the joint goals of contributing to the "practical concerns of people in an immediate problematic situation" and at the same time fulfilling "the goals of social science". He emphasizes that joint collaboration is necessary especially in developing a mutual ethical framework acceptable to all parties.

Hult & Lennung (1980) concurs with Rapoport (1970) in stating that action research should help problem-solving in practical social situations. While adding to scientific knowledge is important, the “competence of the respective actors” should also be enhanced. Collaborative research is the goal addressing “an immediate situation using data feedback in a cyclical process aiming at an increased understanding of the totality of a given social situation”. Action research mainly adds to knowledge of “change processes in social systems” while always respecting mutually acceptable ethical considerations.

Kemmis and McTaggart (1982) link the two major words action and research thereby highlighting the major features of the methodology. Action research contributes by “trying out ideas in practice as a means of improvement and as a means of increasing knowledge”.

McNiff, Lomax, & Whitehead (1996) emphasize the importance of putting the “I” at the centre of action research. The authors recommend that the first person active voice be used as a norm. The question “how do ‘I’ fit into the research?” is important. Specifically:

1. I am the subject and object of the research

2. I take responsibility for my own actions
3. I own my claims and judgment
4. I am the author of my own research accounts

Also, the question “how do ‘I’ fit into the action?” is important. The key concerns for this question are:

1. by seeing my own practice as the central focus of my research
through critical reflection and self study
2. by encouraging others to participate in a negotiated definition of
shared practices
3. by showing respect for other ways of doing things
4. by showing humility and exposing my vulnerability
5. by being open to argument
6. by being willing to accept that I could be wrong
7. by owning my mistakes by standing my ground when my
principles are at stake

I have asked these questions. Indeed, asking these questions has reinforced and guided my decisions to adopt the research methodology used in this research. Of vital

importance for me is to continue in this attempt to say something that is important in practice as well as in theory. Indeed a professional doctorate like this Doctor of Business Administration (Information Systems) is designed to be practical in orientation. Hence I am encouraged to continue in this vein.

Participative Action Research

The rationale behind *participative* action research is to get those affected by the research to be involved in the process. Kemmis and McTaggart (1982) understand action research as “a form of collective self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of those practices and the situations in which the practices are carried out. The approach is action research only when it is collaborative, though it is important to realize that action research of the group is achieved through the critically examined action of individual group members.”

I agree that it is important to concentrate on empowering groups and including the voices of those involved into the research. However, I contend that good action

research can also be done by a single researcher on his/her own professional practice and action, even without emphasis on the participative community involved. In this research I have striven to include the voices of my colleagues as participants in the research and thus empower myself and be empowered by others.

REFLECTIVE PRACTITIONER RESEARCH METHODOLOGY

According to the reflective practitioner methodology proposed by Schon (1983) and Overmeer et al. (1998), by integrating researchers' reflections with empirical data from interviews, the reflective practitioner methodology allows the researchers to give an account of how they applied knowledge in their professional practices. It encourages researchers to reflect on their professional experiences both theoretically and experientially to produce insights which act as the findings or conclusions of their research. This research paradigm advocates the importance of self-reflection (Moustakas, 1990; Clandinin and Connelly, 1994; Williams, 1996b).

I am operating within the reflective practitioner paradigm in this research when I reflect on my action to set up a reflective practitioner knowledge management system, the **kBlogCentral**, in my interior design firm in China. I interpret quotes from

work-related interviews/discussions often reported in the form of dialogues. I comment reflectively upon these dialogues as they are the key empirical data for the research. I relate the dialogues to the major research themes and analyze them. As an action researcher I rely upon what Jack Whitehead (cited in Williams, 2004) calls “the authority of your lived experience”.

As a practitioner researcher I am a member of the work group or culture being researched. Thus my responses and thoughts and experience are important and should be included in the empirical data and analysis. In some ways, I am the most important research subject as I glean warranted assertions from my own lived experience as well as from others’ experiences. As such I am influenced by trends in ethnographic research.

THE HEURISTIC INQUIRY RESEARCH METHODOLOGY

Heuristics is a kind of phenomenological inquiry. The researcher’s own personal experience and insights along with those of others as co-participants or co-researchers are included. This approach can be included to good effect in *reflective practice*

research. Patton (1980, 1990) mentions that in heuristically research all the voices of those who experience the phenomenon intensely are of interest.

The word heuristic is Greek in origin (*heuriskein*) and means to “discover”.

Heuriskein means, “I find” and relates it to another word for discovery “eureka”.

The reports of heuristic researchers are filled with the discoveries, personal insights, and reflections of the researchers. Discovery comes from “a kind of being wide open in surrender to the thing itself, recognition that one must relinquish control and be tumbled about with the newness and drama of a searching focus that is taking over life” (Douglas & Moustakas, 1984). The Heuristic process leads one from the individual to the general and back again, from the feeling to the word and back to the feeling, from the experience to the concept and back to the experience.

Williams (2004) mentions that heuristic inquiry is gaining increasing academic recognition and has been doing so since 1980s. He writes that heuristic inquiry “emphasizes achieving warranted insights from using multidisciplinary, psychological, artistic, emotional, and personal knowledge to delve deeply into the research questions and data” (Williams, 2004). There are basically four stages which can be used to structure most heuristic research projects:

1. framing the question(s);
2. carrying the question(s) within;
3. listening to other voices, including poetry, art, emotions, etc, to delve to the true heart of the research questions;
4. Tying it all together in the report or thesis. (For example, the artistic or poetic voice is understood to be able to enable valuable insights into even the most scientific investigations of, say, information management systems in e-business.)

I have followed these four stages in this research. I framed the research questions in an emergent process wherein I carried the questions within as I worked with our design team, clients and projects. It was through the art and poetry of Chinese philosophy that enabled me to delve to the heart of the research in this reflective practitioner study. Writing this thesis in this manner allows me to tie it all together to form an integrated research project.

A Personal Heuristic Statement

In conducting this research I wanted to not only research knowledge management systems but also change the professional practice of our design firm for the better. I also wanted to change myself and my own professional practice. Hence this reflective practitioner research is influenced by heuristic inquiry and other aspects of phenomenological strands of action research.

It seems to me that change occurs when an experience is lived individually and together, communicated and honored. In this assertion I am challenged by Polanyi's (1962) statement regarding his having "crossed the heuristic gap, which lies between problem and discovery". For Polanyi "having made a discovery, I shall never see the world again as before. My eyes have become different; I have made myself into a person seeing and thinking differently." These words describe my feelings and experiences as I have conducted this research in Conrad Interior Designs.

My initial involvement in the project was intuitive (Crossan, Lane, & White, 1999). However, I came to understand that, using the words of Jurgen Habermas' philosophy of communicative action, I researched a symbolically structured object domain. Thus

I needed procedures that are logically distinct from those developed in the natural sciences; I needed procedures to explore the “meaning” that is constitutive of social reality. Social action largely depends on the agent’s “definition of the situation”. Social actions have primarily inter-subjective meanings, and hence are not solely subjective. The social-cultural matrix in which individuals find themselves and act are primarily inter-subjective meanings: inherited values and world views, institutionalized roles and social norms, shared language, shared emotional patterns, and the like. Habermas insists that any methodology that ignores “the interpretive schemata through which social action is itself mediated, that pursues the tasks of concept and theory foundation in abstraction from the prior categorical formation of social reality, is doomed to failure” (Habermas 1976).

In line with a reflective practitioner methodology, I have relied heavily on experience in this research. Maslow (1966) asserts that “all of modern communications, technology, knowledge-words, labels, concepts, symbols, theories, formulas, and sciences are all useful only because people already knew them experientially”. Renata Tesch alludes to similar notions in her qualitative research discourse, which analyzes qualitative constructs, such as ethnomethodology, symbolic interactionism and phenomenological approaches in research (Tesch, 1990).

THE FORM OF REFLECTIVE PRACTITIONER RESEARCH APPROACH USED IN THIS STUDY

In this study I investigate how the process of developing a blog-based reflective practitioner knowledge management system changed the management and design practices of a Chinese interior design firm aspiring to integrate Chinese philosophical insights. The main source of data is the data within the knowledge management system itself and my reflective practitioner accounts. The research methodology is best labeled as a form of reflective practitioner research informed by critical theory, interpretivism, heuristic inquiry, action research, and traditional Chinese philosophy. The form of reflective practitioner research is based upon and will follow the guidelines given by my previous thesis supervisor Dr Williams (2004) in his book *“Write a Doctoral Thesis about Work: Professional Action Research”*. The following conversation with Dr Williams explains how I was led to incorporate a depth form of reflective practitioner research. It also demonstrates a form of heuristic research writing style.

Fergus: Dr Williams, what are your thoughts as you read this draft of my thesis?

Dr Williams: As I read your work I discern that your real thesis, the deep motivation and power and love of knowledge behind your work, is that management and design practice of a modern Chinese design firm can be informed and understood by referring to traditional and the best of modern Chinese thinking. There is a kind of passion for you here Fergus. I think you love it. And I think you sense that this will contribute to success for you, success for your design and education businesses, and success for your life's contribution to the people around you and the culture and society of China (including your loved ones). This is perhaps why the doctoral thesis is so important for you Fergus. You should really write what is in your heart as well as your mind.

Fergus: I do think that there are some good features in the contemporary Communist Party and you know I respect traditional Chinese philosophy especially for what I think is a necessary rebirth of ethics and creative thinking in China.

Dr Williams: I think you must increase the importance of your referring to traditional Chinese philosophy. Many people will back you on this one. It could make you famous. My hope for you is that you will eventually become a Chinese living treasure.

Fergus: Thus I think I need to add something to the research questions and findings. How about the following?

1. How did the process of developing a Blog-based reflective practitioner action research knowledge management system change the management practices of a Chinese interior design firm aspiring to incorporate Chinese philosophical insights?
2. How did the process of developing a Blog-based reflective practitioner action research knowledge management system change the design practices of a Chinese interior design firm aspiring to incorporate Chinese philosophical insights?

The findings will be incorporated in the following final assertions (which are warranted by the rich narrative of the thesis and undergirded by the theory of communicative action):

1. The process of developing a Blog-based reflective practitioner action research knowledge management system was a vital part of the management practice of a Chinese interior design firm becoming more efficient, effective, creative and ethical understood with reference to Chinese philosophical insights.
2. The process of developing a Blog-based reflective practitioner action research knowledge management system was a vital part of the design practice of a Chinese interior design firm becoming more efficient, effective, creative, and ethical understood with reference to Chinese philosophical insights.

ETHICS

In my original application to the University Ethics Committee I stated that the potential positive benefits of the research to the clients and to humanity in general might be as follows:

- Participants will have a better understanding of their working environments.
- Participants can use the knowledge management system to create, store and share knowledge with other staff members.
- Participants can unveil any mistaken assumptions or ideologies through self reflections.
- People will be encouraged to create and manage knowledge through self reflections and consensus-seeking discourses.
- People will be encouraged to unveil any mistaken assumptions or ideologies through self reflections.

In employing a critical reflective practitioner research methodology, I am aware of the importance of ethics. Guba and Lincoln (1989) point out that ethical risks can occur through: the intimacy of face-to-face contact, the difficulty of maintaining

privacy and confidentiality, the possibilities of violation of trust, the need for open negotiations, and what to include/exclude in the framing of the study. In conducting this research I had to be careful to avoid violating trust by misinterpreting comments, or inadvertently passing on confidential information to others. I had to engage in open discussions and be open to possibly negative feedback from participants and I had to discern whether or not to include material from participant reflections or from my own reflections.

Erickson (1986) demands that participants in qualitative research need to be comprehensively briefed and informed about the research and are carefully protected from risks. Pitman and Maxwell (1992) basically concur, stressing that ethical decisions are ongoing with one of the first decisions being whether the inquiry can actually be conducted.

Pitman and Maxwell (1992) comment that for all major theorists in qualitative research, ethical considerations were imperative. The authors also stress the obligations of the researcher both to the community studied and to the profession.

Thus I considered that my responsibility, to myself, to the participants and to the research community, was to tell my lived story, with as much maturity, meaning and virtue as I could. My hope was thus to bring out *some* results from the research. However, I did not consider that it is my responsibility to disclose *all* my major understandings or perceptions relevant to those results. I saw that one of my ethical responsibilities was to be caring and nurturing to all involved in the research, including myself. Thus, even if the events, actions and thoughts were relevant to the results that I was discussing, I was selective in what I chose to reveal. In this way, I not only safeguarded participants in the research (by anonymity and by selecting what to include), but also myself (Clandinin, 1993). As I will discuss further in detail in the following chapters, I need to respect the proper boundaries for privacy of my self as well as other participants.

Ethical Conduct of the Research

In conducting the research I followed regulations given by the University Ethics Committee. In this section I first give the regulation and then describe how I duly conducted the research in line with my signed statement to the Ethics Committee.

Regulation 1: *Participants should be provided with an information letter which describes in clear, simple terms, the procedures proposed, the anticipated benefits, and any possible risks of the research project. Written consent from each participant should be obtained to protect the researcher and this institution.*

I invited all 15 staff members of my interior design firm to participate in the study with a detailed information letter (Appendix A). The staff members decided to participate in the research on a voluntary basis. Their decision about whether to take part in the research or not had no bearing on the researcher's professional relationship with the participants. Records (e.g. blogs, staff appraisals, etc.) of those staff members who do not give consent were not used for the purposes of this research.

Regulation 2: *A researcher needs to be ethically vigilant in gathering data from persons in dependent or unequal relationship especially with reference to conducting research in the researcher's own workplace. While an individual as an officer of an agency may have access to certain information, or an existing relationship with potential participants, it is not ethical to use this access or existing relationships for research purposes. Special care must be taken to ensure the power the researcher holds as an officer of that agency is not misused.*

I critically reflected on the following qualitative data:

- work-related interviews/discussions with the participants, the interviews/discussions were only daily conversations
- Minutes of meetings of the interior design firm
- Staff appraisal reports
- Researcher's memos including reflections
- Company documents relevant to the research e.g. workshop handouts, internal circulars, etc
- Postings on the blog-based knowledge management reflective practitioner system

As I am the co-owner of the interior design firm I was researching, I realized the potential conflicts of interest with staff as participants in the research. Thus I was ethically vigilant especially with persons in dependent or unequal relationships. In no way and at no time did I misuse my power in the organization such as unethically gaining access to information or existing relationships for research purpose.

Regulation 3: *Privacy of participants might be encroached if the confidentiality of the participants' identities is not ensured.*

To ensure privacy of all participants including myself, I used anonymous accounts to ensure the confidentiality of participants' identities when writing up the thesis. Following my ethical stance to ensure that no person could use my accounts to harm any participant, including myself, I included minor fictive elements as recommended by Williams (2004) (This concurs with Barone (1988) who claims that all "research is fictive, fashioned by the researcher"). Thus no person could use the material to blame or malign any participants because there is an element of doubt. What is more, the material could thus not to be used in a court of law to the detriment of any participant. Also, I guarantee to preserve all the confidential records (those which can identify, or potentially identify a participant or organization) in secure and locked storage for a minimum of five (5) years.

RESEARCH WRITING STYLE

To explain my research writing style I include the following email discussion between myself and Dr Williams, the original supervisor of this thesis. I have significantly

edited this discussion so as to make it my own (with permission from Dr Williams).

Once again I am endeavoring to demonstrate my research approach by the form of the writing style used.

Fergus: Dr Williams, I would like to discuss the question of writing style as I have not yet found my “authorial voice” as you put it.

Dr Williams: Sure, fire away. What are your initial thoughts on the matter?

Fergus: Lomax and Parker (1995) write that action research writing “should be pluralistic, rather than monolithic, and diverse, rather than constrained”. They assert that the researcher should “celebrate the unique, personal, and subjective strengths of individual action research and help action researchers display their own personal signatures”.

Dr Williams: Sounds good to me. I note that you include a lot of personal history in your research approach.

Fergus: Bruner (1990) states that personal history influences all researchers' writing styles.

Dr Williams: You also include a different rhetoric than the dry, boring rhetoric used in most theses. I sometimes think that this form of rhetoric is to try to convince the reader that they are truthful because they can mask their passion or interest in the subject. Perhaps they think that this is more scientific. In fact it is not.

Fergus: Yes, I have noted the same thing. Denzin and Lincoln (2005) assert that *all* research writing has a rhetorical stance. Zald (1993) states that "scientific and technical model emphasizes logic, clarity, and data representation in its rhetorical stance, to the exclusion of intuition, allusiveness, imagery". Denzin (1994) expresses that research can be tender-minded and tough-minded and this is reflected in the respective writing styles. I am in the tender-minded category.

Dr Williams: Do you include more than one writing style? I think that this is preferable as it increases the validity of your research by allowing a certain form of triangulation of viewpoints.

Fergus: My research writing style is a mixture of traditional and other styles. I do include elements of a traditional third person, non-autobiographical, non-personal, passive voice, striving for objectivity. This style is useful when I discuss issues and situations that could cause concern or misunderstandings. At other times I include some autobiography; some heuristic elements of including excerpts of intuition, art, poetry, emotion, and insight; and some critical-communicative styles of writing. Subjectiveness, metaphor, autobiography, reflexiveness, and narrative are important aspects of my research writing style.

Dr Williams: Sometimes you are even a bit theatrical.

Fergus: Erickson (1986) is unambiguous about the *theatrical* function in social science research, particularly the use of the vignette as an explication tool. He urges researchers to include “personal commitments” to

enliven substantive theory. This means that the reader is a serious research partner or “co-analyst”. Audience participation is also part of the approach. Erickson has four audiences - researchers, policymakers, practitioners, and the local audience. By the way, what do you think on my adoption of personal accounts as one of my writing style?

Dr Williams: Yes, I do like your personal accounts.

Fergus: Lancy (1993) writes a whole chapter in *Qualitative Research in Education* about “Personal Accounts”. He places autobiography (memoir, chronicle, diary, and reminiscence) as a form of “self-generated life history”. I write in this way.

Dr Williams: Do you hope to increase the readability and interest of your work?

Fergus: John Van Maanen’s book *Tales of the Field: On Writing Ethnography* (1988) encourages the researcher to tell relevant personal stories that attract the interest of the reader. He says that the stories should be coherent and complete. They should ring true in the minds of the

narrator, the researcher and the reader. Researchers should include the art of storytelling. Use the present tense, give a dramatic flair to the story as if were happening here and now in real-time: “characters . . . must be given names, faces, motives, and things to do, lines to speak” (p. 104). This approach is also supported in his later 1989 book *Researching lived experience: Human science for an action sensitive pedagogy*.

Dr Williams: You do give names and characters to your research participants. But what about if the examiner wants you to be like the average researcher and does not agree with these current trends in research writing.

Fergus: I think that the authorities I am quoting should give this type of reader a new way of thinking. Lenzo (1995) urges researchers to break free from “the censorious hold of ‘science writing’ on our consciousness, as well as the arrogance it fosters in our psyche.” She states that the subjectiveness of both the researcher and those being researched need to be included as well as the facts.

Dr Williams: But what about if the examiner says that your thesis is like a narrative or story and therefore is “lightweight”.

Fergus: Narrative and story add weight to my thesis! Clandinin (1993) urges researchers to explore a narrative form of research writing. She advises the development of a qualitative style sourced from favourite fiction authors so to develop a storytelling skill.

Dr Williams: What if people say your style is too artistic, like a construction?

Fergus: I would say to them those authorities in research such as Eisner (1992) asserts that “scientific research, in the end, is a construction and the more artistic in character, the better.” Lenzo (1995) states that: “representations of knowledge in research reports might be viewed as constructed from partial, multiple, local, and historical authorial positioning - at the same time under scrutiny and set in serious play.” John Van Maanen in his book *Tales of the Field: On Writing Ethnography* (1988), encourages the research writer to tell striking stories with interest (does it attract?), coherence (does it hang

together?), and fidelity (does it seem true?). He advises researchers to recall in the present tense, to avoid giving away the ending to help build a degree of tension, and to use condensed but rich contextual descriptions, artistic nerve, unusual phrasings, fresh allusions, rich language, cognitive and emotional stimulation, puns, and quick jolts to the imagination. This idea of 'fragmented knowledge' is furthered by using a novelistic style which unfolds event by event, conveying uncertain meanings for an audience unsure of where it is being taken and why, and with characterization for individual voices: "characters . . . must be given names, faces, motives, and things to do . . . lines to speak" (p. 104). I hope that I have woven a captivating thread that commands the attention of the curious.

Dr Williams: What about it readers of this thesis think that more technical and scientific styles of writing are closer to the truth?

Fergus: I would point out to these readers that researchers such as Zald (1993) state that confessional or impressionistic models of research may take us closer to the truth than "the scientific and technical model [which]

emphasizes logic, clarity and data representation in its rhetorical stance, to the exclusion of intuition, allusiveness, imagery" (p. 521). He goes on to mention that intuition, allusiveness and imagery are valid way to express truth. Reason and Goodwin (1999, p. 10), of the Centre for Action Research and Professional Practice at the University of Bath, refer to the same thing under the notion of the "quality of attention". They write that "intuitive knowing of purposes, intellectual knowing of strategy and ... and an empirical knowing of the outside world" should all be included (Reason & Goodwin, 1999, p. 10). Overall, the central message is that all aspects of human beings should ideally be included in good research.

SUMMARY

In this chapter I write about the research approach and methodology. After introducing the notion of the research philosophy, I give an account of the major paradigms in information systems research including positivism, interpretivism, and critical theory. I add detailed descriptions of the emerging research paradigms of reflective practitioner and heuristic inquiry. After giving an account of research ethics,

I conclude with a detailed explanation of my research writing style using a dialogue format.

In the next chapter I provide a literature review of major elements of the research. I cover literature on knowledge, knowledge management, information and knowledge warfare, Habermas' theory of communicative action, and Chinese philosophy, history, and culture.

CHAPTER THREE

LITERATURE REVIEW

Superior leaders get things done with very little motion. The Sage does not care to hoard. The more he uses the more for the benefit of others, the more he possesses himself. The more he gives to his fellow-man, the more he has of his own.

Lao-Tzŭ, Tao Te Ching, translator Lionel Giles

Ignorance is the night of mind, a night without moon or star.

Confucius, Analects, translator not known

INTRODUCTION

The literature reviewed for this thesis together with my analysis and reflections of my experience and the research texts provide me with “moon [and] star” to lighten ignorance. And, as in our use of the **kBlogCentral**, the more knowledge I use and share the more I possess.

All the literature reviewed in this chapter is important to the analysis, reflections, and synthesis of the research texts which form the remainder of this thesis. In this light I review: what is knowledge? Knowledge management; from information warfare to knowledge warfare; understanding blogs; critical social theory and Habermas' theory of communicative action; Chinese historical, cultural, and philosophical influence on this study.

WHAT IS KNOWLEDGE?

Since Drucker (1993) claims that “the basic economic resource - the means of production – is no longer capital, nor natural resources, nor labor. It is and will be knowledge”, knowledge is considered as the primary source of sustainable competitive advantage for organizations (e.g. Conner and Pralahad, 1996; Grant, 1996; Spender, 1996) because knowledge-based resources are socially complex and usually difficult to imitate (Alavi and Leidner, 2001). Knowledge and knowledge management is therefore a key concern in organizations, and an important research topic in a number of academic disciplines (Schultze, 1998). However, there is little consensus on the definition of the term knowledge (Biggam, 2001) in literatures of different disciplines like information systems, strategic management, organizational

memory and organizational learning disciplines. In fact, the problem of defining knowledge has occupied the minds of philosophers since the classical Greek era and has led to many epistemological debates (Alavi and Leidner, 2001). Davenport and Prusak (1998) cautions that “confusion about what data, information, and knowledge are - how they differ, what the words mean - has resulted in enormous expenditures on technology initiatives that rarely deliver what the firms spending the money needed or thought they were getting”. Instead of engaging in the debate to probe, question, or reframe the term knowledge, many authors, notably in IT literature, try to address the problem of defining knowledge by distinguishing data, information and knowledge (Alavi and Leidner, 2001).

Relationship between Data, Information and Knowledge

Many authors tried to define and distinguish the terms data, information, and knowledge in different literatures (e.g. Dretske, 1981; Boisot, 1995; Nonaka and Takeuchi, 1995; Davenport and Prusak, 1998; Burton-Jones, 1999; Hutchison and Warren, 2001). Data is considered as “a set of discrete, objective facts existing in symbolic form that have not been interpreted (Davenport and Prusak, 1998); information is “data that have been shaped by humans into meaningful and useful

form” (Laudon and Laudon, 1998) while “knowledge is information processed in the minds of individuals” (Alavi and Leidner, 2001). The terms are usually defined in a hierarchical relationship; data is attributes of things or events, information is processed data while knowledge is authenticated information (Dretske, 1981; Machlup, 1983, Vance, 1997). However, Tuomi (1999) argues that the hierarchy should instead be inversed; Tuomi (1999) argues knowledge must exist before information can be processed and data can be collected. Tuomi (1999) suggests that structured representation of knowledge becomes information while structured representation of information becomes data.

The researcher contends that “Data, information, knowledge and understanding presuppose each other. They are acquired and develop interdependently” (Ackoff, 1996). The relationship between data, information and knowledge is not hierarchical but entwined as shown in Figure 3.1, which shows how processed data become information while structured representation of information can become data in opposite direction; authenticated information becomes knowledge while structured representation of knowledge can become information; authenticated data can become knowledge directly (e.g., a person who never seen traffic lights knows when he/she can cross the road after observing other people crossing the road safely whenever the

light is green) while structured representation of knowledge can become data directly in opposite direction.

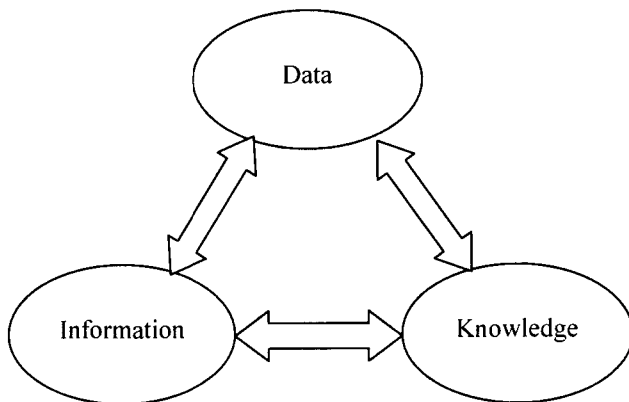


Figure 3.1 Relationship between data, information and knowledge

In fact, the conversion process between data, information and knowledge does not follow any static sequence; the process is instead dynamic and interactive in nature. As knowledge within an agent’s mind is continuously being updated during the data collection or information processing processes (Boisot, 1998), the agent may need to iterate the data collection or information processing processes with different criteria even though the agent is knowledgeable in so far as to what data to collect and how to process the information at the beginning of the process.

Working Definition of Knowledge

As different views of knowledge may lead to different approaches to knowledge management (Carlsson, El Sawy, Eriksson and Raven, 1996), it is necessary to indicate clearly the definition of knowledge adopted in this study. The researcher, in this study, concurs with Davenport and Prusak (1998) that “Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provide a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers”. The researcher adopts a subjective stance towards the meaning of knowledge that there is “no such thing as disembodied knowledge” (Hassell, 2004) which means that knowledge does not exist outside an agent (Fahey and Prusak, 1998). Unlike information, “knowledge is about beliefs and commitment. Knowledge is a function of a particular stance, perspective, or intention” (Nonaka and Takeuchi, 2004). Tsoukas and Vladimirou (2001) argue that knowledge presuppose values and beliefs; and are closely connected with action. Knowledge can not be observed directly and can only be inferred from action of the agent (Boisot, 1998). Knowledge is considered an emergent property of purposeful human activity (Checkland and Scholes, 1990) and “is created through the interactions among

individuals or between individuals and their environments” (Nonaka, Toyama and Konno, 2000).

It should be noted that the stance towards knowledge adopted by the researcher in this study might not align with the stance of every participant involved in this study; rather it forms the epistemological basis for building, using and evaluating **kBlogCentral** throughout the study. The notion of knowledge and knowledge management in current knowledge management literature is mostly originated in West; knowledge management practice in China is likely to be different due to the dramatic difference in histories, cultures and institutional forces between China and the West (Zhu, 2004). Hall and Roger (1998) discern that “the priority of logical reasoning in the West is paralleled in China by the prominence of less formal uses of analogical, parabolic and literary discourse. The Chinese are largely indifference to abstract analyses that seek to maintain an objective perspective, and are decidedly anthropocentric in their motivations for the acquisition, organization and transmission of knowledge”. Fung (1952) even argues that “Chinese philosophers for the most part have not regarded knowledge as something valuable in itself, and have not sought knowledge for the sake of knowledge”. Given the difference between countries with regards to their philosophical assumptions on knowledge and knowledge management; Takeuchi’s

(2001) argument that knowledge management “may blossom to become the most universal management concept” is considered untenable. Pauleen and Murphy (2005) opine that the Western analytical assumptions on knowledge currently dominate information and knowledge management research and development. They contest that information and knowledge management models and frameworks that exclude the influence of national and regional culture have seriously undercut their potential effectiveness, particularly in global applications. Although there are few comparative studies on the different approaches on knowledge management between different countries (e.g. Nonaka and Takeuchi, 1995; Takeuchi, 2001; Hutchings and Michailova, 2004; 2006; Michailova and Hutchings, 2006; Weir and Hutchings, 2005), there is hardly any empirical study on the philosophical and cultural influence on knowledge management practice in China. Grover and Davenport (2001) call for more empirical research on knowledge management in order to build a healthy tension between knowledge and action. The researcher thus endeavors to explore theory through the practice of developing and introducing **kBlogCentral** in his firm in China through employing a reflective practitioner research methodology informed by critical theory, interpretivism, heuristic inquiry, action research, and traditional Chinese philosophy.

Taxonomies of Knowledge

Knowledge is classified into two categories, namely explicit and tacit knowledge (Polanyi, 1967) where tacit knowledge is further divided into cognitive tacit knowledge and technical tacit knowledge (Nonaka and Takeuchi, 1995). Explicit knowledge refers to the knowledge that can be codified and transmitted in systematic and formal language (e.g. documents, databases and emails) (Tiwana, 2002). In contrast, tacit knowledge is hard to be codified or communicated in symbolic form or natural language (Alavi and Leidner, 2001) because tacit knowledge is personal and context specific in nature (Nonaka and Takeuchi, 1995). Tacit knowledge is personal knowledge embedded in individual experience and involves intangible factors such as personal belief, perspective, and the value system (Nonaka and Takeuchi, 1995). Michael Polanyi referred to tacit knowledge as “knowing more than we can say” (Polanyi, 1967). The cognitive element of tacit knowledge refers to the mental models (e.g. schemata, paradigms, beliefs and viewpoint) that are developed by an individual’s education and experiences while the technical tacit knowledge refers to individual’s know-how and skills (Nonaka and Takeuchi, 1995).

According to the subjective stance towards the meaning of knowledge adopted in this study, knowledge does not exist outside an agent (knower) (Fahey and Prusak, 1998). It should be noted that the term explicit knowledge used throughout this study is not considered, epistemologically, as genuine knowledge because knowledge entails a knower. Unlike information, knowledge can't be treated as an object that people can "pick up, possess, pass around, put in a database, lose, find, write down, accumulate, count, compare and so forth" (Brown and Duguid, 2000). Explicit knowledge is considered, at most, as a kind of contextually richer information that is ready for interpretation by an agent.

Knowledge Creation

Alavi and Leidner (2001) identify four socially enacted processes in knowledge management: (1) creation, (2) storage/retrieval, (3) transfer, and (4) application. Knowledge creation is strategically important to organizations in achieving competitive advantages (Grant, 1996; Zack, 1999); it is considered a critical factor for the sustainability of organizations (Brown and Duguid, 1998). As the researcher considers knowledge creation a critical process for his firm to achieve competitive advantages in creativity and innovations, this study has chosen to focus on the

knowledge creation process. Nonaka, Toyama and Konno's (2000) widely cited unified model of dynamic knowledge creation is employed as a framework in this study in developing **kBlogCentral**.

The unified model of dynamic knowledge creation consists of three elements: (1) the SECI knowledge conversion process, (2) "ba" (space for knowledge conversion) and (3) knowledge assets. Nonaka, Toyama et al. (2000) explain that "using its existing knowledge assets, an organization creates new knowledge through the SECI process that takes place in ba. The knowledge created then becomes part of the knowledge assets of the organization, which becomes the basis for a new spiral of knowledge creation".

The SECI model

Nonaka and Takeuchi (1995) coin the notion of knowledge conversion and develop a theory of knowledge creation known as SECI model. Nonaka and Takeuchi (cited in Alavi and Leidner, 2001) assert that knowledge creation involves "a continual interplay between the tacit and explicit dimensions of knowledge and a growing spiral flow as knowledge moves through individual, group and organizational levels".

According to the SECI model, knowledge is created through interaction of tacit and explicit knowledge as shown in figure 3.2 below:

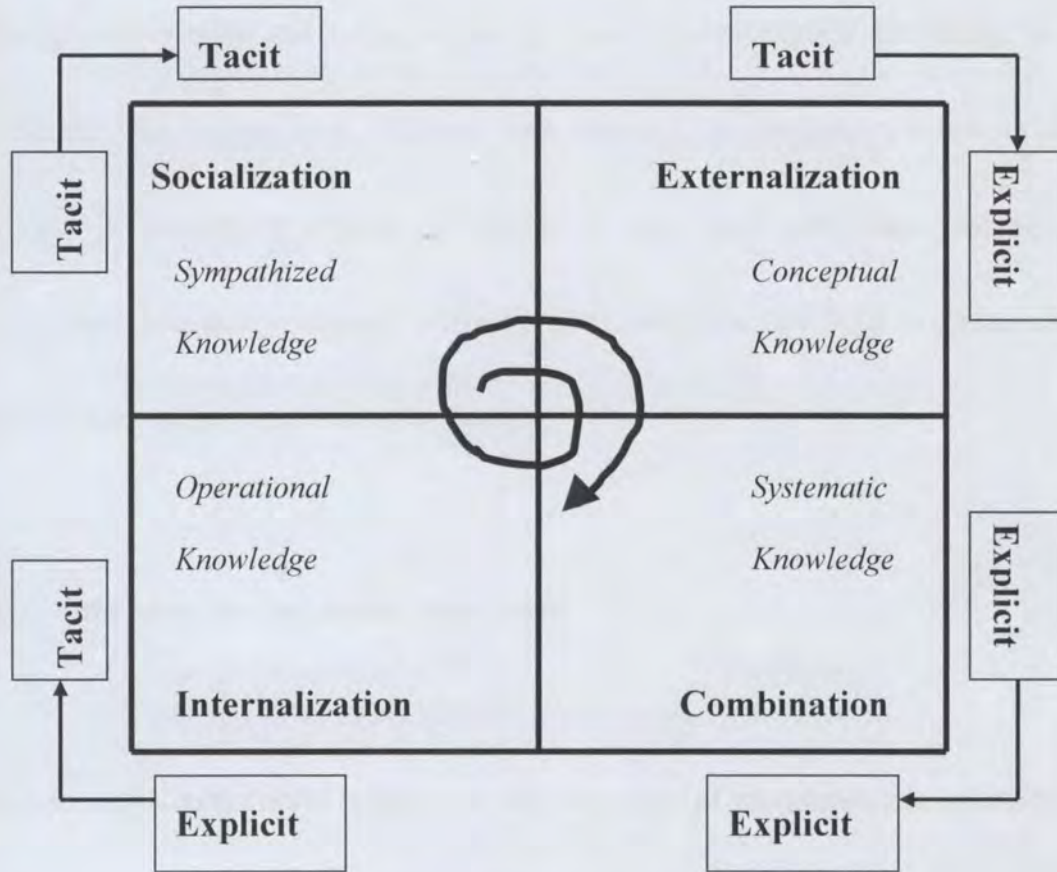


Figure 3.2 SECI diagram representing four modes of knowledge conversion

(Adapted from Nonaka and Takeuchi, 1995)

Socialization refers to the process of converting tacit knowledge to new tacit knowledge, named as sympathized knowledge, through social interactions between organizational members (e.g. apprenticeship). Externalization refers to the process of converting tacit knowledge to new explicit knowledge, named as conceptual knowledge, through dialogue and collaboration (e.g. articulating individual tacit

knowledge through reflection). Combination refers to the process of converting explicit knowledge to new explicit knowledge, named as systematic knowledge, through assimilation and consolidation of organizational explicit knowledge (e.g. gathering information from different data sources). Internalization refers to the process of converting explicit knowledge to new tacit knowledge, named as operational knowledge, through learning from materials that hold organizational explicit knowledge (e.g. learning by doing).

“Ba” – the space for knowledge conversion

Nonaka and Konno (1998) suggest that the four types of knowledge conversion take place within different types of “ba” which can be thought of as a “shared space for emerging relationships”. Nonaka, Toyama et al. (2000) explain that “‘Ba’ is the context shared by those who interact with each others, and through such interactions, those who participate in ‘ba’ and the context itself evolves through self-transcendence to create knowledge.” “Ba”, considered as the context where knowledge conversions (creation) take place, can be physical, virtual, mental or any combination of them (Nonaka and Konno, 1998). The notion of “ba” was incorporated into the unified model of dynamic knowledge creation resulting in four types of “ba”: Originating

“ba” for Socialization; Dialoguing “ba” (or Interacting “ba” in Nonaka and Konno, 1998) for Externalization; Systemizing “ba” (or Cyber “ba” in Nonaka and Konno, 1998) for Combination and Exercising “ba” for Internalization (Nonaka, Toyama et al., 2000).

Originating “ba” refers to the context within which individuals share experience through face-to-face interactions. Dialogue “ba” refers to the context within which tacit knowledge is converted to explicit knowledge and share among individuals through the process of reflection, collaboration and dialogue. Systemizing “ba” refers to the virtual space for interactions and collaboration. Exercising “ba” refers to the context for conversion of individual explicit knowledge to tacit knowledge through active and continuous learning (Nonaka and Konno, 1998; Nonaka, Toyama et al., 2000).

The main tenet of the notion “ba” is to create a context which facilitates knowledge creation through collaborative social interactions. Nonaka, Toyama et al. (2000) argue that “knowledge is created through the interactions among individuals or between individuals and their environments, rather than by an individual operating alone...Participants of ‘ba’ cannot be mere onlookers. Instead they are committed to

'ba' through action and interaction." In a similar vein, **kBlogCentral** emulates the functions of "ba" by providing a platform for individuals to perform reflection, engage in dialogue and collaborate with others in order to create knowledge.

Knowledge assets

Nonaka, Toyama et al. (2000) defines knowledge assets as "firm-specific resources that are indispensable to create values for the firm". They identify four types of knowledge asset: (1) Experiential knowledge assets that refer to the shared tacit knowledge (e.g. skills and know-how of individuals); (2) Conceptual knowledge assets that refer to the explicit knowledge articulated through images, symbols and language (e.g. design); (3) Systematic knowledge assets that refer to the systematized and packaged explicit knowledge (e.g. documents and manuals) and (4) Routine knowledge assets that refers to the tacit knowledge that is rooted and embedded in actions and practices (e.g. organizational culture).

KNOWLEDGE MANAGEMENT

Knowledge management refers to those processes that acquire, organize and communicate knowledge between employees for the sake of enhancing their productivity at work (Alavi and Leidner, 1999). von Krogh (1998) suggests that knowledge management helps organization to compete in the market through identifying and leveraging the collective knowledge within the organization. Organizations are investing in knowledge management projects to leverage their knowledge resources in order to achieve competitive advantages. However, most of the knowledge management initiatives are unsuccessful (Storey and Barnett, 2000; Schultze and Boland, 2000). Given that there is much debate, theorizing, and writing of a normative nature on knowledge management system, there is an urgent need of in-depth empirical research to explore the critical factors that may lead to successful development and implementation of such systems (Butler 2003).

Different Perspectives of Knowledge Management

Burrell and Morgan (1979) dichotomize the philosophy of science into objective and subjective paradigms in their framework of four paradigms of social and organizational inquiry. The objective stance implies positivist ontology that reality is independent of human perception while the subjective stance implies interpretivist ontology that reality is socially constructed. Applying Burrell and Morgan's framework to the meaning of knowledge and knowledge management, Schultze (1998)

identifies two opposite perspectives on knowledge management namely, the functionalist perspective and the interpretive perspective.

Functional perspective

The functionalist perspective on knowledge management adopts the objective stance towards the meaning of knowledge that knowledge exists as an object and is waiting to be discovered by the human agent. Functionalist perspective on knowledge management considers that knowledge has an object-like existence within an individual and an organization. The main objective of knowledge management under such perspective is to capture, manipulate, transfer and protect knowledge (Schultze, 1998). Codification approach to knowledge management (Hansen, Nohria and Tierney, 1999) is founded upon the assumptions of the functionalist perspective on knowledge management. Codification approach, which focuses on disembodied, quantifiable information rather than complex ideas like knowledge (von Krogh, Ichijo et al., 2000), advocates the use of information technology to capture, store, share and use of explicit knowledge available within the organization. Davenport, Jarvenpaa and Beers (1996) criticize the dominance of codification approach to knowledge management in IS discipline, they argue that many articles on knowledge management in IS discipline have focused on developing and implementing knowledge management databases, tools and techniques. Davenport and Prusak (1998) caution against the risk of over reliance on information technology which results in undermining the social and cultural nature of knowledge creation. The same authors assert that information technology should be employed to facilitate human social interactions instead of manipulating knowledge management databases. According to

the subjective stance towards the meaning of knowledge adopted in this study, the functionalist knowledge management approach can only be applied to manage data and information rather than knowledge.

Interpretive perspective

The interpretive perspective on knowledge management adopts a subjective stance towards the meaning of knowledge that knowledge is socially constructed and has no existence independent of human experience and social practices of knowing (Schultze, 1998). The main objective of knowledge management under such perspective is to “coordinate purposeful individuals whose actions stem from their unique interpretation of situated circumstances” (Schultze, 1998). Orlikowski (2002) contends that “knowing is not a static embedded capability or stable disposition of actors, but rather an ongoing social accomplishment, constituted and reconstructed as actors engage the world in practice”. Knowledge is created through interactions between humans and their environments rather than operating alone (Nonaka, Toyama et al., 2000). The role of knowledge management is thus to “create collaborative mechanisms so that when individuals take action, they envisage a social system of joint actions and inter-relate their action with this envisaged system” (Weick and Roberts, cited in Schultze, 1998). Malhotra (1999) envisages that cultural and social factors are critical to the success of any knowledge management endeavor. Personalization approach to knowledge management (Hansen, Nohria et al., 1999) is founded upon the assumptions of the interpretive perspective on knowledge management. Personalization approach emphasizes the social nature of knowledge creation and thus “focuses on the management of conversation and social interaction between individuals, and the knowledge transferred during these social activities” (Na

Ubon and Kimble, 2002). The interpretive perspective on knowledge management is adopted in this study for the developing **kBlogCentral**; major objective of the system is to facilitate social interactions through providing a space and history for “an actor’s self reflection, action and dialog with others” (Boland, Tenkasi et al.; cited in Schultze, 1998).

FROM INFORMATION WARFARE TO KNOWLEDGE WARFARE

Information Warfare

Napoleon (cited in Kreisher, 1999) stated that war is 90 percents information, illustrating that information played a critical role in the battlefields of the 19th century. There is no standardized definition for the term ‘Information Warfare’; Schwartau (1996) defines ‘Information Warfare’ as follows:

Information warfare consists of those actions intended to protect, exploit, corrupt, deny, or destroy information or information resources in order to achieve a significant advantage, objective, or victory of a specific adversary or adversaries.

The ultimate goal of information warfare is to gain information superiority over adversaries. A core information warfare process is to destroy, steal, manipulate and deny access to an adversary's information. It is not surprising to say that any process or organization that is information intensive is subject to information warfare.

Knowledge Warfare

As knowledge becomes the major resource for wealth and power (Burton-Jones, 1999), Knight (2003) points out that knowledge warfare is a school of thought that focus on directly engaging enemy's decision-makers and the ultimate aim is to attack the cognitive decision making processes of the enemy.

I define the term knowledge warfare as follows:

Knowledge warfare aims at attaining knowledge superiority over the adversaries; it consists of any actions to protect one's own or attack adversaries' processes of applying expertise.

Knowledge warfare centers on the adversaries' ability of sense making in the environment for making appropriate decision and performing decisive action accordingly.

Paradigm Shift

Varela and Maturana (Cited in Baumard, 1996) pointed out that 80 percents of human 'vision' is internally constructed by the other parts of brain, only 20 percents of the 'vision' is coming from the neurons on human retinas; vision is not mere information but knowledge. Baumard (1996) then suggests that a paradigm shift from information warfare to knowledge warfare is required because mapping, as an act of 'vision' without knowing, is nonsense. Following are the two major driving forces behind the imminent need for such a paradigm shift;

Knowledge-based economy

We are moving beyond a limited concept of information-based to a broader concept of a knowledge-based economy because knowledge has become the paramount resource for economic progress (Burton-Jones, 1999). Organizations are competing in this knowledge-based economy with knowledge as their major asset and source of

competitive advantages. The information warfare doctrine is unable to keep pace with the change and provide a holistic view of the situation. Instead of focusing on facts and figures, we need to concentrate on adversaries' ability to apply their expertise; i.e. the adversaries' ability of sense making in the environment and making decisive actions accordingly. That is not to say facts and figures are useless, instead of only manipulating bits and bytes, the knowledge warfare paradigm shifts the focus to the brains of the human beings that interpret them (Baumard, 1996).

Information overload

'Information has always been a source of power, but it is now increasingly a source of confusion' (Wilensky; cited in Baumard, 1996). Subsequent to the rapid development of information, communications and storage technologies, the volume of information grows exponentially in the environment. As a result of the emergence of highly cost effective storage media (e.g. hard disk, DVD ROM) and duplication technologies (e.g. high speed Xerox machine, back-up function of information systems); people are duplicating unnecessary copies of information in their daily activities. Besides, the rapid development of ICT (e.g. Internet, email) exacerbates the problem on a global scale. The problem of information overload induces confusion about information

sources and it is very difficult to filter useful information from other noises; the worst place of information overload is cyberspace which is loaded with huge amount of unnecessarily duplicated or corrupted information.

UNDERSTANDING BLOGS

Definition of Blog

Blood (2000) discloses that Jorn Barger coined the term 'Weblog' in December 1997 while the term 'Blog' was a shortened from the term 'wee-blog' made by Peter Merholz in early 1999. The term 'Blog' was ranked top of the Merriam-Webster's Words of the Year 2004; Merriam-Webster online dictionary defines Blog as follow,

Blog *noun* [short for *Weblog*] (1999): a Web site that contains an online personal journal with reflections, comments, and often hyperlinks provided by the writer”

Blogging Basics

The following description of the basic aspects of Blogging draws heavily upon a web article name "Blogging Basics" that best explains the features of a typical Blog:

(<http://www.technorati.com/help/blogging101.html>, viewed on 12 Nov 2005)

1. **What's a weblog?** A weblog, or "blog", is a personal journal on the Web. Weblogs cover as many different topics, and express as many opinions, as there are people writing them. Some blogs are highly influential and have enormous readership, while others are mainly intended for a close circle of family and friends.
2. **Why are blogs important?** The power of weblogs is that they allow millions of people to easily publish their ideas, and millions more to comment on them. Blogs are a fluid, dynamic medium, more akin to a "conversation" than to a library — which is how the Web has often been described in the past. With an increasing number of people reading, writing, and commenting on blogs, the way we use the Web is shifting in a fundamental way. Instead of primarily being passive consumers of information,

more and more Internet users are becoming active participants.

Weblogs allow everyone to have a voice.

3. **What are common misperceptions about weblogs?** The main misconception about blogs is that they are *only* personal diaries. Weblogs come in all flavors, from personal journals that are mainly shared with close friends and family, to blogs with readership levels placing them in the league of mainstream media. Blog topics include political commentary, product reviews, scientific endeavors, and any area of information where people have a deep expertise and a desire to express it.
4. **What is a blogger?** A blogger is someone who writes a blog.
5. **What is the blogosphere?** Blogosphere is a word used to describe the online community of bloggers and their writings.
6. **How is a weblog different from a website?** A weblog is a website that is updated frequently, most often displaying its material in journal-like entries.
7. **What is a weblog post or entry?** An entry, a post, or a posting, are the terms often used to refer to a specific article or commentary written by the blogger on his or her weblog.

8. **What is a comment?** Many weblogs allow readers to write a reaction to what was written in the blog entry. Comments can often be found directly following the blog entry.

9. **What is RSS?** RSS is a *file format* that allows anyone with a website — from large media companies to individual commentators — to easily "syndicate" their content, similar to how comic strips and popular columns are syndicated by their owners to hundreds of newspapers. Except that on the Web, the RSS syndication is usually free, and the content that is syndicated is often not the full entry, but excerpts and links back to the originating website. Technorati uses RSS to track updates to millions of blogs.

10. **What is the relationship between blogging and journalism?**

Weblogs are different from traditional media. Bloggers tend to be more opinionated, niche-focused, and partisan than journalists, who strive for editorial objectivity. Blogs encourage dialog with readers, which is why many traditional journalists now also have blogs. The relationship between blogging and journalism can be characterized as symbiotic rather than competitive. Bloggers are

individuals or between individuals and their environments” (Nonaka, Toyama and Konno, 2000).

It should be noted that the stance towards knowledge adopted by the researcher in this study might not align with the stance of every participant involved in this study; rather it forms the epistemological basis for building, using and evaluating **kBlogCentral** throughout the study. The notion of knowledge and knowledge management in current knowledge management literature is mostly originated in West; knowledge management practice in China is likely to be different due to the dramatic difference in histories, cultures and institutional forces between China and the West (Zhu, 2004). Hall and Roger (1998) discern that “the priority of logical reasoning in the West is paralleled in China by the prominence of less formal uses of analogical, parabolic and literary discourse. The Chinese are largely indifference to abstract analyses that seek to maintain an objective perspective, and are decidedly anthropocentric in their motivations for the acquisition, organization and transmission of knowledge”. Fung (1952) even argues that “Chinese philosophers for the most part have not regarded knowledge as something valuable in itself, and have not sought knowledge for the sake of knowledge”. Given the difference between countries with regards to their philosophical assumptions on knowledge and knowledge management; Takeuchi’s

(2001) argument that knowledge management “may blossom to become the most universal management concept” is considered untenable. Pauleen and Murphy (2005) opine that the Western analytical assumptions on knowledge currently dominate information and knowledge management research and development. They contest that information and knowledge management models and frameworks that exclude the influence of national and regional culture have seriously undercut their potential effectiveness, particularly in global applications. Although there are few comparative studies on the different approaches on knowledge management between different countries (e.g. Nonaka and Takeuchi, 1995; Takeuchi, 2001; Hutchings and Michailova, 2004; 2006; Michailova and Hutchings, 2006; Weir and Hutchings, 2005), there is hardly any empirical study on the philosophical and cultural influence on knowledge management practice in China. Grover and Davenport (2001) call for more empirical research on knowledge management in order to build a healthy tension between knowledge and action. The researcher thus endeavors to explore theory through the practice of developing and introducing **kBlogCentral** in his firm in China through employing a reflective practitioner research methodology informed by critical theory, interpretivism, heuristic inquiry, action research, and traditional Chinese philosophy.

Taxonomies of Knowledge

Knowledge is classified into two categories, namely explicit and tacit knowledge (Polanyi, 1967) where tacit knowledge is further divided into cognitive tacit knowledge and technical tacit knowledge (Nonaka and Takeuchi, 1995). Explicit knowledge refers to the knowledge that can be codified and transmitted in systematic and formal language (e.g. documents, databases and emails) (Tiwana, 2002). In contrast, tacit knowledge is hard to be codified or communicated in symbolic form or natural language (Alavi and Leidner, 2001) because tacit knowledge is personal and context specific in nature (Nonaka and Takeuchi, 1995). Tacit knowledge is personal knowledge embedded in individual experience and involves intangible factors such as personal belief, perspective, and the value system (Nonaka and Takeuchi, 1995). Michael Polanyi referred to tacit knowledge as “knowing more than we can say” (Polanyi, 1967). The cognitive element of tacit knowledge refers to the mental models (e.g. schemata, paradigms, beliefs and viewpoint) that are developed by an individual’s education and experiences while the technical tacit knowledge refers to individual’s know-how and skills (Nonaka and Takeuchi, 1995).

According to the subjective stance towards the meaning of knowledge adopted in this study, knowledge does not exist outside an agent (knower) (Fahey and Prusak, 1998). It should be noted that the term explicit knowledge used throughout this study is not considered, epistemologically, as genuine knowledge because knowledge entails a knower. Unlike information, knowledge can't be treated as an object that people can "pick up, possess, pass around, put in a database, lose, find, write down, accumulate, count, compare and so forth" (Brown and Duguid, 2000). Explicit knowledge is considered, at most, as a kind of contextually richer information that is ready for interpretation by an agent.

Knowledge Creation

Alavi and Leidner (2001) identify four socially enacted processes in knowledge management: (1) creation, (2) storage/retrieval, (3) transfer, and (4) application. Knowledge creation is strategically important to organizations in achieving competitive advantages (Grant, 1996; Zack, 1999); it is considered a critical factor for the sustainability of organizations (Brown and Duguid, 1998). As the researcher considers knowledge creation a critical process for his firm to achieve competitive advantages in creativity and innovations, this study has chosen to focus on the

knowledge creation process. Nonaka, Toyama and Konno's (2000) widely cited unified model of dynamic knowledge creation is employed as a framework in this study in developing **kBlogCentral**.

The unified model of dynamic knowledge creation consists of three elements: (1) the SECI knowledge conversion process, (2) "ba" (space for knowledge conversion) and (3) knowledge assets. Nonaka, Toyama et al. (2000) explain that "using its existing knowledge assets, an organization creates new knowledge through the SECI process that takes place in ba. The knowledge created then becomes part of the knowledge assets of the organization, which becomes the basis for a new spiral of knowledge creation".

The SECI model

Nonaka and Takeuchi (1995) coin the notion of knowledge conversion and develop a theory of knowledge creation known as SECI model. Nonaka and Takeuchi (cited in Alavi and Leidner, 2001) assert that knowledge creation involves "a continual interplay between the tacit and explicit dimensions of knowledge and a growing spiral flow as knowledge moves through individual, group and organizational levels".

According to the SECI model, knowledge is created through interaction of tacit and explicit knowledge as shown in figure 3.2 below:

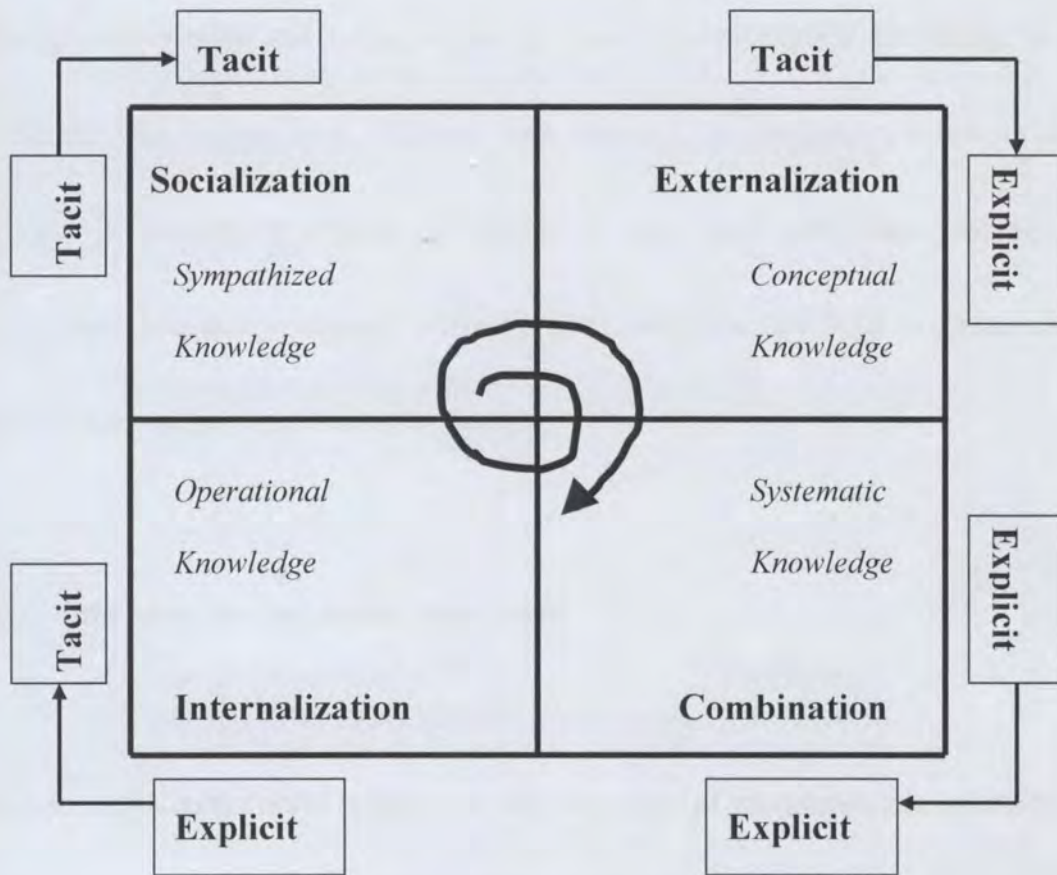


Figure 3.2 SECI diagram representing four modes of knowledge conversion

(Adapted from Nonaka and Takeuchi, 1995)

Socialization refers to the process of converting tacit knowledge to new tacit knowledge, named as sympathized knowledge, through social interactions between organizational members (e.g. apprenticeship). Externalization refers to the process of converting tacit knowledge to new explicit knowledge, named as conceptual knowledge, through dialogue and collaboration (e.g. articulating individual tacit

knowledge through reflection). Combination refers to the process of converting explicit knowledge to new explicit knowledge, named as systematic knowledge, through assimilation and consolidation of organizational explicit knowledge (e.g. gathering information from different data sources). Internalization refers to the process of converting explicit knowledge to new tacit knowledge, named as operational knowledge, through learning from materials that hold organizational explicit knowledge (e.g. learning by doing).

“Ba” – the space for knowledge conversion

Nonaka and Konno (1998) suggest that the four types of knowledge conversion take place within different types of “ba” which can be thought of as a “shared space for emerging relationships”. Nonaka, Toyama et al. (2000) explain that “‘Ba’ is the context shared by those who interact with each others, and through such interactions, those who participate in ‘ba’ and the context itself evolves through self-transcendence to create knowledge.” “Ba”, considered as the context where knowledge conversions (creation) take place, can be physical, virtual, mental or any combination of them (Nonaka and Konno, 1998). The notion of “ba” was incorporated into the unified model of dynamic knowledge creation resulting in four types of “ba”: Originating

“ba” for Socialization; Dialoguing “ba” (or Interacting “ba” in Nonaka and Konno, 1998) for Externalization; Systemizing “ba” (or Cyber “ba” in Nonaka and Konno, 1998) for Combination and Exercising “ba” for Internalization (Nonaka, Toyama et al., 2000).

Originating “ba” refers to the context within which individuals share experience through face-to-face interactions. Dialogue “ba” refers to the context within which tacit knowledge is converted to explicit knowledge and share among individuals through the process of reflection, collaboration and dialogue. Systemizing “ba” refers to the virtual space for interactions and collaboration. Exercising “ba” refers to the context for conversion of individual explicit knowledge to tacit knowledge through active and continuous learning (Nonaka and Konno, 1998; Nonaka, Toyama et al., 2000).

The main tenet of the notion “ba” is to create a context which facilitates knowledge creation through collaborative social interactions. Nonaka, Toyama et al. (2000) argue that “knowledge is created through the interactions among individuals or between individuals and their environments, rather than by an individual operating alone...Participants of ‘ba’ cannot be mere onlookers. Instead they are committed to

'ba' through action and interaction." In a similar vein, **kBlogCentral** emulates the functions of "ba" by providing a platform for individuals to perform reflection, engage in dialogue and collaborate with others in order to create knowledge.

Knowledge assets

Nonaka, Toyama et al. (2000) defines knowledge assets as "firm-specific resources that are indispensable to create values for the firm". They identify four types of knowledge asset: (1) Experiential knowledge assets that refer to the shared tacit knowledge (e.g. skills and know-how of individuals); (2) Conceptual knowledge assets that refer to the explicit knowledge articulated through images, symbols and language (e.g. design); (3) Systematic knowledge assets that refer to the systematized and packaged explicit knowledge (e.g. documents and manuals) and (4) Routine knowledge assets that refers to the tacit knowledge that is rooted and embedded in actions and practices (e.g. organizational culture).

KNOWLEDGE MANAGEMENT

Knowledge management refers to those processes that acquire, organize and communicate knowledge between employees for the sake of enhancing their productivity at work (Alavi and Leidner, 1999). von Krogh (1998) suggests that knowledge management helps organization to compete in the market through identifying and leveraging the collective knowledge within the organization. Organizations are investing in knowledge management projects to leverage their knowledge resources in order to achieve competitive advantages. However, most of the knowledge management initiatives are unsuccessful (Storey and Barnett, 2000; Schultze and Boland, 2000). Given that there is much debate, theorizing, and writing of a normative nature on knowledge management system, there is an urgent need of in-depth empirical research to explore the critical factors that may lead to successful development and implementation of such systems (Butler 2003).

Different Perspectives of Knowledge Management

Burrell and Morgan (1979) dichotomize the philosophy of science into objective and subjective paradigms in their framework of four paradigms of social and organizational inquiry. The objective stance implies positivist ontology that reality is independent of human perception while the subjective stance implies interpretivist ontology that reality is socially constructed. Applying Burrell and Morgan's framework to the meaning of knowledge and knowledge management, Schultze (1998)

identifies two opposite perspectives on knowledge management namely, the functionalist perspective and the interpretive perspective.

Functional perspective

The functionalist perspective on knowledge management adopts the objective stance towards the meaning of knowledge that knowledge exists as an object and is waiting to be discovered by the human agent. Functionalist perspective on knowledge management considers that knowledge has an object-like existence within an individual and an organization. The main objective of knowledge management under such perspective is to capture, manipulate, transfer and protect knowledge (Schultze, 1998). Codification approach to knowledge management (Hansen, Nohria and Tierney, 1999) is founded upon the assumptions of the functionalist perspective on knowledge management. Codification approach, which focuses on disembodied, quantifiable information rather than complex ideas like knowledge (von Krogh, Ichijo et al., 2000), advocates the use of information technology to capture, store, share and use of explicit knowledge available within the organization. Davenport, Jarvenpaa and Beers (1996) criticize the dominance of codification approach to knowledge management in IS discipline, they argue that many articles on knowledge management in IS discipline have focused on developing and implementing knowledge management databases, tools and techniques. Davenport and Prusak (1998) caution against the risk of over reliance on information technology which results in undermining the social and cultural nature of knowledge creation. The same authors assert that information technology should be employed to facilitate human social interactions instead of manipulating knowledge management databases. According to

the subjective stance towards the meaning of knowledge adopted in this study, the functionalist knowledge management approach can only be applied to manage data and information rather than knowledge.

Interpretive perspective

The interpretive perspective on knowledge management adopts a subjective stance towards the meaning of knowledge that knowledge is socially constructed and has no existence independent of human experience and social practices of knowing (Schultze, 1998). The main objective of knowledge management under such perspective is to “coordinate purposeful individuals whose actions stem from their unique interpretation of situated circumstances” (Schultze, 1998). Orlikowski (2002) contends that “knowing is not a static embedded capability or stable disposition of actors, but rather an ongoing social accomplishment, constituted and reconstructed as actors engage the world in practice”. Knowledge is created through interactions between humans and their environments rather than operating alone (Nonaka, Toyama et al., 2000). The role of knowledge management is thus to “create collaborative mechanisms so that when individuals take action, they envisage a social system of joint actions and inter-relate their action with this envisaged system” (Weick and Roberts, cited in Schultze, 1998). Malhotra (1999) envisages that cultural and social factors are critical to the success of any knowledge management endeavor. Personalization approach to knowledge management (Hansen, Nohria et al., 1999) is founded upon the assumptions of the interpretive perspective on knowledge management. Personalization approach emphasizes the social nature of knowledge creation and thus “focuses on the management of conversation and social interaction between individuals, and the knowledge transferred during these social activities” (Na

Ubon and Kimble, 2002). The interpretive perspective on knowledge management is adopted in this study for the developing **kBlogCentral**; major objective of the system is to facilitate social interactions through providing a space and history for “an actor’s self reflection, action and dialog with others” (Boland, Tenkasi et al.; cited in Schultze, 1998).

FROM INFORMATION WARFARE TO KNOWLEDGE WARFARE

Information Warfare

Napoleon (cited in Kreisher, 1999) stated that war is 90 percents information, illustrating that information played a critical role in the battlefields of the 19th century. There is no standardized definition for the term ‘Information Warfare’; Schwartau (1996) defines ‘Information Warfare’ as follows:

Information warfare consists of those actions intended to protect, exploit, corrupt, deny, or destroy information or information resources in order to achieve a significant advantage, objective, or victory of a specific adversary or adversaries.

The ultimate goal of information warfare is to gain information superiority over adversaries. A core information warfare process is to destroy, steal, manipulate and deny access to an adversary's information. It is not surprising to say that any process or organization that is information intensive is subject to information warfare.

Knowledge Warfare

As knowledge becomes the major resource for wealth and power (Burton-Jones, 1999), Knight (2003) points out that knowledge warfare is a school of thought that focus on directly engaging enemy's decision-makers and the ultimate aim is to attack the cognitive decision making processes of the enemy.

I define the term knowledge warfare as follows:

Knowledge warfare aims at attaining knowledge superiority over the adversaries; it consists of any actions to protect one's own or attack adversaries' processes of applying expertise.

Knowledge warfare centers on the adversaries' ability of sense making in the environment for making appropriate decision and performing decisive action accordingly.

Paradigm Shift

Varela and Maturana (Cited in Baumard, 1996) pointed out that 80 percents of human 'vision' is internally constructed by the other parts of brain, only 20 percents of the 'vision' is coming from the neurons on human retinas; vision is not mere information but knowledge. Baumard (1996) then suggests that a paradigm shift from information warfare to knowledge warfare is required because mapping, as an act of 'vision' without knowing, is nonsense. Following are the two major driving forces behind the imminent need for such a paradigm shift;

Knowledge-based economy

We are moving beyond a limited concept of information-based to a broader concept of a knowledge-based economy because knowledge has become the paramount resource for economic progress (Burton-Jones, 1999). Organizations are competing in this knowledge-based economy with knowledge as their major asset and source of

competitive advantages. The information warfare doctrine is unable to keep pace with the change and provide a holistic view of the situation. Instead of focusing on facts and figures, we need to concentrate on adversaries' ability to apply their expertise; i.e. the adversaries' ability of sense making in the environment and making decisive actions accordingly. That is not to say facts and figures are useless, instead of only manipulating bits and bytes, the knowledge warfare paradigm shifts the focus to the brains of the human beings that interpret them (Baumard, 1996).

Information overload

'Information has always been a source of power, but it is now increasingly a source of confusion' (Wilensky; cited in Baumard, 1996). Subsequent to the rapid development of information, communications and storage technologies, the volume of information grows exponentially in the environment. As a result of the emergence of highly cost effective storage media (e.g. hard disk, DVD ROM) and duplication technologies (e.g. high speed Xerox machine, back-up function of information systems); people are duplicating unnecessary copies of information in their daily activities. Besides, the rapid development of ICT (e.g. Internet, email) exacerbates the problem on a global scale. The problem of information overload induces confusion about information

sources and it is very difficult to filter useful information from other noises; the worst place of information overload is cyberspace which is loaded with huge amount of unnecessarily duplicated or corrupted information.

UNDERSTANDING BLOGS

Definition of Blog

Blood (2000) discloses that Jorn Barger coined the term 'Weblog' in December 1997 while the term 'Blog' was a shortened from the term 'wee-blog' made by Peter Merholz in early 1999. The term 'Blog' was ranked top of the Merriam-Webster's Words of the Year 2004; Merriam-Webster online dictionary defines Blog as follow,

Blog *noun* [short for *Weblog*] (1999): a Web site that contains an online personal journal with reflections, comments, and often hyperlinks provided by the writer”

Blogging Basics

The following description of the basic aspects of Blogging draws heavily upon a web article name "Blogging Basics" that best explains the features of a typical Blog:

(<http://www.technorati.com/help/blogging101.html>, viewed on 12 Nov 2005)

1. **What's a weblog?** A weblog, or "blog", is a personal journal on the Web. Weblogs cover as many different topics, and express as many opinions, as there are people writing them. Some blogs are highly influential and have enormous readership, while others are mainly intended for a close circle of family and friends.
2. **Why are blogs important?** The power of weblogs is that they allow millions of people to easily publish their ideas, and millions more to comment on them. Blogs are a fluid, dynamic medium, more akin to a "conversation" than to a library — which is how the Web has often been described in the past. With an increasing number of people reading, writing, and commenting on blogs, the way we use the Web is shifting in a fundamental way. Instead of primarily being passive consumers of information,

more and more Internet users are becoming active participants.

Weblogs allow everyone to have a voice.

3. **What are common misperceptions about weblogs?** The main misconception about blogs is that they are *only* personal diaries. Weblogs come in all flavors, from personal journals that are mainly shared with close friends and family, to blogs with readership levels placing them in the league of mainstream media. Blog topics include political commentary, product reviews, scientific endeavors, and any area of information where people have a deep expertise and a desire to express it.
4. **What is a blogger?** A blogger is someone who writes a blog.
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6. **How is a weblog different from a website?** A weblog is a website that is updated frequently, most often displaying its material in journal-like entries.
7. **What is a weblog post or entry?** An entry, a post, or a posting, are the terms often used to refer to a specific article or commentary written by the blogger on his or her weblog.

8. **What is a comment?** Many weblogs allow readers to write a reaction to what was written in the blog entry. Comments can often be found directly following the blog entry.

9. **What is RSS?** RSS is a *file format* that allows anyone with a website — from large media companies to individual commentators — to easily "syndicate" their content, similar to how comic strips and popular columns are syndicated by their owners to hundreds of newspapers. Except that on the Web, the RSS syndication is usually free, and the content that is syndicated is often not the full entry, but excerpts and links back to the originating website. Technorati uses RSS to track updates to millions of blogs.

10. **What is the relationship between blogging and journalism?**

Weblogs are different from traditional media. Bloggers tend to be more opinionated, niche-focused, and partisan than journalists, who strive for editorial objectivity. Blogs encourage dialog with readers, which is why many traditional journalists now also have blogs. The relationship between blogging and journalism can be characterized as symbiotic rather than competitive. Bloggers are

often sources for journalists, and many blogs contain commentary and riffs on what journalists wrote that day. Frequently newsmakers use blogs to respond to what journalists write about them. And by linking to traditional media, weblogs can introduce new readers to journalists and their publications.

11. Are weblogs a business or a hobby? For most people, blogging is a hobby. For some, especially journalists, writers, and business and political leaders, writing blogs enhances their professional careers by giving their voices a broader audience and allowing more engaged contact with their readers, constituents, and customers. Some bloggers have readership numbers approaching that of big media and are able to earn income from their popularity.

12. What is a permalink? The homepages of most weblogs have several entries, or posts, listed on them. Because blogs tend to be frequently updated, articles you find on a weblog's homepage one day may not be there the next. A permalink is the permanent identifier to a specific weblog post or article. Bloggers love permalinks — they provide an easy way to capture specific

references to posts or articles about which bloggers are writing.

13. Why is linking so important? A link from one weblog to another helps provide context around an argument or point, and it is essentially a "vote of attention" from one blogger to another. By linking to another site or blog, the weblog author is saying, "I find what you are saying important enough to link to it." Linking also helps create the conversation of the Web, the critical mass of connected thought that is not available in static text.

(Adapted from www.technorati.com)

With the emergence of free and easy to use blogging services like Blogger and Pitas in 1999, the number of bloggers grew exponentially in the past few years. Technorati tracked 3 million blogs in July 2004 and the number grew to 20.4 millions by 30 Nov 2005. According to the Internet Society of China, number of bloggers in China has surged to 17.5 millions, a 30-fold increase in just four years. An estimated 75 millions of Internet users, more than a half of the 130 millions of Internet users in China, are regular blog readers (China Daily, 27 Dec 2006).

The Communicative Perspective of Blogs

Blogs are personal journals published on the Internet or Intranet. However unlike a personal diary, a blog is intentionally to be disclosed to public readers who can comment on the postings by using the comment function. Through publishing blog, publisher-to-reader, reader-to-publisher and reader-to-reader dialogues are facilitated by Comment, Search, Trackback and RSS functions provided by most blogging sites. Wijnia (2004) asserts that bloggers publish their blogs with the intention of starting a conversation. Wrede (2003) contends that Blogs are a form of writing in public and are intended to offer opportunities for communication; a blog is a constant invitation for conversion.

CRITICAL SOCIAL THEORY AND HABERMAS' THEORY OF COMMUNICATIVE ACTION

Critical Social Theory

Critical social theory was associated with the Frankfurt School of Germany with prominent figures like Max Horkheimer (1895-1973), Theodor Adorno (1903-1969),

Erich Fromm (1900-1980), Herbert Marcuse (1898-1979) and Jurgen Habermas (1929-).

Critical theory is primarily a way of doing philosophy, integrating the normative aspects of philosophical reflection with the explanatory achievements of the social sciences. The ultimate goal of its program is to link theory and practice, to provide insight, and to empower subjects to change their oppressive circumstances and achieve human emancipation, a rational society that satisfies human needs and powers

(Cambridge Dictionary of Philosophy, pp. 278-79)

Critical social theory advocates emancipation of human beings from domination and coercion through critical self reflections. Through critical self reflections, human beings can unveil any taken for granted assumptions and ideologies caused by unbalanced instrumental rationality in modernity (Agger, 1991; Held, 1980).

Jurgen Habermas and Theory of Communicative Action

Jurgen Habermas, a second generation social theorist of Frankfurt School of Germany, created his famous Theory of Communicative Action (Habermas, 1984, 1987).

Habermas' Theory of Communicative Action has great influence in Information Systems research (Lyytinen and Klein, 1985; Klein and Hirschheim, 1991; Lyytinen, 1992; Hirschheim and Klein, 1994; Ngwenyama and Lee, 1997; Ngwenyama, 1998). Habermas (1984) contends that communication is important to the survival of human species; "If we assume that the human species maintains itself through the socially coordinated activities of its members and that this coordination has to be established through communication – and in certain spheres through communication aimed at reaching agreement – then the reproduction of the species also requires satisfying the conditions of a rationality that is inherent in communication action" (Habermas, 1984, p.397). Habermas also stresses the importance of language to human beings, "what raises us out of nature is the only thing whose nature we can know: language" (McCarthy, 1987, p.287).

Human Interest

In his book *Knowledge and Human Interests* (1972), Habermas categorizes human interests into technical, practical and emancipatory interest. The technical interest is for control and manipulation; the practical interest is for inter-subjective communicative understanding; and the emancipatory interest is for attaining freedom

from domination through critical self-reflection. Technical interest aims at attaining technical or instrumental knowledge for manipulation and control in natural science; practical interest aims at attaining practical knowledge for mutual understanding while emancipatory interest is concerned with emancipation from unjust domination through self-reflection (Pusey, 1987).

Human Rationality

Habermas (1972, 1984, 1987) categorizes human rationality into instrumental, strategic and communicative rationalities. Instrumental rationality is mainly oriented towards success or control of nature; strategic rationality is mainly concerned with dominating other people through manipulation and coercion; communicative rationality is oriented towards inter-subjective understanding and true consensus. Habermas (1984, 1987) contends that if instrumental rationality is not balanced by communicative rationality, people are led into misguided technicism; if strategic rationality is not balanced by communicative rationality, people are inevitably dominated by raw power and coercion.

Human Action

Habermas (1972, 1984) categorizes human action into instrumental action, strategic action and communicative action. Instrumental action aims at success or control over nature; strategic action is concerned with domination of other people by manipulation and coercion; communicative action aims at reaching inter-subjective understanding and true consensus. Habermas (1984) distinguished communicative action from strategic action which is mainly concerned with manipulating others. He points out that “The concept of communicative action presupposes language as the medium for a kind of reaching understanding, in the course of which participants, through relating to a world, reciprocally raise validity claims that can be accepted or contested” (Habermas, 1984, p.99). He further states that “language is a medium of communication that serves understanding, whereas actors, in coming to an understanding with one another so as to coordinate their actions, pursue their particular aims” (Habermas, 1984, p.101).

Validity Claims

Habermas (1984) asserts that participants who act communicatively need to relate their interpretations to three types of validity claims; “The concept of reaching and understanding suggests a rationally motivated agreement among participants that is measured against criticizable validity claims. The validity claims (propositional truth, normative rightness, and subjective truthfulness) characterize different categories of a knowledge embodied in symbolic expressions” (Habermas, 1984, p.75), i.e. claims to truth raised in constatives speech acts which relates to the objective world relations; claims to rightness raised in regulatives speech acts which relates to the social world relations; claims to truthfulness raised in expressives speech acts which relates to the subjective world relations (Habermas, 1984, p.329).

Ideal Speech Situation

The prerequisite conditions for successful communicative action is called *ideal speech action* which “excludes all force-whether it arises from within the process of reaching understanding itself or influences it from the outside-except the force of the better argument (and thus that it also excludes, on their part, all motives except that of

a cooperative search for truth)” (Habermas, 1984, p.25). Under ideal speech situation, all participants are free from any kind of distortion, coercion, manipulation and distorted ideologies.

CHINESE HISTORICAL, CULTURAL, AND PHILOSOPHICAL INFLUENCE ON THIS STUDY

Holden (2001) asserts that national culture plays an important role in knowledge management initiatives. Jin (2001) suggests that different societies may have different approaches to knowledge creation according to their different cultural premises and organizing principles. Holden (2001) criticizes the negligence of the impact of national culture on knowledge management research by saying that “the literature gives the impression that knowledge management operates in a kind of unitary vacuum in which diversity in terms of language, cultural and ethnic background are compressed into one giant independent variable which is in any case pushed to the side”. I concur with Pauleen and Murphy (2005) that knowledge management models that exclude the influence of national and regional culture seriously undercut their potential effectiveness. Therefore I contend that it is important for our firm, the readers of this thesis, research partners and co-analysts, to have a brief understanding

on the history, culture, and philosophy of China which is one of the oldest civilizations in the world. Knowledge on the upsurge and decline of various dynasties in the Chinese history is helpful for our firm to understand the development of the Chinese culture and institutions which constitute the context of this research. As part of the research, I used the following excerpts from my literature review regarding Chinese history and philosophy. I reflect on the information in fictitious dialogues with colleagues based on my knowledge, experience and discussions with them.

Facts on Mainland China

The following facts on mainland China are adapted from information available on the Web Site on China (<http://www.china.org.cn/e-changshi/index.htm> , viewed on 3 June 2006).

Formal name: People's Republic of China (PRC)

Capital: Beijing

Land size: China has a landmass of 9,600,000 sq km, making it roughly the same area as the continental United States. The area of cultivated land in China was 123.5 million ha at the end of 2003, a decrease from 126 million hectares the previous year.

Location: In the east of the Asian continent, on the western shore of the Pacific Ocean.

Border countries: Korea, Mongolia, Russia, Kazakhstan, Kyrgyzstan, Tadjikistan, Afghanistan, Pakistan, India, Nepal, Bhutan, Myanmar, Laos and Vietnam.

Geography: Mountains, high plateaus, and deserts in the west; plains, deltas, and hills in the east. The highest mountain in China is the highest mountain in the world: Mount Qomolangma. The mountain towers above all others at 8,848 m or 29,035 feet.

Population: China is the world's most populous country with a population estimated at about 1.294 billion by the end of 2003, one-fifth of the world's total. This figure does not include the Chinese living in the Hong Kong and Macao Special Administrative Regions, and Taiwan Province.

Population density: The population density is about 135 people per sq km, roughly four times greater than that of the U.S.

Population ethnicity: 91.6 percent of Chinese people are Han. The non-Han population includes 55 ethnic minorities, of which the major groups are the Zhuang, Manchu, Hui, Miao, Uygur, Yi, Tujia, Mongolian, and Tibetan.

Population distribution: Most of the population of China lives in the middle and lower reaches of the Yellow River, Yangtze River and Pearl River valleys, and the Northeast Plain. In 2000 a "go-west" campaign was launched by the government to

help its relatively backward western and central areas catch up with more affluent eastern China.

Religions: The number of religious worshippers in China is estimated at well over 100 million, most of whom follow Buddhism. Other major religions are Daoism, Islam and Christianity in both its Catholic and Protestant forms.

Languages: Standard Chinese or Mandarin (Putonghua, based on the Beijing dialect), Yue (Cantonese), Wu (Shanghainese), Minbei (Fuzhou), Minnan (Hokkien-Taiwanese), Xiang, Gan, and Hakka dialects, as well as minority languages.

In 1958, the First National People's Congress approved, at its Fifth Session, the adoption of the Pinyin (Scheme for the Chinese Phonetic Alphabet) for spelling Chinese names and places in Roman letters, but the Pinyin system was not popularly used until the late 1970s. Pinyin is now widely seen in China, and it replaces earlier Romanization spelling systems.

Economy: China's economy has boomed since 1978, as a result of sweeping economic reforms. GNP grew from \$128 billion in 1980 to \$745 billion in 1998. China's economy continues to grow rapidly, with a GDP real growth rate of 8 percent in 2002, and an annual industrial production growth rate of 11.6 percent between 1979 and 2000.

Political parties: The Communist Party of China ("CPC") is the country's sole political party in power. Hu Jintao became general secretary of the CPC at its 16th National Congress in November 2002. Founded in July 1921, the CPC today has more than 67 million members. There are eight other parties.

Administrative divisions: China is made up of 23 provinces, five autonomous regions, four municipalities directly under the Central Government, and the special administrative regions of Hong Kong and Macao. The 23 provinces are Anhui, Fujian, Gansu, Guangdong, Guizhou, Hainan, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang; the five autonomous regions are Guangxi, Inner Mongolia, Ningxia, Xinjiang and Tibet; the four municipalities are Beijing, Chongqing, Shanghai and Tianjin.



Figure 3.3 Map of China

Source: <http://www.cia.gov/cia/publications/factbook/geos/ch.html>

Reflective Discussion about Facts of Mainland China

Dr Williams: How do you think knowledge of these facts is important for your research?

Fergus: Important aspects of the changes in the professional practice of myself and my colleagues in the firm are due to inspiration from Chinese

philosophy. One can not discuss Chinese philosophy without some knowledge of the facts of Mainland China.

Dr Williams: What do you think is the most significant fact bearing on your research?

Fergus: I think the "go-west" campaign in year 2000 could prove to be the most important. We have discussed this and begun to think of ways to position ourselves for market share in this developing area.

Brief History of China

Referring to Table 3.1, history of China can be briefly classified into legendary, ancient, imperial and modern periods. The "Three Kings and the Five Emperors" of the legendary period are first recorded in *Shi ji*, the magnum opus of Sima Qian (ca. 145-ca. 86 B.C). The three Kings were the Heavenly, Earthly and Human Kings while the Five Emperors were Huang Di (Figure 3.4), Zhuanxu, Ku, Yao and Shun. The earliest archaeologically proven dynasty in the Chinese history was the Xia Dynasty (2070-1600 BC) (Ho, 1992). Great Yu who solved the problem of severe flooding at

that time by constructing dikes and waterways founded the Xia Dynasty and became the emperor of the first Chinese dynasty (Fung, 1952). Xia, Shang and Zhou (Western and Eastern Zhou) Dynasties were both slave societies. The sun eclipse of 776 B.C. was a watershed in Chinese history, knowledge on Chinese history prior to that date is rather uncertain while written records after that date are rich and reliable (Fung, 1952).



Figure 3.4 Portrait of Emperor Huang Di

(Source: <http://www.chinapage.com/emperor/huangdi.html>)

Feudalism, analogous to the feudal systems in the western nations, was firstly established in China during the Zhou Dynasty. Intellectual activities blossomed during the “Spring and Autumn Period” (770-476 BC) and the “Warring States Period” (475-221 BC). “Hundred Schools” of thought e.g. Confucian, Legalist, Taoist, Yin-Yang and Mohist schools etc. emerged during these periods. Some predominant

schools and thinkers in that period are listed in Table 3.2. These philosophical movements laid the core foundations of Chinese culture which still exerts significant influence on the perception and attitude towards knowledge among contemporary Chinese. Ying Zheng founded the Qin Dynasty (221-206 BC) and claimed himself as “Qin Shi Huang”, the first emperor of Qin Dynasty. Qin Shi Huang conquered other rival states by the end of the “Warring States Period” and founded the first unified empire which brought China into the imperial period of the history of China. Despite his controversial brutal suppression on intellectual activities by burning classic works and burying scholars of various schools other than those of the Legalist school, his move to unify Chinese writings, currency and measurement standards did contribute greatly to the development of Chinese civilization. Adopting Legalist’s doctrine, Qin Shi Huang scrapped the feudal system and established a centralized government that ruled the country by tight and stringent laws. Confucianism became the orthodox philosophy during the Han Dynasty (Western Han: 206 BC-AD 9, Eastern Han: AD 25-220). However, Han Dynasty was briefly interrupted by the Xin Dynasty (AD 9-24) which was established by Wang Mang for a period of 15 years. Han Dynasty was prosperous and the famous “Silk Road” was emerged as the major route for trade between China and the western regions. Buddhism was introduced to China from India as a result of frequent contacts with the western regions and Buddhism became

the dominant religion in the later Tang Dynasty. After nearly four centuries of unrest during the “Three Kingdoms”, “Western Jin”, “Eastern Jin” and “Southern and Northern Dynasties” periods, Wen Di reunited China and established the Sui Dynasty in A.D. 581. Tang Dynasty was established by Gaozu in A.D. 618. Tang and Han Dynasties were probably the most prosperous era in Chinese History. Following the stormy periods of “Five Dynasties”, “Ten Kingdoms”, “Northern Song”, and “Southern Song”, China was invaded by various neighbor countries like Liao, Jin, and the Mongols.

Dynasty	Dates
Legendary Period	
Three Kings and Five Emperors	3000-2070 BC
Ancient Period	
Xia	2070-1600 BC
Shang	1600-1046 BC
Western Zhou	1046-771 BC
Eastern Zhou	
Spring and Autumn Period	770-476 BC
Warring States Period	475-221 BC
Imperial Period	
Qin	221-206 BC
Western Han	206 BC-AD 9
Xin	AD 9-24
Eastern Han	AD 25-220
Three Kingdoms (Wei, Shu and Wu)	AD 220-280
Western Jin	AD 265-317
Eastern Jin	AD 317-420

Southern and Northern Dynasties	AD 420-589
Sui	AD 581-618
Tang	AD 618-907
Five Dynasties	AD 907-960
Ten Kingdoms	AD 907-979
Northern Song	AD 960-1127
Southern Song	AD 1127-1279
Yuan	AD 1271-1368
Ming	AD 1368-1644
Qing	AD 1644-1911
Modern Period	
Republic of China	AD 1911-1949
People's Republic of China	AD 1949-

Table 3.1 Timeline of Chinese History

Finally, Mongol took over China and Kublai Khan established Yuan Dynasty in A.D. 1271. Papermaking, gunpowder, compass and printing are said to be the four major inventions made by Chinese in Yuan Dynasty. Besides, Marco Polo made his adventure to China during Yuan Dynasty. Zhu Yuanzhang founded the Ming Dynasty in A.D. 1368. Unlike Song and Yuan dynasties, Ming Dynasty put agriculture at the core of the economic development and policies were skewed towards agricultural development. Previous feudal system and slavery were scrapped; lands were confiscated from the landlords and rented to the peasants. As a result, peasants were gaining their importance for the first time in the history of China. Although agriculture was the main focus of the Ming Dynasty, Zheng He was appointed by Zhu

Di to perform seven overseas exploration voyages which extended the influence of Ming Dynasty to South East Asia, Indian Ocean and eastern coast of Africa.

Schools	Thinkers
Confucian School	Confucius, Mencius, Xun Zi
Legalist School	Shang Yang, Han Fei Zi
Taoist School	Lao Zi, Zhuang Zi, Shen Dao, Yang Chu, Lie Zi
Strategist School	Sun Tze, Sun Bing, Wu Qi
Mohist School	Mo Zi, Gong Shu Ban
Dialectician School	Hui Shi, Kong Sun Loong
Yin-Yang School	Zhou Yen, Gui Gi Zi
Diplomatist School	Su Qin, Zhang Yi
Independent Schools	Gao Zi, Guan Zi, Yen Zi, Bian Que, Gong Shu Ban, Shang Gao, Qu Yuan

Table 3.2 Important schools of thought in ancient China.
(Adapted from Ho, 1992)

The Manchu conquered China and established the Qing Dynasty (AD 1644-1911). Although the people in Qing Dynasty were forced to have their haircut in Manchurian style and wear clothing in Manchurian ways, Confucian philosophy was adopted by the Qing emperors to manage the country. By the nineteenth century, Qing Dynasty was devastated by foreign invaders and forced to enter into many humiliating treaties. Frustrated by the discredited regime, after many attempts, Sun Yat-sen initiated the “Wuchang Uprising” in 1911 to overthrow the Qing Dynasty. The Republic of China

was founded on 29 December 1911 in Nanjing and Sun Yat-sen was elected as the first president who ended the feudal monarchies which ruled China for more than 2,000 years. The formation of the Republic of China signified the end of the imperial period and China entered into the modern period of Chinese history.



Figure 3.5 Mao Zedong, chairman of the Central People's Government, at the founding ceremony of the People's Republic of China
(Source: <http://www.china.org.cn/english/features/China2004/106418.htm>)

The period from 1912 to 1949 was one of the dark ages in the history of China, Japanese invasion and civil wars further weakening the country. Inspired by the “October Revolution” of Russia in 1917, Marxism and the notion of revolution were starting to ferment in China. The “May Fourth Movement” against the unequal treaties imposed on China after the First World War further propagated Marxism and

the notion of revolution all over China (Laaksonen, 1988). Consequent to the “October Revolution” of Russia and “May Fourth Movement”, delegates of different communist groups all over China gathered in Shanghai in 1921 to form the Communist Party of China which finally overthrew the Kuomintang government in 1949. After about 30 years of civil unrest and Japanese invasion, Mao Zedong (Figure 3.5), as the chairman of the Communist Party of China, declared the establishment of the People’s Republic of China on the first of October, 1949.

Chinese economy and life of people were improving during the post liberation period until Mao Zedong initiated the “Cultural Revolution” in May 1966 which devastated China for a decade. The mutual distrust fermented in this period still hinders the knowledge creation and sharing among contemporary Chinese. Subsequent to the arrest of the “Gang of Four” which was led by Jiang Qing who was the widow of Mao Zedong, the “Cultural Revolution” turmoil was finally ended in October 1976.



Figure 3.6 Government poster entitled; *Long live Marxism, Leninism and Mao Zedong's Thought*

(Source: <http://www.cnn.com/interactive/specials/9908/china.revolution.posters/content/poster12.html>)

After the “Cultural Revolution” was ended, Deng Xiaoping’s power was reinstated and he rolled out several significant economic reforms since then. The economic reforms can be classified into four phases; “Four Modernization” phase (1976-1977) to modernize industry, agriculture, national defence and science/technology; “Breakthrough of the Reforms” phase (1978) to shift China’s course towards market socialism; “Green Revolution” stage (1979) to carry out agricultural reform in order to motivate peasants to increase their productivity; “Opening [up] to the World” (1980) to liberalize foreign trade by setting up Special Economic Zones in four costal cities (Laaksonen, 1988). China’s entry to the World Trade Organization in 2001 marked the success of China’s market oriented policy since 1978. The strong economic performance of

China can be reflected in the following quote from The World Factbook

(<https://www.cia.gov/cia/publications/factbook/print/ch.html> , viewed on 14 July

2006):

The restructuring of the economy and resulting efficiency gains have contributed to a more than tenfold increase in GDP since 1978. Measured on a purchasing power parity (PPP) basis, China in 2005 stood as the second-largest economy in the world after the US...

The Central Committee of the Chinese Communist Party in October 2005 approved the draft 11th Five-Year Plan and the National People's Congress is expected to give final approval in March 2006. The plan calls for a 20% reduction in energy consumption per unit of GDP by 2010 and an estimated 45% increase in GDP by 2010.

Reflection:

Being the most populous and one of the oldest civilizations of the world, China now is the world's most robust economy with nearly double digits GDP growth over the past few years. However, referring to Table 3.3, the path of the development of China was undulating and painstaking. Although China stood as the leading civilization for centuries outpacing the rest of the world in both arts and science development (CIA, 2006), it took China nearly 5,000 years to attain the current status of being a

developing country. Table 3.3 is my reflections on the important events which had significant impacts on the intellectual development of China. These events also play a significant role in molding the current institutions and culture of China that significantly influence Chinese attitude towards knowledge and its creation.

Time	Events	Impacts
Shang and Zhou Dynasties	Slaveholding was started	Slaves were oppressed and exploited
“Spring and Autumn” and “Warring States” periods	Blossom of various schools of thought, like Confucius, Taoist, Legalist, Yin-Yang schools.	Vigorous development of Chinese philosophies, especially the Confucius, Taoist and the Yin-Yang philosophies which have profound influences on the culture of China.
Qin Dynasty	Adoption of Legalist’s doctrine in managing the empire Burning of Books and Burying Scholars Standardized writings, currency and measurement standards	Highly centralized monarchy, manage the empire through oppression and coercion. The centralized management was the prototype of bureaucratic model of ruling by successive emperors/rulers. Destroyed virtually all intellectual works of scholars, intelligentsia was oppressed and coerced for the first time in Chinese history. Intelligentsia was oppressed frequently in Chinese history. Founded a common platform for intellectual development and knowledge management activities.
Han Dynasty	Establishment of Silk Road	Exposure to western culture and technologies. Buddhism was brought into China from India. Buddhism is still a very important religion among contemporary Chinese and has great influence in Chinese culture.

	Reinstatement of classic intellectual works	Recovered part of the classic works destroyed in the previous Qin Dynasty
	Adoption of feudal system	Oppression and coercion of peasants seeded the later formation of the Communist Party of China in modern China.
Tang Dynasty	Adoption of Buddhism by Tang monarchy	Buddhism is deep rooted in Chinese philosophy and culture since Tang Dynasty.
Yuan Dynasty	Invention of papermaking and printing technologies	Facilitated intellectual development and knowledge management activities.
Ming Dynasty	Zheng He's seven voyages	Exposure to foreign culture and technologies.
1917	"October Revolution" of Russia	Marxist and Leninist philosophies were introduced to China. The ideology of the People's Republic of China, Socialism, is based on the ideology of Marxism. Marxism is very important in the academia of post 1949 China; most researchers subscribe to Marxism as their philosophical foundation for research.
1949	Establishment of the People's Republic of China	Peasants and workers climbed to the top of hierarchy of the society after a long history of being oppressed. Former merchants and intelligentsia were expelled from the core power centre (Laaksonen, 1988).
1957	Hundred Flowers Movement	The communist government first advocates the educated intelligentsia to criticize the regime freely, but those outspoken critics were finally prosecuted due to their criticism (Laaksonen, 1988). This experience still deters the nowadays intelligentsia from criticizing the ruling government freely.
1966-1976	Cultural Revolution	Most classic intellectual works, temples, antiques and artworks were destroyed during the cultural campaign against the "Four Olds"; Old Custom, Old Culture, Old Habits, and Old Ideas (Heaslet, 1972).

		<p>Most landlords, merchants and even intelligentsia were criticized, harassed, jailed, tortured or even killed by the red cadre. Students were mobilized to criticize their teachers, people are brainwashed to criticize their friends and even family members (Spence, 1999). Cultural revolution seeded mutual distrust among Chinese people.</p> <p>Confucianism was denounced during the “Criticize Lin Biao and Confucius” campaign. Being accused of representing the values of old China, Confucianism was heavily attacked during cultural revolution.</p>
1976-1977	“Four Modernization” movement	Campaign to modernize industry, agriculture, national defence, science and technology. First to discard “Take class struggle as the key link” and shifted the focus of work to socialist modernization (Laaksonen, 1988). Unbalanced technical rationality leads to technicism.
1978	“Breakthrough of the Reforms” movement	To shift China’s course towards market socialism. This movement leads to the current Lifeworld of most Chinese people being colonized by the system.
1980	“Opening to the World” movement	To liberalize foreign trade by setting up Special Economic Zones in four costal cities (Laaksonen, 1988). The policy of “let some group to get rich first” resulted a current situation of huge disparity of wealth and knowledge.
2006	“Constructing a harmonious socialist country”	In addressing the problems of moral crisis and social conflicts that caused by disparity of income, China is trying to construct a harmonious socialist country through revitalizing some traditional Chinese philosophies, especially those doctrines from Confucianism

Table 3.3 My reflections on significant events in the history of China

Reflective Discussion about History of China

Dr Williams: How do you think knowledge of the history is important for your research?

Fergus: This is the same question you asked in the previous section. My answer is likewise similar. This thesis reports on changes to professional practice of myself and my colleagues in the firm. Important aspects of these changes are due to inspiration from Chinese philosophy which cannot be discussed in isolation from the history of China.

Dr Williams: Again, how do you think knowledge of the facts of China is important for your research?

Fergus: Important aspects of the changes in the professional practice of myself and my colleagues in the firm are due inspiration from Chinese philosophy. One can not discuss Chinese philosophy without some knowledge of the facts of Mainland China.

Dr Williams: What do you think is the most significant fact bearing on your research?

Fergus: The most important aspect of Chinese history impacting on this research is the importance of knowledge for the Chinese people. Indeed, it was this that inspired me to develop and seriously champion the use of a knowledge management system.

Dr Williams: I think that you will need to incorporate modern communist philosophical insights, especially the poetry of Mao Tse-tung and the recent cultural directions of the communist party, as well as traditional Chinese philosophy into your study. They will be a great ally as you try to change Chinese culture and society for the better.

Fergus: Thank you Dr Williams. You always lead me to new horizons. I agree with your proposed adjustments in the research questions; that is the reason why I love action research because I can see and feel it evolves!

Dr Williams: What do you think about the Chinese Communist Party?

Fergus:

First of all, I would like to say something positive (I seldom do so) about the communist party; we are lucky that we currently have a kind, humanistic Premier, Wen Jiabao. In some coal mining accidents, he rushed to the site of accident regardless of his own safety. I felt from his facial and body expressions that he was really sad about the casualties. He has a good heart. Secondly, the communist party recently rolled out a series of measures to fight against corruptions; many corrupted senior government officials were arrested in the past few months. This stop the problem of uneven income distribution from deteriorating, e.g. in some cities, backed by corrupted government officials, property developers demolish the homes of the ordinary people to reclaim lands for their own profits. Thirdly, although the media are still under censorship in China, freedom of speech is much improved in this term of government. Starting from this term of government, the media became the forefront to unveil wrong doings of the government bureau and officials. This was impossible in the past. Lastly, Chairman Hu Jintao is wise and insightful trying to construct a harmonious nation through revitalizing traditional Chinese

philosophies and values. What we need now in China is humanity which is at the centre of traditional Chinese philosophies.

Dr Williams: What about giving the other side of the story about the Chinese Communist Party?

Fergus: I think the current communist government is facing some critical challenges:

1. Challenges brought by the Knowledge economy. Imagine how many peasants are needed to produce the quantity of rice that is equivalent to the value of, say, a copy of Windows Vista?
2. Challenges brought by being a member of the WTO. Deadlines for tariff reductions for various products are due, how can Chinese products compete with others without tariff protection? Actually, resources in China are heavily misallocated with such tariff protection, e.g. the motor manufacturing industry.

3. Corruptions. The communist party tried very hard to shift people from being loyal to family to loyal to the party; however this led to the severe corruption problems through 'Guanxi'.
4. Unemployment. This problem will deteriorate in the coming future because of (1) and (2) above.
5. Disparity of Wealth and Knowledge. The peasants are becoming unwilling to send their children to study in university even they are eligible to be admitted. They are so poor that they need to pay their tuition fees through raising debts. Many girls working in the karaoke bars at the coastal cities to support the study of their family members, i.e. the fate of whole family is sacrificed for one family member. I mean it; such humanity and love is preached by Confucianism. However, the worsening problem of unemployment further deteriorates the situation as university graduates are unable to pay back their debt without securing a job.

6. Breakdown of morality. During the period of “May Fourth” and “Cultural revolution”, there were campaigns to abolish the “Four Olds” where traditional values are one of the main targets. China is facing a critical problem of moral crisis at the moment. Brought by imbalanced modernization, people are becoming ego-centric and materialistic. Lots of social problems arise as a result of the collapse of traditional values which preach love, benevolence and humanity.

Chinese Culture

There is no one standard definition, application to most contexts, of the word *culture*. Bates and Plog (1980), following Franz Boas' work, define culture as “the system of shared beliefs, values, customs, behaviours, and artifacts that the members of society use to cope with their world and with one another, and that are transmitted from generation to generation through learning.” Due to the distinctiveness and uniqueness of Chinese culture Child and Warner (2003); any phenomena involving China should be explored with consideration to the specific cultural context of Chinese. Cited in Child and Warner (2003, p.30), Redding's list provides an exhaustive description of Chinese distinctive culture;

Societal order: This reflects the sense of Chinese civilization as based on the learning and practice by individuals of clearly defined roles, all within a dominating state structure with a remit to preserve order, and all socialized into a belief in the need for appropriate conduct in the interests of harmony.

Hierarchy: Stemming largely from Confucian ethics, these values legitimate paternalism at the levels of family and organization, and patrimonialism at the state level, and provide a moral justification for hierarchy by stressing reciprocal vertical obligations.

Reciprocity and personalism: This is the currency of horizontal exchange, and the guarantor of the limited but adequate trust that maintains the particular structure of transactions.

Control: In a society of competing families, under conditions of scarce resources, and in an interventionist state, control of one's fate becomes a core ideal for many, particularly business owners, and sensitivities to control become highly tuned.

Insecurity: This is endemic in an essentially totalitarian state, with weak property rights, and it is associated with competitiveness and a work ethic. Building defenses and reserves becomes a moral duty towards dependents, as well as a practical necessity.

Family based collectivism: The architecture of horizontal order in Chinese society is based on identity with family as the core social unit.

Knowledge: The Chinese respect for learning appears to have survived the ravages of the Cultural Revolution and the related persecution of intellectuals, although its support in the institutional fabric is less strong than in the Imperial period. The value of learning, however, remains high, and there is doubtless some connection made with social mobility in its retention as a core ideal.

Reflection:

Current Chinese cultural patterns are mostly coined by the different ancient schools of Chinese philosophy, especially Confucianism and Daoism, over the last 2,500 years. Unfortunately, some cultural patterns that impede knowledge creation were resulted from the famines and natural disasters that had happened in the last millennium or

affected by the post 1947 social institutions that are informed by the ideology of the ruling communist government. Without critical reflection to uncover such distorted assumptions and ideologies, some people would inevitably be marginalized in the knowledge creation and social reproduction process. Habermas' thinking is appropriate in this context.

Chinese Philosophies

Fung (1952) suggests that "Chinese philosophers for the most part have not regarded knowledge as something valuable in itself, and have not sought knowledge for the sake of knowledge". Hall and Roger (1998) discern that "the priority of logical reasoning in the West is paralleled in China by the prominence of less formal uses of analogical, parabolic and literary discourse. The Chinese are largely indifference to abstract analyses that seek to maintain an objective perspective, and are decidedly anthropocentric in their motivations for the acquisition, organization and transmission of knowledge". It is shown from the above quotes that the distinctive Chinese philosophy has tremendous influence on Chinese attitude towards knowledge and thus their perspective on knowledge management, it is necessary to have an in-depth understanding on Chinese philosophy to explore, if necessary, the possibilities to

revitalize some doctrines of the traditional Chinese philosophy in order to meet the contemporary challenges in the current knowledge economy.

Chinese philosophical worldviews are, in some aspects, contrasting to the Western ones. Chen (2001, p.86) envisages that Chinese, opposite to the Western analytic approach, adopts the notion of “holism” in their worldview.

Since the pre-Socratic philosophy of Democritus (460-360 B.C.), by and large the occidental tradition has sought to break up, or atomize, the universe in order to understand how it works. The Western way of thinking is characterized by its analytic approach, which considers fragments of reality as independent objects of study (the Greek roots of the word *analysis*, in fact, denote “loosening” or “breaking apart”). This tradition is reflected in modern Western medicine, for example, which tends to analyze bodily organs in isolation to determine their functions; the body is broken down into parts in order to understand it as a whole.

Chen (2001) explains that Chinese thinking starts from an *integrative* point of view. Relationships are the key whether they are social, economic, or biological. This is a holistic point of view. Holism considers individual parts as integrated, inseparable, and interdependent elements of the larger whole.

The well developed Chinese philosophy is deeply rooted in a combination of Confucianism, Taoism or Buddhism (Schwartz, 1985). The Chinese philosophical tradition originated with broad visions of life and reality as represented in holistic paradigms striving for both utter simplicity and rich ambiguity (Graham, 1989).

Cheng (2002) explains that the fundamental tenet of Chinese philosophy is “Organic Unity”. The ultimate reality, *benti* (the root-substance) is regarded as the source of which everything else arises; all things that arise from *benti* are the *yong* (function) of *benti* and form a natural part of *benti*. Table 3.4 lists some polarities of the organic unity in that they form a substance-function relationship.

The <i>substance</i> component of organic unity is shown in:	The <i>function</i> of the substance of organic unity is shown in:
Unity	Disunity
Oneness	Scatteredness
Identity	Difference
Continuity	Discontinuity

Table 3.4 This table lists some polarities of the organic unity in that they form a substance-function relationship/ Cheng (2002) explains that “the unity, oneness, identity, and continuity that Chinese philosophy treasures include the variety, diffuseness, difference, and discontinuity as functions of their original reality. Hence, there is no opposition in each kind of contrast”.

Fung (1947) argues that, in Chinese philosophy, the contrasts do not continue to be antithetical but instead are synthesized into one whole. Fang (1981) claims that the doctrine of pervasive unity is both adopted by Confucianism, Taoism and Buddhism. For example, Confucius says “the Tao inherent in me is that of an all-pervading unity”. According to the *Book of Change* (cited in Fang, 1981, pp.23-24), it is said that “the Tao of Heaven and Earth is perseverently visible; the Tao of the sun and moon is perseverently illuminant; and all the dynamical activities in the universe are perseverently exhibiting the One”. Fang also quote Lao-Tzū’s saying that “from time immemorial, everything abides by the One (= the *Tao*): Heaven abides by the One for its purity; earth abides by One for its peace; the divine abides by the One for its spirituality; valleys abide by the One for their being infiltrated with fullness; all

creatures abide by the One for their fulfillment of life; and the princes and kings abide by the One for their nobility of character. ... And therefore, the sage embraces the One as a model for all the world”.

Fang (1981, p.24) goes on to explain that, although the various forms of Mahayanic Buddhists have developed different explanations and methods, they all agree on the “the ideal harmony in which the One absolute Truth permeates all else. This is the ideal state of the One-true in which main-in-one, one-in-many, and all-in-all coalesce into the integral unity as is achieved in the Enlightenment itself, likewise called in Chinese the Bodhi-Tao”.

The Chinese holistic understanding of truth is understood as in the integration of Heaven (Universe), Human and Earth (Xu, 2001). The value of being human is founded in that we are endowed with the nature of ultimate reality (*benti*) and in that we can achieve our potential within our family, our society, and in political life. This Chinese holistic understanding leads to an emphasis on education and self-cultivation as both a morally necessity and rationally mandated.

Chou Tun-yi (1017-1073), (Cited in Fung, 1953), a famous Neo-Confucianist of Sung Dynasty (960-1279), composed the T'ai-chi T'u (Diagram of the Supreme Ultimate) as shown in Figure 3.7, in which the origins of the 'Heavenly Principle' was elucidated. Accompanying the diagram, Chou Tun-yi (Cited in Fung, 1953, pp. 435-437) composed an explanatory text on the diagram. I quote in full to give the full literary and cultural power of both the diagram and the text.

“The Ultimateless (wu chi)! And yet also the Supreme Ultimate (t'ai chi)

The Supreme Ultimate through movement (*tung*) produces the *yang*. This movement, having reached its limit, is followed by quiescence (*ching*), and by this quiescence it produces the *yin*. When quiescence has reached its limit, there is a return to movement. Thus movement and quiescence, in alteration, become each the source of the other. The distinction between the *yin* and *yang* is determined, and their Two Forms (*liang yi*) stand revealed. By transformations of the *yang*, and the union therewith of the *yin*, water, fire, wood, metal, and earth are produced. These five ethers (*ch'i*, i.e. elements) become diffused in harmonious order, and the four seasons proceed in their course. The Five Elements are the one *yin* and *yang*; the *yin* and *yang* are the one Supreme Ultimate; and the Supreme Ultimate is fundamentally the Ultimateless. The Five Elements come into being each having its own particular nature (*hsing*). The true substance of the Ultimateless, and the essences of the Two (Forms) and Five (Elements), unite in mysterious union, so that consolidation ensues. The *ch'ien* principle becomes the male element, and the *k'un* principle becomes the female element. The two ethers (i.e. the *yin* and *yang*) by their interaction operate to produce all things, and these in their turn produce and reproduce, so that transformation and change continue without end. It is man alone,

however, who receives all these in their highest excellence, and hence is the most intelligent (of all beings). His bodily form thereupon is produced, and his spirit develops consciousness. The five principles of his nature react (to external phenomena), so that the distinction between good and evil emerges and the myriad phenomena of conduct appear. The sage regulates himself according to the mean, correctness, love, and righteousness, and takes quiescence as essential, thus establishing the highest standard for mankind. Hence the sage's 'virtue is one with that of Heaven and Earth; his brilliance is equal to that of the sun and moon; his course is in harmony with that of the four seasons; and in his relation to good or bad fortune he is in harmony with the spirits.' The superior man, by cultivating these (sagely virtues), enjoys good fortune, while the petty man, by violating them, incur bad fortune. Therefore it is said: 'The Way (*Tao*) of Heaven is established by the yin and yang; the Way of Earth is established by softness (*jou*) and hardness (*kang*); the Way of man is established by love (*jen*) and righteousness (*yi*). And again: 'by tracing things to their beginning and back to their final issue, (the *Book of Changes*) comes to know the meaning of life and death' Great indeed is the Changes. Herein has been expressed its fullest (meaning).

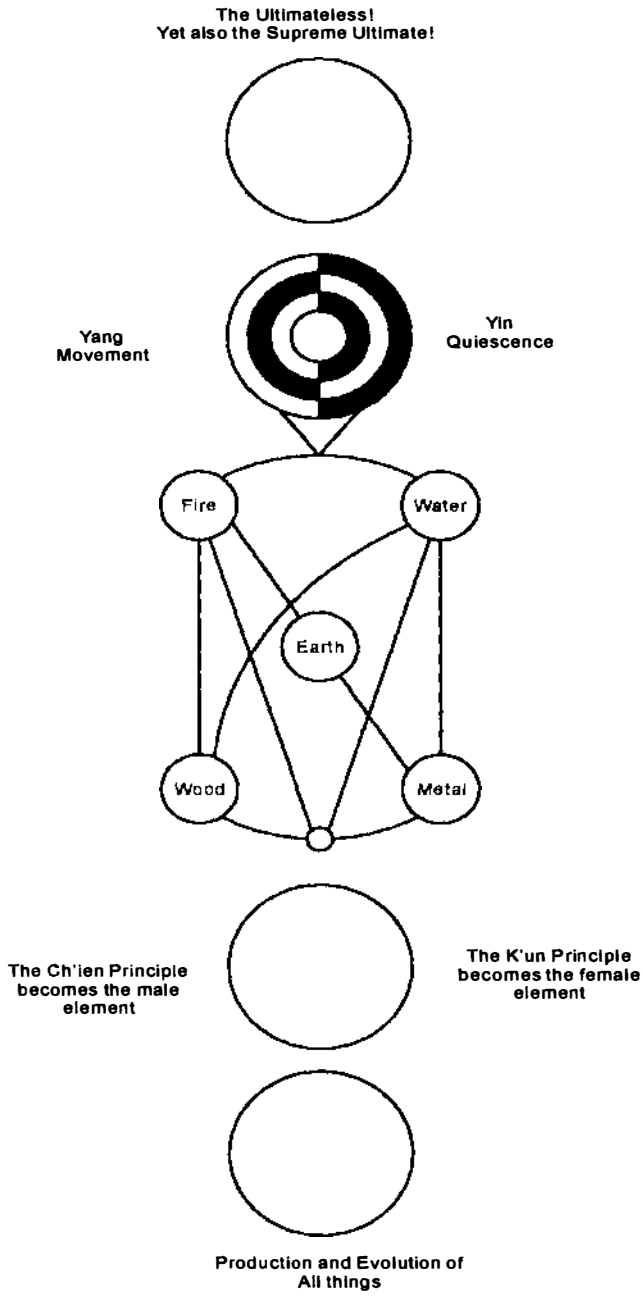


Figure 3.7 Diagram of the Supreme Ultimate
(Adopted from Fung, 1953, p.436)

Chinese Ancient 'Yin Yang', 'Wu Hsing' Philosophies and Action

Research

Ying Yang Philosophy

Kaptchuk (1983) holds similar Chinese view on unity but explains it from Chinese Yin-Yang perspective. Yin and Yang are polar complements. They are not forces, energy, matter, or mythical concepts. They are just terms to describe how things relate to each other, especially in the continual process of change. Yin and Yang do represent a systematic way of thinking in which all things are part of the whole, interdependent and interrelated to all other things. All things exist in relationship with other things. In this sense all things are ultimately one and cannot be truly isolated or totally independent.

Kaptchuk (1983) goes on to point out that the notion of causation, the central idea of Western philosophy, is almost absent in Chinese worldviews. Chinese subscribes to the notion that it isn't necessary to search for the cause because all phenomena occur independently of any external act of creation. Cited in Kaptchuk (1983), Needham stresses the importance of *order* and above all *pattern* in Chinese thinking. A central

tenet is that things influence other things more by relational inductance or being part of the whole rather than through simplistic or mechanical types of causation. It is better to see things side by side or related in patterns rather than as one thing causing another thing.

Fung (1953, p.6) writes;

The *yang* and *yin* are conceived of as two mutually complementary principles or forces, of which the *yang* represents masculinity, light, warmth, dryness, hardness, activity, etc., while the *yin* represents femininity, darkness, cold, moisture, softness, passivity, etc. All natural phenomena result from the ceaseless interplay of these two forces.

Fung (1953) points out that yin and yang are mutually complementary in unceasing interplay which results in the pattern and order of all things. Masculinity, light, warmth, dryness, hardness and activity are words associated with Yang. Femininity, darkness, cold, moisture, softness, passivity are words associated with the Yin.

Creel (1953) explains that Yin and Yang was not a dualism of the occidental sort, like between good and evil. Instead, Yin and Yang complemented each other to maintain the cosmic harmony, and might transform into each others. Quoted from the Shanghai Institute of Traditional Chinese Medicine, Kaptchuk (1983, pp.8-12) depicts the five principles of Yin and Yang as follows:

1. All things have both Yin and Yang aspects.
2. Any Yin and Yang can be further divided into another level of Yin and Yang.
3. Yin and Yang mutually create each other.
4. Yin and Yang control each other.
5. Yin and Yang transform into each other.

Yin Yang philosophy is illustrated by the Tai Ji symbol Figure 3.8;

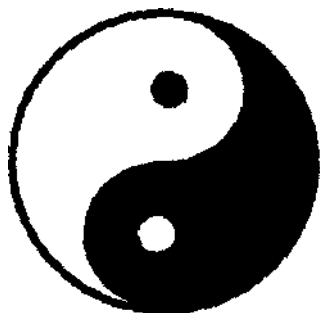


Figure 3.8 Tai Ji symbol

Kaptchuk (1983) goes on to explain that according to the Tai Ji symbol, the outer circle representing the whole and is divided into Yin (Black) and Yang (white). The small circles of opposite shading represent the seed of Yin within Yang and vice versa. The dynamic curve dividing Yin and Yang illustrates that they are merging in a state of flux. Thus Yin and Yang create, control and transform into each other.

Five Elements (Wu Hsing) Philosophy

Five Elements were first mentioned in a chapter titled “Grand Norm” in the *Book of History* which is one of the five ancient “Five Classics” (Ho, 1992). Five Elements, which are earth, wood, metal, fire and water, and which are regarded as abstract forces rather than as the actual embodiment of these substances (Fung, 1953). According to the Five Elements school of thought, all things and phenomena can be classified as one of the five elements. The relationship and effect between the five elements can be described as a cycle of interaction between the elements as shown in Figure 3.9. The doctrine of five elements describes both a generating cycle and an overcoming cycle of interactions between the elements. In the generating cycle, wood generates fire; fire generates earth; earth generates metal; metal generates water; water generates wood. In the overcoming cycle, wood overcomes earth; earth

overcomes water; water overcomes fire; fire overcomes metal; metal overcomes wood.

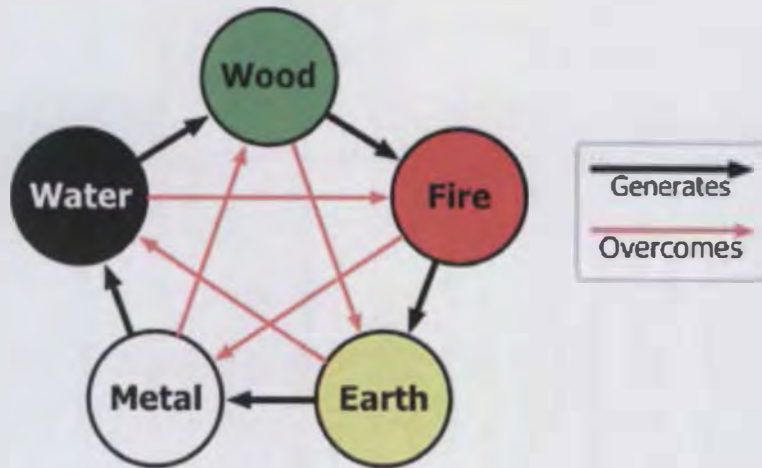


Figure 3.9 Relationship between five elements
 (Source: http://en.wikipedia.org/wiki/Five_Elements)

Chinese applies the notion of the Five Elements to almost all aspects of their life e.g. Chinese human organs, shape, size, color, odor, climate, time, flavor, emotion, direction etc. Table 3.5 maps the Five Elements with phenomena in Chinese life.

Element	Wood	Fire	Earth	Metal	Water
Phase	new yang	full yang	yin/yang balance	new yin	full yin
Color	green	red	Yellow	white	black
Direction	east	south	center (nadir/zenith)	west	north
Life Cycle	infancy	youth	adulthood	old age	death
Energy Quality	generative	explosive	stabilizing	contracting	conserving

Season	spring	summer	between seasons	autumn	winter
Climate	windy	hot	Damp	dry	cold
Development	sprouting	blooming	ripening harvest	withering	dormant
Smell	rancid	scorched	fragrant	putrid	rotten
Flavor	sour	bitter	sweet	pungent	salty
Mental Quality	sensitivity	creativity	clarity	intuition	spontaneity
Negative Emotion	anger	hate	anxiety	grief	fear
Positive Emotion	patience	joy	empathy	courage	calmness
Body	tendons	pulse	muscle	skin	bones
Aperture	eyes	tongue, throat	lips, mouth	nose	ears
Bodily Fluids	hairs	sweat	saliva	mucus	urine
Primal Spirit	green dragon	red phoenix	yellow phoenix	white tiger	black tortoise
Male Animal	tiger	horse	dragon, dog	monkey	rat
Female Animal	rabbit	snake	cow, sheep	hen	pig
Numbers	8, 3	1, 7	10, 5	4, 9	6, 1
I Ching Trigrams	wind, thunder	fire	earth, mountain	heaven, lake	water
Hexagrams	51, 57	30	2, 52	1, 58	29

Table 3.5 Mapping of Five Elements with phenomena in Chinese life
 (Source: <http://www.soton.ac.uk/~maa1/chi/philos/five.htm>)

Yin Yang Theory and Action Research

Lewin (1947, cited in Foster, 1972) asserts that;

...it is clear that by a state of no social change we do not refer to a stationary but to a quasi-stationary equilibrium; that is to say a state comparable to that of a river which flows with given velocity in a given direction during a certain time interval. A social change is comparable to a change in the velocity or direction of that river.

The principle of Action Research is analogous to the Yin Yang philosophy as illustrated in Figure 3.10

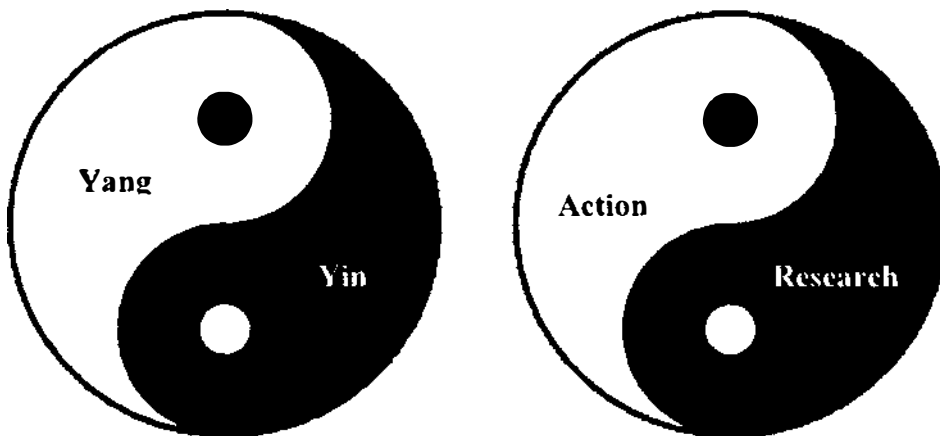


Figure 3.10 Action Research and Yin Yang Philosophy

Based on the five principles of Yin Yang philosophy, I propose the following five principles of Action and Research within Action Research

1. All social changes have both Action and Research aspects.

Chou Tun-yi (1017-1073), (Cited in Fung, 1953), a famous Neo-Confucianist of Sung Dynasty (960-1279), composed the T'ai-chi T'u (Diagram of the Supreme Ultimate) as shown in Figure 3.7, in which the origins of the 'Heavenly Principle' was elucidated. Accompanying the diagram, Chou Tun-yi (Cited in Fung, 1953, pp. 435-437) composed an explanatory text on the diagram. I quote in full to give the full literary and cultural power of both the diagram and the text.

“The Ultimateless (wu chi)! And yet also the Supreme Ultimate (t'ai chi)

The Supreme Ultimate through movement (*tung*) produces the *yang*. This movement, having reached its limit, is followed by quiescence (*ching*), and by this quiescence it produces the *yin*. When quiescence has reached its limit, there is a return to movement. Thus movement and quiescence, in alteration, become each the source of the other. The distinction between the *yin* and *yang* is determined, and their Two Forms (*liang yi*) stand revealed. By transformations of the *yang*, and the union therewith of the *yin*, water, fire, wood, metal, and earth are produced. These five ethers (*ch'i*, i.e. elements) become diffused in harmonious order, and the four seasons proceed in their course. The Five Elements are the one *yin* and *yang*; the *yin* and *yang* are the one Supreme Ultimate; and the Supreme Ultimate is fundamentally the Ultimateless. The Five Elements come into being each having its own particular nature (*hsing*). The true substance of the Ultimateless, and the essences of the Two (Forms) and Five (Elements), unite in mysterious union, so that consolidation ensues. The *ch'ien* principle becomes the male element, and the *k'un* principle becomes the female element. The two ethers (i.e. the *yin* and *yang*) by their interaction operate to produce all things, and these in their turn produce and reproduce, so that transformation and change continue without end. It is man alone,

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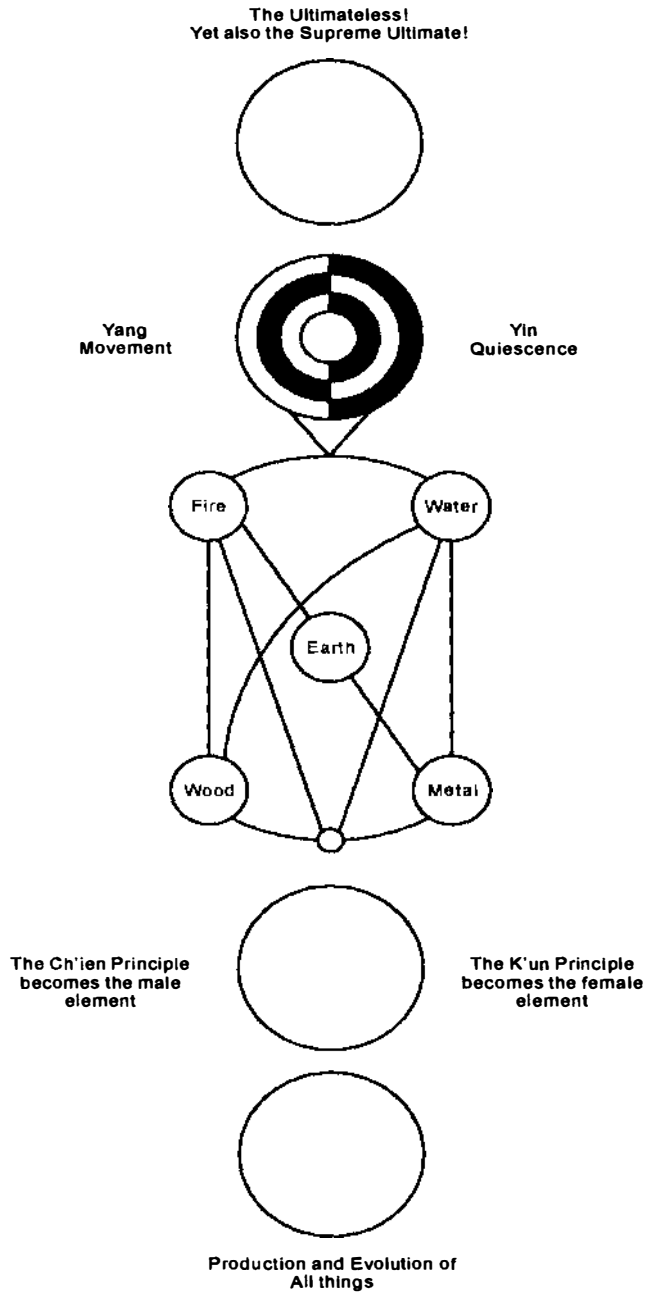


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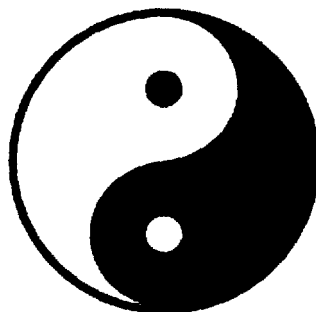


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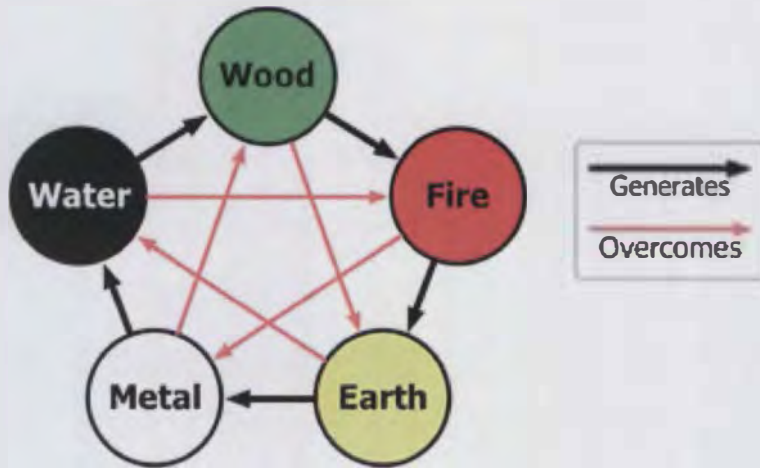


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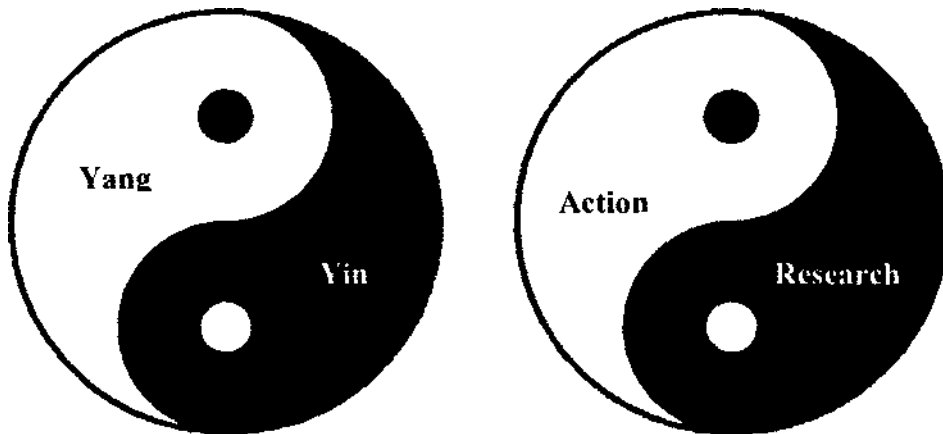


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3. Action and Research mutually create each other.
4. Action and Research control each other.
5. Action and Research transform into each other.

Five Elements Theory and Action Research

Susman and Evered (1978) state that action research goes through a cyclical process which consists of diagnosing, action planning, action taking, evaluating and specifying learning phases.

The Five Elements are also analogous with the five phases of Action Research proposed by Susman and Evered (1978). However, the five phases proposed by Susman and Evered are in sequential order within a cyclical process while the Five Elements don't follow any predefined sequence. According to the Wu Hsing theory, the universe is changing constantly, if there is any imbalance caused by a deficiency in any of the Five Elements, that particular Element should be restored to return the system to a state of equilibrium. There is a danger that some action researchers focus overly on a particular method, such as the action research spiral, when doing their

research. Although I agree that action research comprises mainly the diagnosing, action planning, action taking, evaluating, and specifying learning phases; I advocate that any one of the five phases, similar to the Wu Hsing philosophy, should be put in place when it is deficient at any particular interval in the research. Hence the model for **kBlogCentral** becomes as shown in Figure 3.11. Patterson and Shannon (1993) argue that action research is a recursive process but might not be in a linear sequence.



*Figure 3.11 Evolved Model for **kBlogCentral***

Note that the understand, plan, act, evaluate and reflect stages are not necessary in sequential order.

Confucianism



Figure 3.12 Portrait of Confucius

(Source: <http://www.chinapage.org/portrait.html>)

Although other philosophical forces contributed to the definition of the Chinese traditional cultural forms, Confucianism remains the philosophical mainstay of Chinese culture. Confucianism is deeply entrenched in Chinese life and culture. Confucianism acquired a life of its own through embodiment in political and social institutions and practices for over two thousand years (Cheng, 2002). Confucianism is a unique Chinese philosophical system that was originally developed from the teaching of Confucius (551-479 B.C.) as shown in Figure 3.12, a great sage of China back to the Zhou Dynasty. Blossomed in the “Warring State” period, Confucianism

became the orthodox philosophy of the Han Dynasty; Wudi of Han Dynasty adopted Confucianist doctrine to govern the state. Although Confucianism was repressed during the Qin Dynasty and the Cultural Revolution period, Confucianism remains the most important philosophy of Chinese and has tremendous influence on the culture, values and mindsets of Chinese and even people in Asian countries. The government of the People's Republic of China is in a process to revitalize Confucianism recently, they are going to establish 100 Confucian Colleges worldwide to preach Confucianism and Chinese culture globally.

The major tenets of Confucianism are three basic guides (ruler guides subject, father guides son and husband guides wife), five virtues (benevolence, righteousness, propriety, wisdom and fidelity) and the doctrine of harmony (Child & Warner, 2003).

Fingarette (1972) contends that the chief concepts of the *Analects*, a major classic of Confucianism, are primary related to human nature, comportment and relationships.

Rite (*li*), Humaneness (*jen*), Reciprocity (*Shu*), Loyalty (*chung*), Learning (*hsueh*), Music (*yueh*) and familial social relationship/obligation are the recurring theme of the *Analects*.

Regarding to the fundamental belief of Confucianism, Shi (1997) writes the supreme noumenon is Heaven, the most fundamental being generating and transcending all things. At the same time Heaven is regarded by Confucianism as immanent with humanity (*Ren*) being the essential content of Nature (*Xing*). At the same time Nature forms the “moral or spiritual ego, which as the real nature of man transcends the empirical ego and the physiological ego”.

Furthermore, Shi (1997) states that one can only recover one’s nature through cultivating one’s moral character. Humanity both manifests human nature and is an “embodiment of the way of Heaven”. The real value of human life is experiencing the noumenon in the unification of Heaven and nature. The Doctrine of the Mean said: “What Heaven imparts to man is called human nature. To follow our nature is called the Way. Cultivating the Way is called education”. The whole of society, state and individuals should “follow the Way of Heaven and proceed from a humanitarian mind”. For Confucianism, the Great Learning is: “From the Son of Heaven down to the common people, all must regard cultivation of the personal life as the root of foundation”.

Daoism (Taoism)

Daoism, based on the study of *Dao De Jing* (Book on the Way and the Virtue) by Lao-Tzū as shown in Figure 3.13, fermented during the “Warring States” period (475-221 BC). Prominent figures in Daoism are Lao-Tzū and Zhuang-Tzū.



Figure 3.13 Portrait of Lao-Tzū

(Source: <http://www.artoflegendindia.com/details/PBL002>)

Daoism may be referred as Daoist philosophy (Daojia) or Daoist religion (Daojiao) which is more mythical. Daoism is referred to as Daoist philosophy in this thesis. Unlike Confucianism that seeks social order and harmony through rites that govern social relationships, Daoist urges people to seek harmony and stability by turning away from received wisdom (Chen, 2001). Subscribing to the notion of “Wu Wei” (doing nothing that is against the nature); Daoist seeks harmony and self-fulfillment

by conforming to the natural way of things. Yin Yang Theory, Five Elements and Daoism are originally three independent schools of thought, Yin Yang Theory and Five Elements Theory were adopted by Daoist and finally amalgamated with Daoism. Although there are many differences in the principles of Daoism and Confucianism, they are considered as complementary instead of mutually exclusive schools of thought (Ho, 1992). Ho (1992, p.47) summarizes the differences of Confucianism and Daoism in Table 3.6:

	Confucianism	Taoism
Nature	Philosophy	Philosophy and Religion
Learning	Official ideology	Unofficial ideology
Way of life	Ritual, self-control, & refinement	Spontaneity, naturalness, primitiveness; a simple and quiet life
Governance	Intervention	Non-intervention, governing by doing nothing that goes against nature
Philosophical emphasis	Ethics	Cosmology (Yin & Yang); dialectics; relativism
Consequence	Hierarchy	Equality; egalitarianism
Ideal	Rulers, or high officials	Immortals

Table 3.6 Comparisons between Confucianism and Taoism
(Source: Ho, 1992)

Reflection:

Chinese philosophies, especially Confucianism and Daoism, play a crucial role in molding the mindsets, values and culture of Chinese. Some aspects of Chinese philosophies, e.g. the notion of respecting the seniors and those on top of the social hierarchy advocated by Confucianism did help numerous imperial monarchies to maintain the continuity of Chinese civilization for a history of near 5,000 years. However, there are some aspects of Chinese philosophies that are indirectly detrimental to the intellectual development of China. According to Daoist, Yin Yang and Five Elements philosophy, the universe and everything are subject to change constantly. With such thinking in their minds, Chinese people have a tendency to accept the status quo and in turn not acting proactively against changes in their environment. Besides, as most Chinese philosophers do not regard knowledge as something valuable in itself (Fung, 1952); Chinese people do not seek knowledge for the sake of knowledge. The Chinese distinctive belief of causation further deteriorates knowledge building activities amongst Chinese.

SUMMARY

In this chapter I give an account of the main areas included in this research. I give accounts of knowledge, knowledge management, information and knowledge warfare, Habermas' theory of communicative action, blogs, and Chinese historical, philosophical and cultural influences. Of particular importance is the way in which these areas intertwine to form the scholarly background to the inquiry.

In the next chapter I describe the main research texts augmented by my own analysis and reflections. Dialogues are presented with all the major players in the research.

CHAPTER FOUR

RESEARCH TEXTS, ANALYSIS, AND REFLECTIONS

*Adept Kung asked: "Is there any one word that could guide
a person throughout life?"*

*The Master replied: "How about 'shu': never impose on
others what you would not choose for yourself?"*

Kung Tzū (Confucius), Analects, translator not known

*"He who is self-approving does not shine. He who boasts
has no merit. He who exalts himself does not rise high."*

Lao-Tzū, Tao Te Chin, translated by Lionel Giles

In this chapter I present the major research texts together with my analysis and reflections. The research texts are usually in the form of dialogues as indicated in the early chapters on research approach and writing style. Research texts from all the main research participants are included.

I begin with myself as the main voice because, inspired by Confucius, I follow the way of “shu”. And when analyzing and reflecting on any of the texts my inspiration from Lao-Tzū safeguard me from “self-approving” or “boasting”. After giving my personal account on the development of the **kBlogCentral**, I analyze and reflect on the remuneration structure, diversity and trust, promotion of Confucian values to promote trust, knowledge hoarding and methodology of design practice. I also, using other participant’s voice as the main voice, analyze and reflect on the initial intention of building a KMS, human nature and management approach, all-rounded knowledge, common lifeworld, next generation KMS, the notion of knowledge, knowledge economy, blog-based KMS, unveiling a common misunderstanding of Confucian values, learning organization and ends with a dialogue on logical creativity.

MYSELF AS THE MAIN VOICE

I have a need for knowledge and to understand the world. Thus I am curious, analytical, insightful, perceptive, and innovative. I can be a strong leader through knowledge and wisdom.

Personal Account on the Development of the **kBlogCentral**

Dr Williams: Do you think that the development and use of the **kBlogCentral** has enabled the professional practice in your firm to be more efficient?

Fergus: I think the developing and using the **kBlogCentral** has improved the efficiency of our firm in the following ways:

- Staff become more proactive and responsible; they can finish their tasks more quickly and fewer resources are needed.
- With reflective mindsets, staff reflect on and check their work regularly and as a result repetitive errors are highly reduced.
- Because staff are continuously kept informed on the development of the company and the projects through the **kBlogCentral**, company resources are better allocated and wastage is reduced.
- With more accurate understanding of the users' needs, staff can deliver proposals and design works more accurately and quickly.
- Staff can access market information, design codes and regulations more quickly in the **kBlogCentral** which is the central knowledge

base for the company.

- Through using the **kBlogCentral**, staff have learnt a systematic way to classify, store and retrieve information, knowledge, books, samples of decoration materials, etc.

Dr Williams: Do you think that the **kBlogCentral** has enabled the professional practice in your firm to be more effective?

Fergus: I think that, because of the development and use of the **kBlogCentral**, the professional practice in our firm has become more effective in the following ways:

- Because of more accurate understandings on client's objectives of their projects, the final designs better utilize the resources of the client, such as reasonable initial investment, lowest maintenance costs, lowest total cost of ownership, etc.
- Because of more accurate understandings of the final users' needs, the final designs are more likely to be accepted by the final users. As a result, clients' businesses are becoming more profitable.

- Because of more accurate understandings of the project in general, we have better odds in winning in a design tender.

Dr Williams: Do you think that the **kBlogCentral** has enabled the professional practice in your firm to become more ethical?

Fergus: The professional practice of our firm has become more ethical in the following ways:

- Apart from the clients' needs, needs of final users are taken into considerations in design.
- All stakeholders' voices along the whole value chain are heard in the process of design.
- Environmental friendly decoration materials and decoration procedures are recommended to our clients for ecological purpose.
- Energy saving equipments and designs implemented for ecological purpose.
- Staff were intrigued to reflect on their philosophical foundations; consider ethics as an important issue to human beings and becoming

more ethical in their professional practice.

Dr Williams: How did your company change due to the development and using of the **kBlogCentral**?

Fergus: In aligning with our vision which evolved as a result of the development and initial use of the **kBlogCentral**, I restructured the company from a hierarchical to a virtual team structure. We focus on our core competencies of concept creation and design sketches; we freeze the headcounts of CAD operators who perform the routine jobs of realizing artist impressions into computer drawings; we outsource part of our production processes and employ more freelance designers. Virtual teaming structure enables our company to be more flexible, efficient, effective, agile and more communicative.

In the following sections I give some accounts of the ways in which the firm has changed as a result of the development and use of the **kBlogCentral**. The

development of the **kBlogCentral** led to a situation in which strategies, tactics, and operations of the firm were constrictively and critically questioned which led to new initiatives being instituted.

Remuneration structure

The general remuneration structure has been changed to align with the company's vision. Staff are rewarded according to their performance in their teams, knowledge contribution to the company and ethical standards instead of total number of hours they spent in the office. Instead of getting monthly salary plus overtime pay as before, staff get monthly salary plus a year-end bonus under the new structure.

I told our staff in a meeting that we were going to change the remuneration structure.

Staff were assured that their new basic monthly salary (bonus not yet included) would be higher than their average income (basic salary plus overtime pay) in previous years.

All staff would get a higher total income under the new structure. I asked our staff for their opinions on the new scheme, nobody responded and I assumed that they all agreed with the proposed change in remuneration structure. A few days later I had the following conversation with Ni-Tzū.

Ni-Tzū: A staff member told me that most staff reject your change of the remuneration structure.

Fergus: Really? Nobody said anything against my proposed change in the remuneration structure in last meeting. Who told you?

Ni- Tzū: I can't tell you his name but as I observed, most of them are uncomfortable with the change.

Fergus: Why didn't they voice out their opinions in the meeting, I thought they agreed with the proposed change. When I asked them for any objections to the proposed change during the meeting, I assumed they all agreed with it when they kept silence.

Ni- Tzū: They were afraid that you might blame them for saying something against your proposal. I think that it didn't necessarily mean that they accept your proposal if they didn't voice out their objections.

Reflection:

On reflection, I think that there are two important issues in this dialogue:

- (1) The staff resist change even if they were assured a higher income under the proposed new structure, and

- (2) Their expressions were out of my expectations.

For (1) I found out that the previous director, Zhao, adopted a hard management approach to manage the company, such as imposing tough rules and penalties. The staff were used to the hard approach (under assumptions of Theory X) so that their resistance for change is relatively higher. Besides, they were afraid of being scrutinized under the newly implemented appraisal system which will be the basis for calculating year-end bonus.

For (2) I found out that I was, because of my previous employment in the Hong Kong Government, under the influence of Western style of expressions in meetings. I was unaware of the distinguished way of Chinese expressions. The staff did not voice out

their objections to my proposed change because they thought that it was their responsibility to respect his/her superiors and at the same time they wanted to maintain harmonious interpersonal relationships within the company. I found theoretical support from Bond (1991) who states that “the Western tradition of straight talk, open debate, friendly disagreement, and loyal opposition does not work in an ‘interpersonal system’ such as the Chinese business culture”. An interpersonal system is focused on maintaining harmonious relationship rather than being concerned with the literal truth. In China relationships in business are mostly hierarchical with the more senior having much greater usable power. Hence the people less senior in the hierarchy tend to say what they think is required of them.

Besides, Chinese are still under the influence of traditional Confucianism’s teaching that it is wrong to comment on others’ works or duties. We can see this approach in the following excerpt from *The Analects*:

“The Master said: ‘He who does not occupy the office does not discuss its policy’”

(8:14)

.

Diversity and Trust

Regarding diversity and trust, the following summarize my general observations from reading the blog postings on **kBlogCentral**:

- Significant diversity exists in our company;
- Staff from different regions of China have different sub-cultures, personalities and behaviors;
- Staff with the same origin tend to be closer with each other and their interactions in the **kBlogCentral** are more frequent.

Chen (2001) claims that “China is the most diverse country in the world in terms of ethnicity (fifty-six ethnic groups), dialects (200 still in use), eight main cuisines, and a chaotic century of political events that has seen no fewer than four radically different political systems (imperialism, warlordism, republicanism, and communism)”.

Fairbank (1987) states that, for China, “Regional differences are too great to be homogenized under a unitary state”. This lack of homogenization leads to significant diversity.

People from the northern regions and southern regions have distinctly different cultural and personality traits in addition to the obviously different spoken languages. Recalling a design presentation in Beijing, the Canadian consultant spoke in English, then I translated into Cantonese and Je-Tzū presented in Putonghua. Thanks to Qin Shi Huang of the Qin dynasty, who unified Chinese writings, and the Communist party's move to adopt Putonghua as a common spoken language, Chinese have more or less some common means for communications for the more than 1.3 billions of Chinese to rely on. However, in my experience, this basic common language is not strong enough to create a common basic trust across sub-cultures. Delong and Fahey (2000), Kayworth and Leidner (2003) caution that "knowledge management practices may be inhibited by a lack of trust across organizational sub-units as well as differences across sub-cultures".

My Promotion of Confucian Values to Promote Trust

In addition to a common unified writing system and the Putonghua spoken language, it is commonly agreed that basic Confucian values are still generally deeply rooted in most modern Chinese. Hence I promote Confucianism to promote trust and thus minimize the problems caused by too much cultural diversity. For this reason I posted

the Confucian classic “*The Analects*” on my blog for others to reflect on Confucian sayings. I think that the doctrines of “Humanity” and “Harmony” evident in Confucianism will prove to be beneficial to the sustainability of the company especially in terms of promoting trust.

According to Janex and Olfman (2003), for a “knowledge repository to be useful it must also store the context in which the knowledge was generated”. The **kBlogCentral** enables users to build mutual trust through understanding the context and the background of other users by reading others’ blog entries accumulated in the system.

Knowledge Hoarding

Below is one of my conversations with Je-Tzū on the issue of knowledge hoarding:

Je-Tzū: Will there be any problem that we share all our knowledge with our staff?

Fergus: No, I don’t think so.

Je-Tzū: But I think that the morality of Chinese employees is relatively low here.

Once they learned all your knowledge, they will quit their jobs; some even bring along our knowledge to join our competitors. Perhaps we need to hoard some critical knowledge so that they will stay longer with us.

Fergus: I disagree with you. If we don't share our knowledge with our employees, they are not competent in their work. I can't see any reason to ask any incompetent staff to stay with us longer.

Je-Tzū: Perhaps you are right to say so.

Fergus: Instead of hoarding knowledge, we need to create a knowledge sharing environment so that all our staff are willing to share and leverage their talents with each others. We won't be able to achieve our objectives without such knowledge sharing culture; we aim at becoming the leader of the industry before 2010.

Je-Tzū: I am afraid that some of our knowledge will be leaked to our competitors; we will lose our competitive edge in one day.

Fergus: I don't worry about this issue as long as we are learning people and a learning organization. I don't mind that our competitors' stock of knowledge is increasing as long as our knowledge creation process is faster than our competitors and we are better in sharing and applying our knowledge.

Reflection:

My reflection is that not only we, as the top management, need to share our knowledge with staff; we need to encourage our staff to share knowledge among them. This sharing of knowledge is especially important for middle management who are more knowledgeable in operational and tactical matters and who I think have a higher propensity to hoard knowledge. Bennet and Bennet (2003) comment that "a major source of opposition to creating a knowledge organization is likely to come from middle management's unwillingness to give up its prerogatives of decision-making and authority". Middle management is likely to think their authority would be threatened if they share knowledge with their subordinates.

Kayworth and Leidner (2003) claim that “effective knowledge management practice requires a culture that fosters and rewards the creation and use of knowledge as well as it’s sharing among individual members and groups”. This is the reason why we include knowledge contribution and sharing as major criteria for calculating year-end bonus for our staff.

Methodology of Design Practice

Kayworth and Leidner (2003) claim that “effective knowledge storage practices should not only seek to codify knowledge and expand human networks; they should also try to embed knowledge into formalized rules, standard operating procedures, and organizational practices that constitute part of the organizational culture.”

Concluding from the building process and the knowledge generated in the **kBlogCentral**, we developed a methodology of our design practice which is aligned with our vision.

Methodology of Design Practice

- (1) Listen to the client's needs and try to find out who the final users are.
- (2) Present and explain a report of our understandings to the client in order to avoid any misunderstanding; clarify with client if there is any misunderstanding.
- (3) Form a virtual team for the project, one of the team members is designated as the team leader whose responsibility is to ensure authentic consensus among team members, clients and outsourcing partners.
- (4) A new blog entry is published for the project; the blog is the base for the project, stakeholders along the value chain can keep track and contribute to the project through discoursing in the **kBlogCentral**. The whole process of the project will be documented in this blog.
- (5) Team members critically reflect on the project to find out the needs and preferences of the final users.
- (6) Within the framework of the final users' needs, client's needs, client's investment budget, client's expected return on investment, corresponding design codes and regulations etc., the team delivers an interior design that is beautiful, functional, sustainable and ethical.
- (7) Once the design is completed and drawings are delivered to the client, team members reflect on the whole process for learning.
- (8) Once the project is commissioned, team members visit the site and reflect on the project for learning.

Apart from sharing knowledge of successful events, discoveries and achievements, we also encourage our staff to share their stories of failure. In sharing knowledge on

failure, staff can reflect and get into discourses to find out knowledge on how to avoid such failure from happening again in future.

JE-TZŪ AS THE MAIN VOICE

Je-Tzū gets on well with customers, trustworthy, quickly sees opportunities, and is smart in intelligence. He is an enthusiast, good at fine arts, loves reading, quickly picks up knowledge on things other than fine arts but he is unfamiliar with information technologies. As an adventurer type person, he is energetic, lively, and optimistic and wants to contribute to the world. He is like a strong, fun loving sea otter who relishes splashing around with his fellows in good times.

Dialogue One: Initial Intention of Building a KMS

Fergus: Before we discuss the initial development of the knowledge management system, can you tell me what your favorite quotes from Chinese philosophy are?

Je-Tzū: The sayings of Confucius and Lao-Tzū are inspirational, they affect the way I think and act in my daily activities.

*A person is born with desires of the eyes and ears,
and a liking for beautiful sights and sounds. If he
gives way to them, they will lead him to immorality
and lack of restriction, and any ritual principles and
propriety will be abandoned.*

Confucius

*In dwelling, live close to the ground. In thinking, keep
to the simple. In conflict, be fair and generous. In
governing, don't try to control. In work, do what you
enjoy. In family life, be completely present.*

Lao-Tzū

*He who exercises government by means of his virtue
may be compared to the north polar star, which keeps
its place and all the stars turn towards it.*

Confucius

Fergus: I can understand from the quotes from Confucius that virtue and training in healthy ritual and propriety is important so that we do not get stuck in immature and unhealthy cravings. I can see from your quote from *Lao-Tzŭ* that you like to keep things simple and not control. In fact, do you know that you are a Taoist?

Je-Tzŭ: I don't know, why?

Fergus: You are managing the company by "Wu Wei" (Without Action) strategy. In fact, I am worried about this as I think that we may be in danger of using this strategy too much in our business.

Je-Tzŭ: What do you mean?

Fergus: We need strategy in doing business. We would be driven out of the design business if we don't change the way we work.

Je-Tzŭ: What's wrong with our practice?

Fergus: Do you know that we are not designing; we are copying the designs of others.

Je-Tzū: We did modify the designs; everybody is doing in the same way in China!

Fergus: You can do this today or perhaps one year or so. Then we will be driven out of the design business in the future. China is opening up its market and more and more Chinese people are traveling abroad. Besides, people will know that you are copying at the end of the day with the presence of information technologies, e.g. the Internet.

Je-Tzū: What should we do next?

Fergus: Build our own knowledge management system.

Je-Tzū: What is it?

Fergus: (I briefly explain the idea of knowledge, knowledge management systems, information management in the context of general management principles, and ways in which such practices can transform organizational operations, tactics, strategy, culture, and individual professional and work practice) Do you think that our company can still operate without you sitting in the office?

Je-Tzū: I don't think so! They need my every instruction. I always give them instructions repeatedly; they keep on asking me same questions which they supposed to know the answer.

Fergus: The first benefit of building our knowledge management system is to free you from sitting in the office. Once we build up our own knowledge management system and if our designers do not refuse to use it, they will not ask you known questions anymore. Besides, we can have creativity instead of just copying in our works if we create and share knowledge on our business environment, design practice and our clients' needs.

Je-Tzū: I know nothing about business administration. But I agree with what you have said, please go ahead with what you think workable. We need to turn our company around.

Reflection:

Reflecting on this dialogue, Je-Tzū was unaware that the firm's unconscious design-by-copy strategy was infringing others' intellectual property rights and such practice was detrimental to the firm's survival. The initial objective of building a

knowledge management system was not only to enhance the efficiency, effectiveness, and empowerment of the interior design firm, but also to change the firm's design strategy as well. What was needed was a new methodology of professional practice in all areas within the general professional and business culture.

Dialogue Two: Human Nature and Management Approach

Je-Tzū: You were right to say that our efficiency and profit margin is low! Some staff intentionally delay the production process in order to get more overtime pay.

Fergus: How do you know that?

Je-Tzū: Mei-mei told me about this during her exit interview. She told me that the reason for her leaving was due to the poor working attitudes of some colleagues. I think we need to control our staff with tough rules and punishments.

Fergus: We must do something to solve the problems or otherwise we cannot enhance our productivity and efficiency. However, I don't think it is a good idea to manage by tough rules and punishments.

Je-Tzū: My friend told me that this strategy works in her company.

Fergus: We are operating in a different industry, creativity is critical to the survival and development of an interior design firm. Rules and punishments would limit the initiatives and creativity of our staff.

Je-Tzū: So, what can we do?

Fergus: They are all educated; most of them got bachelor degrees. I think they should be encouraged instead of being punished. However, I need to think about what we can do to address the problem.

Reflection:

I think Je-Tzū adopts Theory X while I subscribe to Theory Y as the philosophical foundations for managing our company. According to McGregor (1960), Theory X assumes that people:

- (1) Dislike work and attempt to avoid it.
- (2) Have no ambition, avoid responsibility, and would rather be directed than to lead.
- (3) Seek security and resist change.
- (4) Must therefore be coerced, controlled, directed, or threatened with punishment in order to get them work.

Theory X is congruent to Hsun-Tzū's assumptions on human nature:

"Nature of man is evil" (Hsun-Tzū, cited in Fung, 1952)

Now man, by his nature, at birth loves profit, and if he follows this tendency, strife and rapacity come about, whereas courtesy and yielding disappear. Man at birth is

envious and hateful, and if he follows these tendencies, injury and destruction result, whereas loyalty and faithfulness disappear. At birth he possesses the desires of the ear and eye, and likes sound and women, and because he follows these tendencies, impurity and disorder result, whereas the rules of proper conduct (li), standard of justice (i) and finish and orderliness disappear. Therefore to give rein to man's original nature and to follow man's feelings means inevitable strife and rapacity, together with violations of etiquette and confusion in the proper way of doing things, and a reversion to a state of violence. Therefore the civilizing influence of teachers and laws, and the guidance of the rules of proper conduct (li) and standards of justice (i) are absolutely necessary. (Hsun-Tzū, cited in Fung, 1952)

Theory Y assumes that:

- (1) Work is as natural as play and rest.
 - (2) People will be self-directed if they are committed to work objectives.
 - (3) People will be committed to their objectives if rewards are in place that addresses higher needs such as self-fulfillment.
 - (4) People learn and seek responsibility.
-

(5) People have potential to solve problems because creativity and ingenuity are common in population.

Theory Y is congruent to Mencius' assumptions on human. Fung (1952) concludes from the following Mencius saying that man's nature is good.

If today men suddenly see a child about to fall into a well, they will without exception experience a feeling of alarm and distress.

Mencius

From this case we may perceive that he who lacks the feeling of commiseration is not a man; that he who lacks a feeling of shame and dislike is not a man; that he who lacks a feeling of modesty and of yielding is not a man; and the one who lacks a sense of right and wrong is not a man.

Mencius

After critically examining my assumptions on nature of man, I subscribe to Theory Y and Mencius' assertion that the nature of human is basically "good". People appear to be acting like the people described in Theory X because of the impaired

modernization of China. Modernization leads to utilitarianism and make people indulge in material comfort, without human feeling and value (Shi, 1997). We need to bring our staff back to their “good” nature by encouraging them to critically examine their basic assumptions; then we can manage our firm according to the assumptions of Theory Y which fosters self-fulfillment and creativity. A saying from Confucius that springs to my mind is;

The Master said: “If you govern the people by laws, and keep them in order by penalties, they will avoid the penalties, yet lose their sense of shame. But if you govern them by your moral excellence, and keep them in order by your dutiful conduct, they will retain their sense of shame, and also live up to standard.”

(The Analects 2:3)

In design business which involves in creativity, it is not suitable to manage by tough rules and coercion. McGregor (2000) argues that “intellectual creativity cannot be 'programmed' and directed the way we program and direct an assembly line or an accounting department”. He contends that traditional supervisory practices, giving orders, close systems of control and the more conventional notions of productivity can even inhibit creativity.

NI-TZŪ AS THE MAIN VOICE

Ni-Tzū is an experienced designer and natural leader who coordinates all the activities of the company. He is direct, self-reliant, self-confident, and protective. Being a natural leader who easily moves to positions of strength, Ni-Tzū realizes the importance of **kBlogCentral** for the future of the firm.

Dialogue 1: All-Rounded Knowledge

Fergus: Ni-Tzū, can you give me an example of your work?

Ni-Tzū: How about the following description of the Hip Hotel project?

The Hip Hotel Project

I posted the following blog entry (see Figure 4.1) on the Hip Hotel project. It gives artist impressions of five different styles of room design according to the Chinese traditional Five Elements Philosophy, i.e. rooms in Metal, Water, Wood, Fire and Earth styles.



Figure 4.1 Ni-Tzū's sketches of the Hip Project

This project was the first design project that we employed our methodology in the whole design process. Our methodology not only transformed our own design practice, it also transformed our client's business model. Below is an excerpt of the conversation between me and the client in our first meeting.

Mei: We are going to operate a hotel in Yang city of China; we want to see whether your company can provide interior design service for our project.

Ni-Tzū: What kind of hotel is it?

Mei: We want to position it as a three stars business hotel.

Ni-Tzū: Is there any similar competitors in the vicinity? Would you please tell us something about the location and the market situation of the project?

Mei: We are located at Gui Street which is at the center of the city; it is a shopping area and a tourist spot. There is another similar hotel near us, it is

called Lily hotel. It is also a three stars hotel but their room rates are very low because they are a state owned company. Their occupancy ratio is quite high because they have contracts with other state owned travel agencies.

Ni-Tzū: What do you think your company's edge is?

Mei: We are a Hong Kong company with an international exposure and we hired a managing director who has worked in an international hotel management company for many years. Besides, we intended to invest a considerable amount in decorating our hotel. Our competitor's interior decoration is unsatisfactory; their last renovation was five years ago. We can compete with them with better decoration, better management at lower price.

Ni-Tzū: Do you have any budget forecast and the ROI calculations right now?

Mei: We haven't finalized our plan yet so we haven't done the calculations. Why?

Ni-Tzū: In my opinion, you better have your calculations on each option before finalizing your plan.

Mei: We haven't thought of other options, we just target at the business sector.....

After the meeting, we did some background research and critically analyze the information on the development of hotel industry in China, the infrastructure of the project, their competitor's room rate etc. Then in the second meeting:

Ni-Tzū: In our opinions, you may consider position your project as a hip hotel instead of a business hotel.

Mei: What is a hip hotel?

Ni-Tzū: Hip hotel is the latest trend in the hotel industry in China; there are only two or three of such kind of hotels in China right now. Hip hotel focuses on a niche market that are educated and life lovers who dislike the

standardized feelings provided by traditional international hotel management group. Hip hotel and traditional business hotel are operating under two totally different paradigms; traditional business hotel provides a standardized 'feel' to customers so their customer don't have to adapt to the new environment if they stay at hotels within the same group; while Hip hotel aims at providing their customers with a distinguished feel and experience.

Mei: Why do you think this business model is suitable for us?

Ni-Tzū: The hotel star rating system in China is quite strict forward, they don't care about the exposure or management level of your company; the rating system is based on only the infrastructure of the project. According to our preliminary evaluation, yours will be a three-star hotel. If you position your hotel as a business hotel which is in the same market segment with your direct competitor, we afraid that the time for you to regain your investment would be very long because your competitor is only charging a walk-in price at RMB300 for a standard room per night. Their pricing structure is distorted because they are a state owned company. Your project is limited by the infrastructure; you better to compete in a niche market through focusing on your core competencies while avoiding weakness of your project. If I were you, I won't compete in a battlefield that I can't leverage my edges which is international exposure and management experience. As far as we know, lots of foreign tourists are visiting the city where your project is located each year and your project is centrally located at a tourist spot. The propensity to pay is higher for foreign customers and the local customers are increasing looking for quality of life and fashion. If you position it as a hip hotel, you can charge higher room rates through leveraging your company's edges with the same infrastructure and perhaps even at a lower investment on decorations.

Mei: Sounds good, please let us have some sketches on your proposed designs.

Our client finally adopted our proposal to position their project as a hip hotel; it was the first hip hotel at that city. Through the methodology we developed during the **kBlogCentral** development process, we not only transformed our practice, we also help our client to transform their business model and practice. It turns out that our

forecast on the trend of hotel industry was right because the market of hip hotel is developing rapidly all over China.

As our customer positioned their hotel as a hip hotel, we tried to find out the needs and preferences of the ultimate end users (we expected most of the customers are Russians). In order to enable the end users to have a distinguished experience, we incorporated Chinese traditional wisdoms of Five Elements philosophy into the design of the hotel rooms. Guests can choose a particular room type that matches with their element categories, e.g. a customer of Water can choose room of Metal. We are not sure whether there are real interactions between the customer's types of elements with the types of elements of the rooms; however, we are sure that the customer would have a wonderful stay out of psychological effect. Besides, we created a floor with rooms exclusive for lady patrons - it was the first of its kind in China.

Fergus: Thanks for the example Ni-Tzū. What did you learn from the project?

Ni-Tzū: I learnt from this case that not all clients have clear understandings of their own projects. If we just listen and follow clients' instructions without any critical examination, we may lose a chance to enhance human life. As you told us before, we need to know the needs of the final users!

Fergus: What do you think the firm learnt from this project?

Ni-Tzū: Reflecting on this case, I think our firm is not operating only in the interior design business. In order to be successful, we need to keep our eyes on different industries and update ourselves with knowledge on different markets. We would not be able to deliver a project that meets the final users' needs without an in-depth understanding of that particular market.

Dialogue 2: Common Lifeworld

Ni-Tzū: Fergus, I think your idea to transform our company is great, but how can other staff know and understand what you are going to do?

Fergus: In order to let our staff to have a common Lifeworld and understanding of the firm's objectives, we have explicitly written down our vision statement.

VISION STATEMENT

Our Vision

Enhance human life through various linguistic skills

Our Mission

Conforming to Client's objectives and budgeting, we aim at maximizing clients' profits through fulfilling final users' needs

Our Objectives

To be a knowledge-based interior design company, and become the leader in the interior design industry of China before 2010

We need

- Beautiful, comfortable and tidy working environment.
- Flat organizational structure to facilitate multi-directional communications.
- Agile, loose while highly cohesive virtual team.
- Harmonized and trusted working relationship.
- Proactive, ever-learning and multi-skilled staff.
- Practical but creative mindsets.
- Strong physical body and healthy soul.

Reflection

Although we have formulated our vision statement, it was not explicitly written down and communicated with staff until Ni-Tzū reminded me to do so. The vision statement is now posted on the home page of the **kBlogCentral**. It is important for staff to know the firm's vision and mission so that they can align their personal objectives with the firm's objectives. Without a common Lifeworld and understanding of the firm's objectives, staff would not be able to coordinate their actions through communicative discourses.

PE-TZŮ AS THE MAIN VOICE

Pe-TzŮ is a systematic, independent thinker who is responsible, trustworthy, and loyal.

As a member of the IT staff, she is responsible for development of the **kBlogCentral**.

Dialogue: Next Generation KMS

Fergus: Do you remember when I first came to our company and talked with you about the need to change our IT structure?

Pe-TzŮ: Yes, but what aspect in particular?

Fergus: I mentioned that our IT structure was not suitable for our new strategy and vision. IT infrastructure should be aligned with corporate vision and strategy but not vice versa.

Pe-TzŮ: At that time the staff were using their own PCs which were not linked together as a network. This structure blocked file and knowledge sharing.

Our new network with a central data repository which facilitates communications and information sharing solved that problem.

Fergus: Yes, that is working well. Also our **kBlogCentral** is changing our professional practice.

Pe-Tzŭ: Yes, I think that is right.

Fergus: However, I think now we need to evaluate **kBlogCentral** against Malhotra's model of next generation KMS.

Pe-Tzŭ: I have heard that Malhotra has two models of KMS.

Fergus: In exploring the enablers and constraints of knowledge management system, Malhotra (2003) compares two extreme archetypes of knowledge management system. In one extreme, Model 1 KMS works well in predictable and stable environment with primary focus on knowledge harvesting, knowledge re-use and replication. At the other extreme of the continuum, Model 2 KMS works well in dynamic and rapidly changing

environment with primary focus on non-routine and unstructured sense making.

Pe-Tzū: The Model 1 KMS is the old style approach as far as I know.

Fergus: According to Malhotra (2003), Model 1 KMS evolved from Taylorism and the assembly line techniques applied by Henry Ford in the production of Model T. As illustrated in Figure 4.2, Model 1 KMS connects ‘information inputs’ and consequent ‘information outcomes’ through pre-specification and pre-determination of programmed logic. Guided by pre-specification and pre-determination of business logic with primary emphasis on optimizing the user of existing knowledge, this model is based upon managerial focus on seeking compliance to minimize variance so that pre-specified business performance outcomes are achieved. Diversity of interpretations and multiplicity of meanings are either ignored or subjected to additional controls in order to ensure compliance with rules. Model 1 KMS focus on the reuse of existing knowledge over creation of new knowledge.

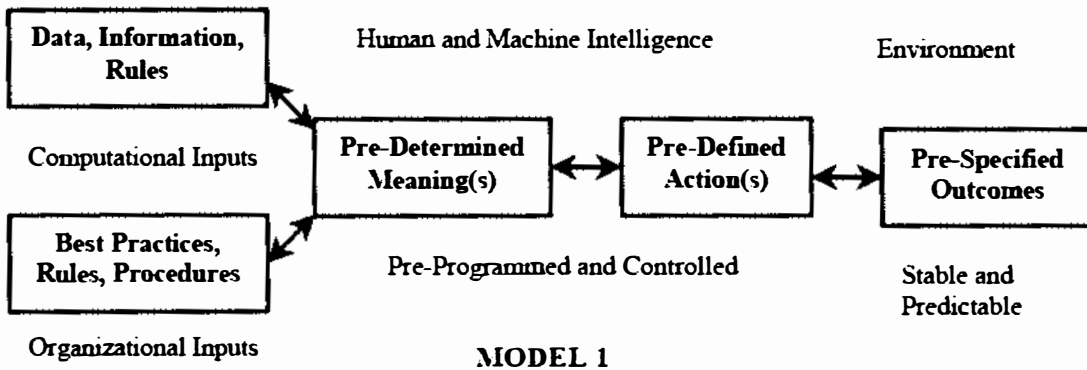


Figure 4.2 Knowledge Management for Routine and Structured Information Processing (Malhotra, 2003)

Pe-Tzū: I guess that Model 2 incorporates a new approach to management.

Fergus: In contrast to the static computerized representations of knowledge in Model 1, knowledge is represented in Model 2 KMS as *intelligence in action* as it is a composite construct resulting from interaction of data, information, rules, procedures, best practices and traits such as attention, motivation, commitment, creativity, and, innovation. In Model 2 KMS illustrated in Figure 4.3, knowledge management is a dynamic process of reinterpretation of data, information, and, assumptions while proactively sensing how decision making process should adjust to the future challenges. The dynamic representation of knowledge provides a more realistic construct integrated with human and social interactions.

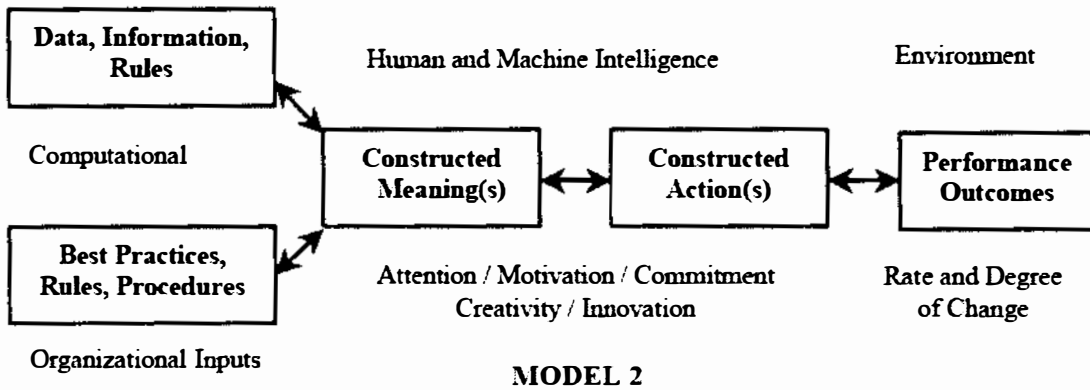


Figure 4.3 Knowledge Management for Non-routine and Unstructured Sense Making (Malhotra, 2003)

Pe-Tzū: Which model gives a better representation?

Fergus: Malhotra (2003) discerns that Model 2 KMS provides a better representation of reality as it takes into consideration of the following two characteristics:

- (a) What is done with data, information, and best practices depends upon subjective interpretation ("construction") of individuals and groups that transform these inputs into actions and performance; and, (b) Performance outcomes need to be continuously re-assessed to ensure that they indeed represent best business performance for the enterprise with respect to changing market conditions, consumer preferences, competitive offerings, and, changing business models, and, industry structures. Within Model 2

KMS, diverse meanings are possible based upon diverse interpretations of the same information inputs across different contexts and at different times.

Pe-Tzū: How do you think our present **kBlogCentral** relates to Malhotra’s ideas?

Fergus: In Table 4.1, **kBlogCentral** is evaluated against the seven challenges proposed by Malhotra (2003)

Enablers & Constraints	Model 1 KMS	Model 2 KMS	Next Generation KMS	kBlogCentral
Business & Technology Strategy	Pre-definition of outcomes.	World of re-everything.	Ongoing questioning of the programmed logic and very high level of adaptability to incorporate dynamic changes in business models and information architectures.	Both worlds of Model 1 KMS and Model 2 KMS. Apart from harvesting existing knowledge for reuse purpose, management strategies, business model and design practice are subject to critique and transformation through users’ reflections and discourses.
Organizational Control	Control for consistency	Self-control for creativity.	Ensure organization is not constrained by overemphasis on consistency.	Self-control for creativity. The new flat and fluid organizational structure fosters communications and creativity with minimal external control. The KMS aims at attaining the ‘Ideal Speech Situation’ which tries to eliminate coercion in discourses.

Information Sharing Culture	Based upon contracts.	Based upon trust.	To inspire trust and motivation for sharing information with stakeholders.	Validation of other users' claims through critical reflections and by examining the other users' background through reading their blog entries helps building up mutual trust. Remuneration and organizational structures were restructured to foster a knowledge sharing culture
Knowledge Representation	Static and pre-specified	Dynamic and 'Constructed'	Dynamic and 'Constructed'. To ensure adaptation of underlying assumptions of KMS to continuously account for complex changes in business environment	Dynamic and 'Constructed'. The tenets of Critical Theory and Habermas' Theory of Communicative Action are employed in the KMS to unveil any distorted assumptions behind users' knowledge and actions.
Organization Structure	Insular and top down.	Inclusive and Self organized.	Organization is conceived as self-organized 'anything, anywhere, anyhow' dynamic structures of people, processes and technology networks.	The newly adopted virtual teaming structure extends the boundary of the firm to include clients, outsourcing partners and service providers along the value chain. Clients, outsourcing partners and service providers are invited to publish their opinions on the blogs set up for particular projects.
Managerial Command and Control	For achieving compliance.	For achieving commitment	Cultivating commitment of knowledge workers to the organizational vision.	Cultivating commitment of all staff to the firm's vision and a high moral standard in their professional practice.
Economic Returns	Decreasing returns.	Increasing returns.	Increasing returns.	Increasing returns. The reflective practitioner research component of the KMS enables the users to continuously evaluate , and transform where necessary, the

				business model and business processes for realizing customer value propositions while harvesting existing knowledge for reuse purpose.
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Table 4.1 **kBlogCentral** evaluated against the seven challenges proposed by Malhotra (2003)

Pe-Tzū: Based on your analysis do you think we should explore alternatives to **kBlogCentral** or just keep things as they are?

Fergus: For the time being, I think we should keep on evolving **kBlogCentral** in light of these new ideas. We should keep an eye on alternatives as they develop.

Reflection:

Given that the market situations and customers' needs are changing rapidly, a knowledge management system that continuously questions the taken-for-granted business process is necessary for the survival of the interior design firm. The **kBlogCentral** enables users to continuously evaluate, and transform where necessary, the business model and business processes for realizing customer value propositions while harvesting existing knowledge for reuse purpose. Such feature of **kBlogCentral**

allows a high level of adaptability to incorporate dynamic changes in business models and information architectures.

CHI-TZŪ AS THE MAIN VOICE

Chi-Tzū is a senior designer, intuitive, good at brainstorming ideas and attends to the details of his daily professional life. He is artistic, sensitive, refined and thus sometimes withdrawn and self-absorbed.

Dialogue: The Notion of Knowledge

Fergus: Chi-Tzū, what do you think about the **kBlogCentral**?

Chi-Tzū: Why do we need to manage knowledge in the first place?

Fergus: We are no longer operating in the agricultural or industrial economy; we have entered the knowledge economy. We will be driven out of the interior design industry in one day if we don't have any mechanism to manage our knowledge as soon as possible.

Chi-Tzū: But our clients are happy with our designs. I think what we need is an intuitive sense of aesthetics; we can still satisfy our clients' needs without any changes in our lives.

Reflection:

Chi-Tzū's question did puzzle me. His question is the driving force for me to research on Chinese culture and subsequently Chinese philosophy.

Fung (1952) writes: "Chinese philosophers for the most part have not regarded knowledge as something valuable in itself, and so have not sought knowledge for the sake of knowledge". Even for practical knowledge, that might have direct bearing upon human happiness, Chinese philosophers have tended to consider examples of actual conduct instead of discussing what knowledge is in general. He states that "Chinese philosophy, in short, has always laid stress upon what man is (i.e., his moral qualities), rather than what he has (i.e. his intellectual and material capacities)".

However, as seen in the following quotes, I found that Confucius did maintain that learning of knowledge is important. I disagree with Fung that Chinese philosophers

do not regard knowledge as something valuable, they generally do not engage in gaining of knowledge for the love of learning only.

The Master said: "Is it not indeed a pleasure to acquire knowledge and constantly to exercise oneself therein?"

The Analects 1:1

The Master said: "He who keeps on reviewing his old and acquiring new knowledge may become a teacher of others"

The Analects 2:11

The Master said: "Learning without thinking is useless. Thinking without learning is dangerous"

The Analects 2:15

Currently in China with its high disparity of wealth and income, people are becoming more materialistic and reject the 'old' China without regard for what it really represented. The ideals of Confucius apply universally, and not only for the educated and wealthy. One can recognise the value of Confucius, whether one is poor or

wealthy. Being a Confucian does not mean abandoning the search for meaning, knowledge, and learning, it requires a use of the wisdom found in all humans within the bounds of Confucius. It seems that today most Chinese seek only knowledge that can be sold, that is so they can make use of knowledge to earn more money. They are not interested in seeking other knowledge not directly related to their paid work. Our designers think they need only an intuitive sense of beauty, and so they are not aware that they need other kinds of knowledge in order to deliver “complete” and better designs, this even though they share a common vision to enhance human life through better design.

KWAN-TZŪ AS THE MAIN VOICE

Kwan-Tzū is a designer who, while disliking learning, is unusually bold in airing his opinions.

Dialogue 1: Knowledge Economy

Kwan-Tzū: Our government is cracking down the sale of pirated CDs so I need to switch to the Internet to download MP3 songs.

Fergus: Don't you know that you are also infringing copyright when you are downloading MP3 songs from the Internet?

Kwan-Tzū: I think too many people are too serious about protecting intellectual property. You mentioned before that we were wrong to adopt the design-by-copy tactic. I am afraid that you don't understand the characteristics of the Chinese market, everybody is copying here. If clients like the designs in the books, we can fulfil their needs promptly and cheaply.

Fergus: We are currently in the knowledge economy, we need to respect and protect intellectual property of ours and that of our local and international competitors. Otherwise it will be difficult for China and us, to compete internationally with other countries in the future, and that is where our future lay. We have to be Chinese, the best China can offer, not imitation French, German or American.

Kwan-Tzū: The 'knowledge economy' you mentioned only affect countries that produces IT products! China is an agricultural and industrial country; we will not be affected in anyway whatsoever!

Reflection:

Written in their book “China and the Knowledge Economy: Seizing the 21st Century” published by the World Bank Institute, Aubert and Dahlman (2001) summarize that China is facing the following imminent and economically dangerous internal threats;

- (1) Unemployment.
- (2) Declining international competitiveness.
- (3) Income and regional inequalities.
- (4) Pollution.

Aubert and Dahlman (2001) state that “For a long part of history, China was the largest and most advanced economy”; however “China is at a critical juncture in its development strategy, caught between daunting internal challenges and a demanding external environment driven by rapidly expanding knowledge”. The two authors advise China to “seize the 21st century – exploiting knowledge to regain its place in the world economy” by building solid foundations for a knowledge-based economy which includes:

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- (1) Updating the economic and institutional regime.
 - (2) Upgrading education and learning.
 - (3) Building information infrastructure.

Aubert and Dahlman (2001) also urge China to raise the technological level of the economy by:

- (1) Diffusing new technologies actively throughout the economy.
- (2) Improving research and development system.
- (3) Exploiting global knowledge.

The transition from an agricultural and industrial economy into a knowledge-based economy provides both threats and opportunities. If China and the Chinese people are well prepared for the transition, China can make use of this opportunity to solve its immense internal problems through dramatically raising productivity, through increasing knowledge and acceptance of its problems at all levels. Otherwise, the internal threats will be magnified and the stability of China would be threatened.

Dialogue 2: Blog-based Knowledge Management System

Fergus: Do you know the reason why staff seldom write their reflective practitioner reports?

Kwan-Tzū: We are quite busy and writing with a pen is time consuming. We are in the 21st Century, and we seldom use a pen. Also, we sometimes forget how to write some of the Chinese characters.

Fergus: Am I right to say that staff were not writing their reflective practitioner reports because it is inconvenient to write with a pen?

Kwan-Tzū: Yes, I think so. I think more staff are willing to write their reflective accounts if we don't need to write difficult and complex Chinese characters. Is there any way to make it easier for us to write our reflective accounts and to read the reflective accounts of others?

Reflection:

Given that Chinese scripts are quite complex, it is very difficult to memorize and write in Chinese. Quoted in Bond (1991), Philip Vernon explains that “Chinese, however, represents every different word by an ideograph, or pictorial character ... there are some 3,500 of these characters ... and far more for uncommon words”. I observed that most of our staff seldom use a pen in their working environment. They use a computer to draw sketches and to type documents, and so on. Fortunately, I discovered that all of them type quickly when they are using QQ (a popular online instant messaging service in China) in networking with their friends. They use Pin-yin (pronunciation) input method when writing with a computer, that is, they write “naturally,” means that they don’t need to recall how to write the complex Chinese characters.

We need to solve the problem of writing Chinese when developing our knowledge management system in order to encourage staff to write their reflective accounts. It came to my mind that Blog writing provides an easy way for staff to publish their reflective accounts. Blogs have the following features that are usable and suitable as the platform for our knowledge management system.

-
- (1) A means of simple publishing for our staff that is proficient in inputting Chinese characters into a computer.
 - (2) The blog provides a responding comment feature, that is, others are able to respond to the blog to point out differences of opinion, as well as constructive and supportive responses.
 - (3) This process has a systematic classification of entries for easy searching.
 - (4) All blog entries are stored in a central database
 - (5) The RSS functions allow for tracing particular topics.
 - (6) The Trackback function allows for easy reference to other related entries.

Blogs provide features that enable users to publish, store, refer, track, search entries easily. Also, it is suitable to be used by our staff as a platform for dialogue and discourse for almost any topic, within the design field or on any other topics.

YU-TZŪ AS THE MAIN VOICE

Yu-Tzŭ is creative and insightful but in general he is not participative.

Dialogue: Unveiling a Common Misunderstanding of Confucian Values.

Fergus: I think Ni-Tzū misunderstood your idea behind the design, why don't you refute his comment on your blog entries?

Yu-Tzū: It is impolite to argue with others, especially with my superior in blog entries which are open to be read by other staff.

Reflection:

This dialogue with Yu-Tzū led me to consider the issue of direct communication. Examining the blog entries, I found that users of **kBlogCentral** seldom get into constructive debate and direct discourse with other users. Reflecting on this issue, I think that perhaps Chinese people's reluctance to get into constructive discourse with others is due to the influence of a common misunderstanding of Confucian values.

Under one common misunderstanding of the Confucianism doctrine of *Mean*, Chinese normally avoid getting into direct discourse with peers for the sake of maintaining harmony and saving *face* (i.e. being humiliated or humiliating others in public). I

think that this common misunderstanding is based on a wrong interpretation of excerpts from *The Analects* such as follows.

The Master said: 'The wise man desires to be slow to speak but quick to act.' (4:24)

The Master said: 'The firm of spirit, the resolute in character, the simple in manner, and the slow of speech are not far from virtue.' (13:27)

I think that we do indeed need to be slow to speak but we can still engage in constructive criticism. Indeed, I assert that the following excerpts from *The Analects* can be interpreted to advise people to enter into direct discourse and constructive criticism.

The Master said: 'Artful speech and an ingratiating demeanor rarely accompany virtue.' (1:3)

Confucius said: 'There are three kinds of friends that are beneficial, and three that are harmful. To make friends with the upright, with the faithful, with the

well-informed, is beneficial. To make friends with the plausible, with the insinuating, with the glib, is harmful. ' (16:4)

I think it is important to unveil such distorted assumptions caused by the influence of common misunderstanding of traditional Chinese philosophies and culture. Furthermore, I think that staff in our firm will not be able to create and share knowledge through consensus-seeking discourse in the **kBlogCentral** without some constructive criticism and direct discourse. This is a good beginning if we are to improve Chinese knowledge management practices. I think that people in China want to discuss the truth of Confucian sayings so that they can be part of the process of improving Chinese management and culture in general.

MI-TZŪ AS THE MAIN VOICE

Mi-Tzū is a designer who loves learning. He adopts a logical approach to his work and art even though he is truly an artist.

Dialogue: Learning Organization

Fergus: Did you post anything new on your Blog?

Mi-Tzū: I published a new blog entry on our Lingnan Project.

Fergus: What is the nature of the project?

Mi-Tzū: The project is to provide interior design service for the renovations of a resort hotel owned by a state owned company. This resort hotel is an historical place constructed in Lingnan style and is mainly used for the reception of government officials from the central government.

The Lingnan Project



At the outset of the project we were trying to preserve the heritage of the Lingnan architecture and decorations of the hotel as required by our client, we eventually reached a higher mission of trying to revitalize the Lingnan philosophy and culture. The **kBlogCentral** changed our staff and made them constructively think, evaluate, and analyse things from various perspectives, and at a deeper level, they began to discuss Western and Eastern philosophies in their blog entries.

After reviewing books and articles on Lingnan culture, we found that Lingnan culture is originated in southern China, and this Lingnan culture is considered a fusion of traditional Chinese culture with Western culture. In Lingnan, traditional Chinese culture absorbed elements of Western cultures and forms a distinctive culture in the southern part of China. However, we discovered that the absorption process was stopped for a few decades in contemporary China, and the current form of Lingnan culture did not renew itself with the changes of Western culture during the last few decades. We decided to envisage a revitalization of Lingnan philosophy and culture through this project by injecting modern elements of Western culture into the current form of Lingnan culture as seen in our artist impressions.

Fergus: Thank you Mi-Tzū. What did you learn from the project?

Mi-Tzū: I learnt that everything in the world is evolving and we need to continuously update ourselves about these changes. The best way to do so is to be a learning person.

Fergus: What do you think the firm learnt from this project?

Mi-Tzū: I think our firm needs to continuously question our strategy and taken-for-granted business processes in order to keep pace with the changes in our markets and our client's needs. We must continuously evaluate, and transform where necessary, our strategy and business processes for realizing the latest customer value propositions. The best way to do so is to be a learning organization.

Reflection:

I think this case also applies to the situation of the influence of traditional Chinese philosophies on Chinese people. As human thought is affected by the limitations

within its material and spiritual environment (Fung, 1953), I think that traditional Chinese philosophies need to be revitalized in light of changes in material and spiritual environments.

Confucianism, considered as a kind of practical, political, and moral philosophy, needs to have some basic assumptions reconsidered in light of modern methods and current environmental challenges. For example, as this case demonstrates, the traditional Confucian tendency to give blind respect to hierarchy can lead to failure to change for the better. Traditional Confucian language tends to be overly simple, ambiguous, intuitive, and non-discursive; this can lead to distorted communication that hinders constructive discourse.

It is my thought that traditional understanding or misunderstanding of Chinese philosophy must be critically re-examined in order to keep pace with the changes in the material and spiritual environment of this modern world. Our firm should resist the Chinese tendency to be a closed society wherein critical debate is forbidden. We can look to the nation of Singapore as an example of where Chinese people overcame these problems to become a thriving success.

Chinese philosophy needs to be revitalized in order to meet the contemporary demands of Chinese human beings. A starting place might be in harmonizing and balancing human rationalities, action and communication. In light of Habermas' theory of communicative action, the five constants advocated by Confucianism for human self-reflection and self-cultivation., could be revitalised:

- (1) Humanity (*ren*)
- (2) Rightness (*yi*)
- (3) Rituals (*li*)
- (4) Wisdom (*zhi*)
- (5) Faithfulness (*xin*))

Cheng (2002) argues that the Chinese philosophical language needs to be revitalized and transformed to meet the latest demands of society. This has been an on-gong process as:

“Chinese philosophy has had to reformulate its identity and submerge itself in the context of history and ethnology. To gain new life, it first had to take on a new form

and new language by reconstructing its vocabulary and discourse in terms of the modern demands for explicitness, precision, independence, and autonomy.”

The lesson for our company is to concentrate on the basics. In developing and evolving our **kBlogCentral** we need to encourage users to critically reflect on their philosophical assumptions and the language they use in expressing their ideas.

VI-TZŮ AS THE MAIN VOICE

Vi-Tzŭ is a designer in our company who is good at graphic design. He is mainly responsible for creating presentation materials.

Dialogue: Logical Creativity

Fergus: Vi-Tzŭ, do you have any new postings in **kBlogCentral**?

Vi-Tzŭ: I have recently published a new blog entry on our “Great-Structure” project.

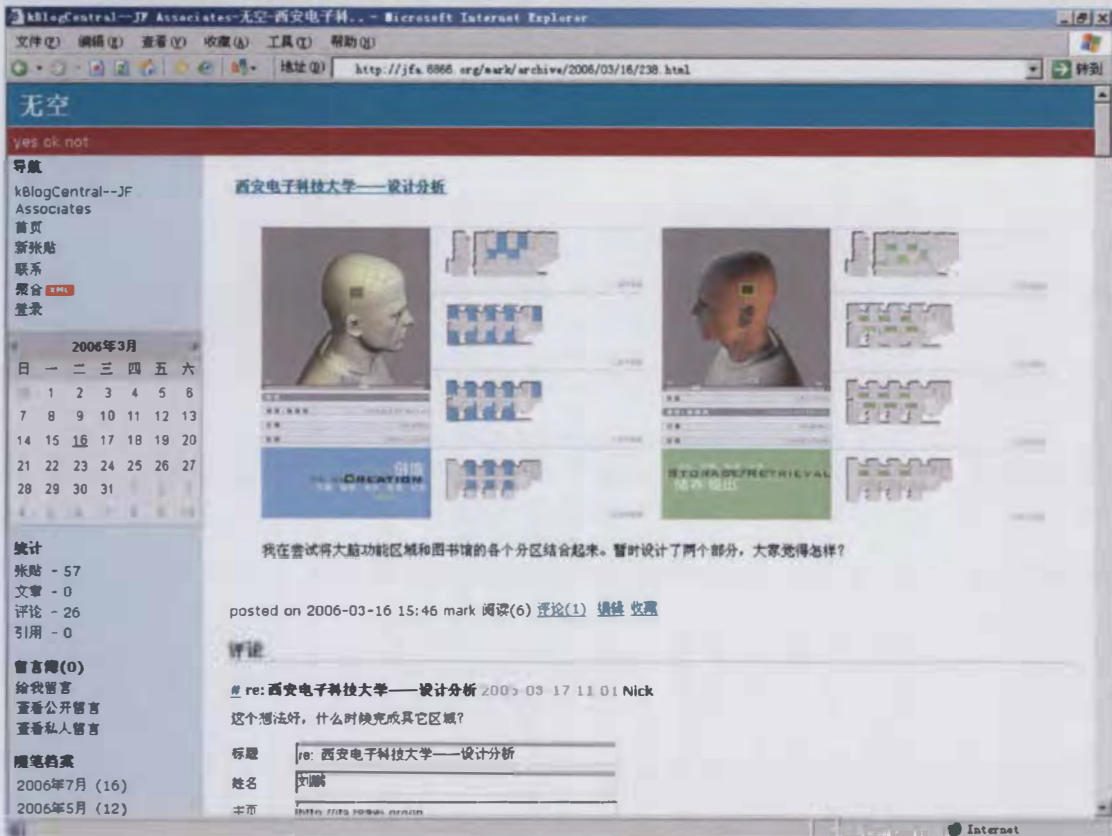
Fergus: What is this Great-Structure project about?

Vi-Tzū: The project was to provide interior design service for a newly constructed library of a university in western China.

Fergus: What is the blog entry about?

Vi-Tzū: We were preparing a Flash multimedia presentation material for the tendering process. I published the blog entry to explain the concepts behind our design.

The Great-Structure Library Project



After rounds of explorations and discussions, we decided to define the nature of a library as the knowledge management system of a university. A conceptual model was then developed in order to analyse the needs of university library users. As the core functions of a knowledge management system involves creation, store/retrieval, sharing and application of knowledge, an analogy of the biological functions of a human brain was employed to demonstrate the role played by the library in managing knowledge of the university. Instead of using a monotonous PowerPoint presentation, we created a Flash presentation to deliver our complicated design concepts to the

audience. Contents of our presentation are getting richer since we employed our new methodology of design practice; we have to switch to multimedia presentations in order to effectively express our creativity behind the design.

According to our definition of a university library, we categorized different zones of the library according to their roles played in a knowledge management system, that is to say, common areas, cafés, and meeting rooms as places for sharing knowledge while the book storage area as a place of storing knowledge and so on. Then different zones are designed with special considerations to the critical factors that facilitate a particular zone to fulfil its specific role in managing knowledge. When the presenter points the cursor over certain area of the human skull of the Flash presentation, e.g. the portion of human brain that corresponds to the memorizing function, then floor plans of those zones that correspond to the same function, in this case, the book storage area, are displayed in order to let the audience to have a better understanding through analogy. We found that, during the knowledge management system building process, that Chinese are good at understanding things through analogous methods. The presentation was successful and we were awarded the contract for this project.

Fergus: Thanks for the example Vi-Tzū. What did you learn from the project?

Vi-Tzū: We can communicate with the audience more effectively if we employ multimedia technologies in our presentations. Besides, analogous method is helpful in communicating complex messages with Chinese audiences.

Fergus: What do you think the firm learnt from this project?

Vi-Tzū: I think our firm has to switch to adopt a strategy of employing multimedia technologies in presentations.

Reflection:

It is shown in this case that the newly developed methodology of design practice has led us to a systematic and logical way of analysing, creating and presenting design to our clients. Through the development and use of the **kBlogCentral**, we have evolved from the strategy of design-by-copy through design-by-intuition to the current design-by-logical creativity.

SUMMARY

In this chapter I present descriptions, analyses and reflections of the principal research texts. Using dialogue format as the primary writing style, I consider all the major research participants in this study.

In the next chapter I give a concluding discussion of the whole thesis. I write in creatively heuristic manner to not only discuss but synthesize and interpret the themes, findings and assertion of the research.

CHAPTER FIVE

CONCLUDING DISCUSSION

“In the management of affairs, people constantly break down just when they are nearing a successful issue. If they took as much care at the end as at the beginning, they would not fail in their enterprises.”

Lao-Tzū, Tao Te Chin, translator Lionel Giles

“Success has many fathers, failure is an orphan.”

Confucius, Analects

INTRODUCTION

Following Lao-Tzū, in the success of this thesis, I intend to take as much care at the end of this thesis as we did when we began with developing our **kBlogCentral**. And following Confucius, in acknowledging the failures as well as the successes in this project, I acknowledge the “orphans” as well as the “fathers”.

In this chapter I reflect and creatively synthesize the findings of this research project. I write as a reflective practitioner heuristically synthesizing the whole research. I reflect on the research journey and the changes that have occurred in my colleagues and my professional practice. I reflect on the effects I have had on others whose involvement I have sought. I also reflect on the significance of the entire experience upon myself. This chapter forms the explication phase of a heuristic inquiry project. Thus I "fully examine what has been awakened in consciousness, in order to understand its various layers of meaning" (Moustakas, 1990, p. 31). As such I heuristically validate the research.

I endeavor to write with truth and honesty. I strive to write a rich description and a creative synthesis of the research. My assertions are validated not only by the whole thesis but also by the richness of my writing and reflections. As I have pointed out in the research approach chapter, the goodness of the research is largely dependent on how much the text rings true. At the end, I give a heuristic statement, in the spirit of Lao-Tzū, as an epilogue, a subsidence, a returning, a fulfillment, and finally as a rest.

A HEURISTIC STATEMENT

This research has been of reflective practitioner autoethnographic inquiry. Emphasizing the role of individuals I have researched with myself and my colleagues, not research subjects. There were research questions, a research methodology and research findings; but the most important single element of the research was a vision. This vision has resulted in the creation of **kBlogCentral**. The development and use of this system has resulted changes in the professional practice of myself and my colleagues in our design company. The word heuristic comes from the same Greek root as Eureka! In this chapter I tell you my Eureka moments during this research project.

A CONCLUDING DISCUSSION

Concluding Conversation

In the following conversation, my research voice, Fergus, and Dr Williams are in dialogue reflectively exploring the project in general.

Fergus: In this final chapter, I need to conclude the thesis and make warranted conclusions and final assertions regarding this research. I hope that we can bring our own insights and reflections to bear concerning this approach to the research questions and the logic and rationality of the assertions and conclusions.

Dr Williams: I think that this is a good idea Fergus. What were the major milestones in your research?

Fergus: For me, the major milestones for the research have been the following:

Date	Event
1 July 2003	Took over as managing director of the interior design firm. My current partner agreed with my vision and strategy for the company.
15 Sep 2003	My current partner agreed with my plan to build a knowledge management system.
27 Oct 2003	I was questioned on why we needed to manage knowledge.

1 Mar 2004	The firm was restructured from hierarchical to virtual team to leverage our core competencies.
1 Mar 2004	Remuneration structure of the firm was changed to create a knowledge sharing culture.
20 Dec 2004	Staff agreed that the new organizational and remuneration structures improved efficiency and staff morale.
1 Mar 2005	Staff were invited to write weekly reflective practitioner reports as a way to manage knowledge.
21 Mar 2005	Knowledge management system based on reflective practitioner reports was fail because seldom staff participated in writing their reflective practitioner reports. Staff misunderstood that the KMS was a measure to monitor their duties and to count their outputs.
26-27 Mar 05	Workshops were held on Action Research and Habermas' Theory of Communicative Action.
22 July 2005	The kBlogCentral reflective practitioner knowledge management system based around web-based blogs was launched.

3 Oct 2005	Workshop on Chinese philosophies and culture was held to address the problem of lack of discourse within kBlogCentral . Topics on Chinese distinguished way of verbal and written expressions, blind respect of hierarchy and notion of knowledge were covered.
1 Jan 2006	Vision statement of the interior design firm was explicitly written down and posted on the home page of kBlogCentral .
1 Mar 2006	Methodology of design practice properly formulated.

Table 5.1 Major milestones for the research.

Dr Williams: Which of the above milestones do you think is the most critical? Please explain why.

Fergus: Probably the most critical was the failure of the move to manage knowledge by inviting staff to write reflective practitioner reports in March 2005. I think the failure was the defining moment of the process to build **kBlogCentral**; it intrigued me to again reflect on my basic assumptions and this led me to the current paths of this study. As a

Chinese brought up in Hong Kong and having worked in mainland China for more than a decade, I assumed that I have virtually the same, or at least understand the worldview of our staff. I discovered that I was wrong in making such assumptions. The failure not only unveiled some of my wrong assumptions in building the knowledge management system, this failure also seduced me into 'loving' the research question. As Moustakas (1990) encourages, it created my thirst to discover, clarify and understand crucial dimensions of knowledge and experience.

Dr. Williams: Would you explain why the failure intrigued you to love the research question?

Fergus: Although I learned the potential benefits brought by self-examination from the literature on action research and critical theory, it was for the very first time that I personally experienced the emancipatory power of self-examination! Without this failure, I would have continued relying upon my wrong assumptions in my professional practice. The errors of my original approach were the source of this research. If there were

no errors and everything worked as planned then there would be no new research on my part, just a tinkering about the edges to make the original system work. However, that was not the case, it was a personal loss of face that it failed, and I had to recover my value as a person, as a manager, and as an owner of the organisation.

Dr. Williams: Do you think this study fills any gap in research on knowledge management?

Fergus: Pauleen and Murphy (2005) criticize the dominance of Western analytical assumptions in knowledge management research and development. As knowledge management research practice is originated in the West, knowledge management research and practice in China is likely to be different due to drastic difference in histories, cultures and institutional forces between China and the West (Zhu, 2004). Besides, Grover and Davenport (2001) call for more empirical research on knowledge management in order to build a healthy tension between knowledge and action. Although there are few comparative studies on different perspectives on knowledge management between

different countries (e.g. Nonaka and Takeuchi, 1995; Takeuchi, 2001; Hutchings and Michailova, 2004; 2006; Michailova and Hutchings, 2006; Weir and Hutchings, 2005), there is hardly any empirical study on the implications of national philosophy and culture on knowledge management practice in China. Employing a critical interpretive heuristic reflective-practitioner research methodology, this research fills the research gap to empirically understand the deeper structure of the “socially shared, historically produced” phenomenon of knowledge management practice in China and, at the same time, to uncover any philosophical and cultural patterns that hinder knowledge creation in Chinese community.

Dr. Williams: I consider your thesis makes an original contribution to knowledge in Knowledge Management as well as the body of knowledge of practice in knowledge management in China. By the way, was there any unexpected discovery in this research?

Fergus: At the beginning of the project, I thought the major objective of the project was to build a knowledge management system to manage

knowledge in our firm and hopefully develop a model that can be extended to bridge what I term the *knowledge divide* in China – the huge gap between the few who have valuable knowledge from the many who have very little valuable knowledge. However, I have begun to discover that it is not a knowledge divide, but a *linguistic divide* which hinders the Chinese people from modern knowledge building and sharing. This linguistic divide is the gap between the very few who are able to engage in communicative action, through constructive debate and critical discourse, and the overwhelming many who dare not speak their mind and engage in honest and open communication. For the many there is little hope, even with education, of freeing themselves from their own misunderstandings of distorted Confucian values formed by growing up in the Chinese culture. Only recently is the liberating potential of Confucianism being rediscovered through revitalised research. This research, of which this thesis is a part, will help to bridge this linguistic divide.

Dr. Williams: What are the implications of this linguistic divide on knowledge management development and practice in China?

Fergus: Given that the main objective of knowledge management is to “coordinate purposeful individuals whose actions stem from their unique interpretation of situated circumstances” (Schultze, 1998). The social anthropocentric nature of traditional Chinese philosophy, which emphasizes interactions between humans and their environments, is basically favourable to knowledge management practice. However, some obsolete or misunderstood doctrines of traditional Chinese philosophy are endangering the communicative competence of contemporary Chinese. Because language is considered an important social system that guides individuals’ interpretation of communicative acts during the social process of human interactions (Habermas, 1984; Cook and Brown, 1999), the existence of what I term *linguistic divide* hinders the creation and sharing of knowledge in China. I perceive that those obsolete and distorted doctrines must be critically examined and revitalized as a modern form of Chinese philosophy that is suitable for Chinese to meet the challenges in the growing knowledge economy.

Dr. Williams: Can you briefly conclude the major discoveries made during the process of building the **kBlogCentral**?

Fergus: We performed a demonstration on the use of **kBlogCentral** with new staff in October 2006. You may understand the major findings by referring to the following dialogue.

Ni-Tzū: **kBlogCentral** is the Blog-based knowledge management system of our firm. I am going to show you how to use this system to manage knowledge.

Chou-Tzū: I am a blogger too! I think I can manage on how to use it; you don't need to show me now. I will ask you if I encounter any problem in using it.

Fergus: **kBlogCentral** is totally different from ordinary blogs, although it is based around blogs. In fact it is a reflective practitioner knowledge management system, and understanding how to perform reflective practitioner research and how to get into consensus-seeking discourses with other users are critical to the successful use of the system. The blog application only provides a necessary platform for collaborative social interactions among users. It is not sufficient to use the blog

application alone to manage knowledge, as it is, by itself, incomplete for our purposes.

Chou-Tzū: What do you mean by “consensus-seeking discourse”?

Fergus: Consensus-seeking discourse means that when a group of people discourse together they communicate in such a way that they maximize the chances of eventually reaching a genuine consensus. The philosopher Jurgen Habermas (1984, 1987) recommends communicative action to enable consensus-seeking discourse which can enable ideal speech situations.

Ni-Tzū: All staff are encouraged to perform reflective practitioner research on their professional practices and then publish their critically examined knowledge in **kBlogCentral** regularly. The knowledge posted in the system is then validated by other users, and then reviewed according to the publisher’s subjective, intersubjective and objective lifeworld (Habermas (1987) calls these *validity claims*). If there is any doubt that arises within the validation process, then users are encouraged to get

into consensus-seeking discourses in order to create knowledge that in turn guides the actions of all within the organisation. It is important to observe that the discourses should ideally be carried out under ideal speech situations as advocated by Habermas. This validation process also constitutes an effective defensive measure to detect any knowledge warfare tactics.

Chou-Tzū: The rationale behind **kBlogCentral** is great! However, it seems to be restrictive, particularly in a creative environment such as our company. We probably won't be creative enough if we achieved consensus in everything. There won't be any diversity in beliefs, opinions and actions.

Chi-Tzū: We asked ourselves the same question before. According to Habermas' theory of communicative action, consensus-seeking discourse does not aim at achieving the same actions for all participants; it only allows participants to coordinate their particular actions through authentic consensus. In other words the group, being synergistic, becomes greater than its sum.

Chou-Tzū: I read some articles on knowledge management on the Internet before.

The notion of knowledge and knowledge management is very difficult to comprehend. I am glad to know that it is not so difficult to manage knowledge now.

Chi-Tzū: Fergus explained in his blog entries that the notion of knowledge is originated in Western philosophy. Chinese people, under the influence of traditional Chinese philosophies, do not place high upon knowledge itself.

Fergus: Although the traditional Chinese philosophies do not place high value upon knowledge itself, I think we need to reflect on this assumption. Philosophy is considered a form of human thought and as such must be affected by its environment; I think philosophy needs to evolve as does the environment of which it is part. Facing the challenge brought by what is sometimes called the *Knowledge Economy*, the Chinese people need a transformation in their attitude towards what is called knowledge, not what is perceived as knowledge.

Chou-Tzū: Do you mean that traditional Chinese philosophy's attitude towards knowledge hinders management of knowledge within Chinese community?

Fergus: Yes, I think so.

Ni-Tzū: You mentioned in your blog entries the term "linguistic divide" which apparently hinders knowledge management within the Chinese community. What do you mean by that?

Fergus: I discovered in my research that the Chinese traditionally and still do, in my opinion, follow the manner or way of expression in some Confucian doctrines. For example, the Chinese people express the Confucian value of properly following beneficial ritual, propriety and social hierarchy in a type of rigid absolute obedience. The Confucian value is thus misinterpreted and becomes a hindrance and a negative cultural expression which actually works against the good of the value. As another example, the Confucian value of harmony is expressed a

blind obedience which hinders constructive communication. This has deterred Chinese from engaging in effective and fruitful discourse with others outside this process, particularly Westerners. As Michael Harris Bond put it; the Western tradition of straight talk, open debate, friendly disagreement, and loyal opposition has no place in an interpersonal system focused on relationships rather than 'truth'. Given that relationships are mostly hierarchical and involve wide discrepancies in usable power, the result is lack of genuine consensus and beneficial outcomes. These constitute what I call the linguistic divide that hinders knowledge creation within the Chinese community.

Ni-Tzū: Yes, I also think Confucianism is to be blamed for the backwardness of contemporary China.

Fergus: Although some doctrines of Confucianism do hinder the knowledge management process, I don't agree with your opinion that Confucianism is to be blamed for the backwardness of contemporary China. For example, Confucianism was the orthodox philosophy of the Han and Tang dynasties when China was a leading civilization of the

world (though the world at that time did not know this). On the contrary, current problems lurking within China are due to the decline and breakdown of true Confucian values and morals, or ethics. There has been a decline of Confucianism and other traditional philosophies since the May Fourth Movement back to early twentieth century.

Chi-Tzū: However China is trying to reconstruct a harmonious socialist country through revitalizing the values and morality, or ethics, of its people. In all of history such movements have been painful to all concerned, and this re-acceptance of the traditions of China within a modern context is no different. The reality is, as mentioned above, the last hundred or so years are but a footnote in the history of China, but the changes have been immense and painful. Perhaps these changes were sudden and unbalanced. Today we have to achieve a return to balance, and when that is achieved a truly beneficial prosperity and a return for Chinese national pride in beneficial achievement for all may be achieved.

Fergus: I think Confucianism has a critical role to play in reconstructing China as a harmonized socialist country. Being a kind of human-centred and also a moral philosophy, Confucianism offers a moral base for the people to reflect on their personal and other assumptions, and then critically examine their beliefs and actions. The revival of ethical values and moral spirits can help addressing the problems brought by the unbalanced rationalities of modernity. However, Confucians must critically examine and adjust some of their obsolete doctrines. For example, the absolute and unquestioning respect of hierarchy and the wrongful subordination and oppression of female should be resisted. Confucianism needs to be revitalized as a modern form of Chinese philosophy that is suitable for the contemporary knowledge economy.

Ni-Tzū: Am I right to say that within the **kBlogCentral**, the web-based blog application provides a platform for social interactions and dialectic discourse? It seems to me that this constructive and critical discourse among users is part of using an efficient media for publishing, storing, retrieving, and then sharing of knowledge. Reflective practitioner research provides a cyclical spiral methodology for the users to

critically reflect on their professional practice in order to explicate their tacit knowledge. This whole process is supported theoretically by critical theory and Habermas' theory of communicative action. The critically reflected knowledge published within the **kBlogCentral** is examined and then validated through communicative discourse that is free of domination and coercion.

Fergus: Excellent! I think you have grasped the essence of **kBlogCentral**.

Dr Williams: The above vignette does indeed describe fascinating insights into the development and initial use of **kBlogCentral**. Have you developed some sort of model to crystallize this process?

Fergus: The model I have developed is detailed below:

The “**SIMPLE**” Model Describing the Development of **kBlogCentral**

Structure

Organizational structure	The usual top-down unidirectional communications under hierarchical organizational structure hinders knowledge sharing among staff members. The new organizational structure was restructured to a flat, fluid, and virtual teaming structure which facilitate multi-directional communications and knowledge sharing.
Remuneration structure	In order to create an atmosphere that promotes knowledge sharing, the remuneration structure of the firm was restructured to reward the creation and sharing of knowledge.

Infrastructure

Central data repository	Instead of storing data and information in a distributed array of personal computers, a central data repository was created to facilitate sharing of data and information. kBlogCentral becomes the central knowledge base for the firm.
Web-based system	The kBlogCentral was web enabled so that internal staff as well as other stakeholders along the value chain can make use of the system to create and share knowledge with each other. The incorporation of knowledge from the client side to the supply side along the value chain ensures holistic market and product

	<p>knowledge is created and shared among all stakeholders along the whole value chain.</p>
<p>Mindset</p>	
<p>Knowledge sharing</p>	<p>Usually, Chinese employees hoard personal skills and knowledge for the sake of maintaining their power within the organization. To facilitate creation and sharing of knowledge, there has to be a mindset shift that it is not a zero-sum game when sharing knowledge with others. Instead, sharing knowledge with others fosters and creates a win-win situation for all stakeholders along the value chain.</p>
<p>Importance of Knowledge</p>	<p>Influenced by misunderstandings and distortions of traditional Chinese values and philosophies, Chinese do not regard knowledge as something valuable in itself. However it is a prerequisite that users be attracted to value the importance of knowledge in any effective knowledge management practices. People needs to value all knowledge whether the knowledge is directly related to material gains or not.</p>
<p>People</p>	
<p>People centred</p>	<p>Although blog-based applications provide a convenient platform with efficient mechanisms to store and retrieve knowledge, people are at the centre of kBlogCentral. The reflections and consensus seeking discourses of people play a major role in the process of</p>

	creating and sharing knowledge.
Diversity	China is probably the most diverse country in the world. Chinese culture can be thought of as a culture with many diverse subcultures, and from this, the Chinese market can be regarded as, in total, a huge market with many different submarkets. Within our firm, diversity should be observed and respected in order to build up mutual trust. Communicative action advocated by the kBlogCentral aims only at coordinating users' actions; it does not curtail the inherent cultural diversity within the firm.
Language	
Discourse	Influenced by misunderstandings and distortions of traditional Chinese values and philosophies, the Chinese are generally reluctant to get into constructive debate and critical discourse with others to avoid any disturbance of harmonious interpersonal relationships. This is seen by the firm as old fashioned and counterproductive. The Western tradition of straight talk, constructive disagreements and consensus seeking discourses should be promoted within the firm as it draws upon the synergy inbuilt within creative people.
Expression	The Chinese generally have distinctive ways of intuitive, ambiguous, and non-discursive expressions which prevent engagement in productive discourse.

	Users of kBlogCentral are encouraged to be more precise, logical and discursive in expressing their opinions.
Equity	
Seniority	One of the main doctrines of Confucianism is to respect the age (whether at home or at work). However, absolute respect of seniority often hinders Chinese from getting into productive discussions with their seniors. Blind respect of seniority leads to a kind of coercion that hinders communicative action so that ideal speech situations are rare. This hindrance to effective communication needs to be recognised and taken into account by both senior and junior partners.
Freedom of communications	Because the Internet is censored and selectively filtered in China, this creates another force in the freedom of communication. In order to let kBlogCentral users to publish their opinions freely, kBlogCentral is a closed internal network unavailable to the public.

Table 5.2 The “*SIMPLE*” model describing the development of the **kBlogCentral**.

Dr Williams: I think that this model crystallizes significant assertions which I think are supported by this thesis. Your rich descriptions provide a form of triangulation and validation of the assertions in the model.

Fergus: That has been my endeavour.

MAJOR BENEFITS OF THE RESEARCH

Dr. Williams: What are the major benefits that have resulted from this research?

Fergus: The research has transformed me both professionally and intellectually. In my professional practice, the research empowered me as a genuine leader who, together with my staff, has brought my interior design firm to a new platform. We now have an explicitly stated vision statement, a sound strategy to compete on our design knowledge, which is our core competency, in addition to our fluid organizational structure, effective methodology of practice, and the most importantly, our learning organization with its learning employees. Intellectually, I have made myself see knowledge management in China from a totally new

perspective. Although knowledge management is originated from the West, I perceive that knowledge management practice in China should also be inspired by Chinese philosophy. Besides, my personal vision to bridge the knowledge divide in China has been elevated to a higher level, that is, to bridge the linguistic divide. I think the following quote best reflects my feeling on my transformation.

Having made a discovery, I shall never see the world again as before. My eyes have become different, I have made myself into a person seeing and thinking differently. I have crossed the gap, the heuristic gap, which lies between problem and discovery

Michael Polanyi

Dr. Williams: Are there any improvements in your firm?

Fergus: Yes, the improvements are beyond my expectation. The following are the notable improvements:

Improved Efficiency and Savings

1. Staff have become more proactive and responsible, with less time needed to finish their tasks. Time and billing savings.
2. Staff now have reflective mindsets; they reflect and check their work in all stages, thus making less repetitive errors. Mistakes are fewer and caught at an earlier time.
3. Staff are kept informed on the development of the company and the projects through **kBlogCentral** with better allocation of company's resources and less wastage. This has resulted in definable savings.
4. There are more accurate understandings on the user's needs with less time and funds wasted in producing proposals and quicker final design delivery.
5. The **kBlogCentral** provides a central point for the staff to search official rules and regulations, with less time needed to locate the necessary information.
6. Staff learn a systematic way to classify information, knowledge, books, and samples of decoration materials, and so on, with greater efficiencies in searching for necessary information.

Improved Effectiveness

1. There are now more accurate understandings of client's objectives and the final design better utilizes the resources and aims of the client. As a result more reasonable investment, lower total cost of ownership, and so on.
2. There is now more accurate understandings on the final user's needs, with the final design generally accepted within the client's business profit aims.
3. There is now superior understanding of a project and thus better odds in winning a design tender.

Ethical Results

1. Final user's needs are now better taken into consideration as a first priority.
2. All participants' voices are now better heard within the design process.
3. Environmentally friendly decoration materials and decoration processes are now able to be better introduced to the client.

4. Energy saving equipment and designs are now able to be better implemented.
5. Staff are now more encouraged to reflect on their philosophical and ethical foundations and to bring these to bear in their personal and professional lives.

Dr. Williams: What are your assertions for this research?

Fergus: My major assertion is that we, colleagues in our design company, have been challenged and changed by the development and the use of **kBlogCentral** and inspired by a combination of Chinese philosophy with some Western overtones. The whole thesis is a testament to this assertion.

Dr Williams: On reading your thesis I accept this general assertion. Can you describe in what ways, both positively and negatively, you and your colleagues have been changed by the development and the use of **kBlogCentral** inspired by Chinese philosophy?

Fergus: Some of our staff have expressed their views in a recent barbeque gathering. I now recall what they said in the following quotes:

Je-Tzū: Before the **kBlogCentral** project, I wasn't aware that I had adopted a Taoist's "Wu Wei" (without action) stance towards managing my firm. Through practicing reflective practitioner research and participating in discourses in **kBlogCentral** I have gained a totally new perception of my roles in managing my business. Before the project, I thought that we were just a group of talented interior designers getting together to create beautiful designs through intuitive aesthetic senses. After using **kBlogCentral**, I have become proactive and have brought all stakeholders into the picture and my role has been to bring all of the stakeholders into a form of harmony, even a synergy. As a service provider, I try my best to maximize my client's yield within their budget; and as a designer, I try my best to satisfy the end user's needs, and as an employer, I try my best to realize my employee's potential. As a part of the wide world, I try my best to make our designs more environmentally friendly. I think the only way to fulfil my various

roles is to build and manage our knowledge base and facilities. I have been intrigued enough by **kBlogCentral** as a knowledge building process to begin to study for my Master's degree at University of Technology Sydney (UTS).

Ni-Tzū: I was personally very sensitive to the term *critical reflection*. What came to my mind was a horrible picture of desperate victims forced to criticize themselves publicly during the Cultural Revolution of China in the 1970s'. I think this negative perception to the term is one of the major deterrence for staff to publish their thoughts at the early stage of the development of the **kBlogCentral**. However, after using **kBlogCentral**, I now employ critical reflection as my personal methodology in handling my daily activities. Through this methodology, I can uncover any potential professional errors or assumptions, in my daily activities. Apart from learning about critical theory and reflective practitioner research, I now understand better that Confucianism also advocates people to perform critical reflection to examine their actions. I like the following quote:

The philosopher Tsang said, "I daily examine myself on three points: whether, in transacting business for others, that I may not have been faithful; whether, in intercourse with friends, I may not have been sincere; whether I may not have mastered and practiced the instructions of my teacher."

The Analects (1:4)

Chi-Tzū: I have a mixed feeling in using **kBlogCentral**, in particular using our newly developed design methodology. On one hand, I am happy that we can, by following our design methodology and using **kBlogCentral**, enhance the quality of people's lives through better understanding of their personal and community needs. However, on the other hand, I have lost part of my influence in deciding which design is the best or more suitable for a particular project. I inevitably have negative feelings when we have differing opinions concerning our designs and we need to coordinate our opinions through discourses in **kBlogCentral** in order to work out the best and most suitable design. I am a kind of person that likes to express myself in my works. I consider that **kBlogCentral**, in some circumstances, has a side effect

of repressing my desire to express myself in my works. Despite the mixed feelings, **kBlogCentral** and the newly developed methodology has changed me from being intuitive to being logical and systematic in managing my work and personal activities.

Kwan-Tzū: I was rather pessimistic on the future of the People's Republic of China. Today, China is facing tremendous problems like huge income disparity, unemployment, ecological disasters, decline of traditional values, spiritual crises and so on. My experience in using **kBlogCentral** has, more or less, changed my view, as I now think communicative actions and revival of traditional values may help China in overcoming some of the apparently imminent societal threats. However, I foresee that the path for China's future is going to be at least turbulent and to say the least; we will be living in 'interesting times'.

Mi-Tzū: Before using **kBlogCentral**, I had never had a constructive argument with my supervisors because of my previous (perhaps wrong) assumptions to absolutely respect my superiors. Through using the

kBlogCentral, I understand the importance of the notion of an ideal speech situation in knowledge building and now I communicate with my team members freely without any unnecessary reservations.

Pe-Tzū: My motto was the Confucian saying that “a superior man is modest in his speech, but exceeds in his actions”. I was afraid to get into discursive discourse with others or even dare to voice my differing opinions in order to avoid affecting the interpersonal relationships among my valued colleagues. The development and implementation of **kBlogCentral** led me to understand that we, as Chinese, are handicapped by our disguised and overly subtle way of expressing ourselves. I have critically examined this issue and changed my motto to “a superior man is communicative in his speech, and becomes excellent in his actions”. Besides, I can better understand the beliefs and behaviours of my colleagues through reading their blog entries accumulated in **kBlogCentral** over time. Overall, these processes are helpful in dissolving our over-protective barriers that hinder trust building among all staff.

Yu-Tzū: I think the rationale behind the **kBlogCentral** is too difficult for me to comprehend. However, the development processes of **kBlogCentral** have led me to change myself into a learning person. I do think that our firm needs to become more of a learning organization as well.

Fergus: This dialogue demonstrates some of the various opinions that my professional colleagues have about **kBlogCentral**. Although some express some doubts, nearly all seem to be positive perhaps largely because of the results obtained through superior access to mutual knowledge, both explicit and implicit. As an example, consider my following entry in **kBlogCentral** explaining the New Year Mission and Vision Statement.

Conrad Interior Design Ltd.

New Year Mission and Vision Statement

Time is passing away quickly, another year has gone, and I hope you can take this chance to reflect on what you have gained or lost during this last year?

We thank all of you for the efforts you contributed to the company, as it was your 'blood' and 'sweat' that enable our company to grow steadily. However, do you aware that most of our efforts could well have been wasted without any added value? If we lack knowledge and suitable mindsets, we would stay only at the labour end but not the knowledge end of our work. Unless we continue learning and cultivating ourselves it is inevitable that our customers will eventually value our designs merely by the weight of our drawings but not the quality of the superior designs communicated through the drawings that we deliver to them on the hope of acceptance by the client.

I strongly advise you in taking a first person stance, and to think about the following questions:

1. What are human beings?
2. According to the definitions I gave in (1) what made human beings transcend other animals?
3. What is being?
4. What is the purpose for my being?

5. What are my objectives?
6. Did I have any plan for my objectives?
7. Did I devote my efforts for my plan?
8. If I don't want to devote efforts for my plan to achieve my objectives, do I need to rethink the above questions from (1) again?

Since I joined this company, I discovered we have a broad and deep talent pool. Due to historical reasons, some staff could not realize their true potential. Did you reflect on the reasons for that? My belief is to provide a suitable platform for all of you to enhance yourselves in your career and learning. Under limited resources, I imposed some measures to improve this platform - we moved to a comfortable office, employed someone to prepare healthy lunches, restructured the organization, improved remuneration packages, improved business processes, improved IT facilities, imported the concepts of action research and built a blog-based Knowledge Management System (**kBlogCentral**) to name a few new facilities and actions. All these measures aim at transforming you into a learning person and our company into a learning organization. The purpose is to create a win-win-win situation between company, staff, and our clients.

I am inclined to believe in the Confucian doctrine that the nature of the human being is 'good'. So, have you realized that I avoid talking punishments but instead give rewards ...I hope all of you adopt a responsible attitude towards what our company has done for us all within last two years.

Our Vision

Enhance human life through various linguistic skills.

Our Mission

Conforming to Client's objectives and budgeting, we aim at maximizing clients' returns through fulfilling the final users' needs.

Our Objectives

To become and be known as a knowledge-based interior design company, and from this unique approach, become the leader in the interior design industry of China before 2010.

We need

- A functional, beautiful, comfortable, and tidy working environment.
- A flat organizational structure to facilitate multi-directional communications.
- An agile organisation, with a loose while highly cohesive virtual team.
- A harmonized and trusted working relationship among all with whom we deal.
- Proactive, ever-learning, and multi-skilled staff.
- Practical but creative mindsets.
- Strong physical bodies and healthy souls.

Happy New Year

2006

Dr Williams: I would like you to reflect on the above document when thinking about the research question for this thesis: “How did the process of developing and using a Blog-based reflective practitioner knowledge management system, with a sourced inspiration from Chinese philosophy, change the professional practice of members of a Chinese interior design firm?”

Fergus: I realize, on re-reading and reflecting on the Vision Statement, that the major changes in the professional practice of myself and my colleagues, are that we are now significantly more communicative in an open, honest, and non-coercive manner. In other words, we are now engaging in more ideal speech situations (Habermas, 1972).

Dr Williams: In what ways are you engaging in ideal speech situations?

Fergus: We are all making validity claims arising from this process in which we communicate freely, honestly, and openly with no coercion or distortion. Following Habermas, we emphasise the importance of self-reflection. For Habermas, the overall goal of discourse is "an inter-subjective mutuality of reciprocal understanding, shared knowledge, mutual trust, and accord with one another" (Held, 1980, p. 333). This can only be achieved by each participant reflecting on his or her words and practice.

Dr Williams: Your words remind me what Reason and Torbett's (2001) call for when they argue for a "turn to action" in the first, second and third person

level of social involvement. But human communication can be distorted by communicative incompetence, by domination, by unbalanced instrumental action and/or strategic action, and by indoctrination and propaganda.

Fergus: Yes, we do need to be careful especially as I am the owner of the firm and the instigator of the **kBlogCentral**. Staff may feel coerced to say what they think. In the ideal world, the better argument should move people towards agreement and consensus (Held, 1980).

Dr Williams: But that do you really mean when you use the term “the *better* argument”?

Fergus: In the **kBlogCentral** discussions I have actively encouraged dissent and encouraged differences of opinion as a healthy part of cooperative inquiry. Many times we should use the term *different* rather than *better*. Difference is more conducive to cooperation and deeper inquiry as we can explore underlying assumptions.

Dr Williams: I agree but how do you get some sort of validity or consensus?

Fergus: I like what Heron (1988, p. 44) offers: "validity is enhanced by a diversity of views that overlap. It is not found simply in the common properties of the different views, but rather in the unity-in-variety of these views".

Dr Williams: That is well put. Is that why you have used so much conversation in your thesis?

Fergus: The dialogue format that I have used extensively in this thesis allows this "unity in variety" of the different views to enhance the validity of my assertions. The Analects of Confucius are largely written in a dialogical format. In using dialogue as a major writing style within the thesis I am following the style used in the Analects. Confucius's disciples wrote the Analects using dialogues of their conversations with Confucius.

Dr Williams: So what is your final assertion in the thesis?

Fergus: My final assertion is that the development and use of our **kBlogCentral** has changed the professional practice of members of the design company by enhancing a diversity of views that overlap. These views overlap because of a common underlying element of Confucian heritage. This heritage is not just **kBlogCentral** in the common values of the different views, but rather in the unity-in-variety of these Confucian values. I contend that the way in which this thesis is written, and the rich descriptions within, testifies to this assertion.

HEURISTIC EPILOGUE

My words have clue, my actions have an underlying principle. ... Thus the Sage wears coarse garments, but carries a jewel in his bosom.

Lao Tzū, The Says (Tr. Lionel Giles)

To put the world in order, we must first put the national in order; to put the nation in order, we must put the family in order; to put the family in order, we must cultivate our personal life; and to cultivate our personal life, we must first set our hearts right.

Confucius, Analects

Dr Williams: In this very final section of your thesis you have a chance to tell us, following Confucius, how you have put your heart “right”.

Fergus: I put my heart right at the beginning of this research by allowing myself to be inspired by both Chinese and Western influences. The outward form of this thesis is Western. My heart follows both Lao Tzū and Kung Tzū (Confucius). The heuristic and poetic aspects of this research are inspired by Lao Tzū, the sage who “carries a jewel in his bosom”. The more formal and regulated aspects of the research, inspired by Confucius, are part of my contribution to the task of putting “the nation” and from this, “the world in order”.

Dr Williams: Referring to the quote what is the “clue ... the underlying principle” that you have followed in this research?

Fergus: My clue, my underlying principle, is that I have chosen in this research, to break free, to seek new meanings through my own eureka discoveries from my creative wanderings, wonderings, and self-reflections. I decided to break free from what is still the norm in

most doctoral theses which Mezirow states is similar to the situation "in traditional societies [where] learning focuses on acquiring the outlook and skills necessary to perform according to well established rules and customs" (Mezirow, 1990, p. xiii). By pursuing a heuristic autoethnographic reflective practitioner research style, I have experienced what Shor (1987) describes as "extraordinarily re-experiencing the ordinary" (1987, p. 3).

Dr Williams: Now that we near the end of your thesis, perhaps the following poem from the Western tradition expresses your feelings:

*We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.*

T.S. Eliot, Four Quartets, 1971

Fergus: Yes, I do feel like this. But I would rather express my feeling within the Chinese philosophical realm.

Life is finite, while knowledge is infinite

Zhuang-Tzū

Dr Williams: We exchanged some emails earlier on where we agreed that you have a passion for empowering yourself and your colleagues through inspiration from Chinese philosophy. Where does this passion come from?

Fergus: I don't know where this passion comes from. Perhaps it is part of my personality or habits of life. I love knowledge and learning. I also want to contribute to the increase in self esteem of the Chinese people. I think that there are many reasons why I have chosen to include inspiration from Chinese philosophy as a core element of the research. One major reason is because I think it can really lead to good effects in the design company. I could have chosen to leave this element out of the research and focus only on the changes due to the development and initial use of the **kBlogCentral**. But I came to realise that to incorporate Chinese philosophy, especial Confucianism, would lead to increased efficiency, effectiveness, and empowerment for my colleagues.

Dr Williams: Why especially Confucianism and not so much Taoist philosophy?

Fergus: Confucianism concentrates on benefits to this present world because it is practical, real and rich. It promotes harmony in the following areas:

1. The individual person: through education and the cultivation of one's humanity.
2. Interpersonal relationships: through the practice of ritual and propriety in respecting persons and institutions such as government, managing authority, schools, work structures, family, marriage, friendships, etc.
3. In the general society and culture: The overarching idea is for the practice in the human world to mirror the perfection in the Heaven.

Reflecting on (1) and (2), I consider that Confucianism helps to address the problem of moral crisis in China and in the world. Reflecting on (3), I consider that Confucianism helps to address the moral and environmental problems. It seems to me that all these are in line with the thinking of Habermas (1984, 1987).

Dr Williams: As this thesis has progressed it seems to me that you have become more and more influenced by Confucianism.

Fergus: Over thousand of years the Chinese have found the sayings of Confucius are so inspirational that you can lead your life and good governance by them. I am rediscovering this. There is a famous story that Zhao-Pu (922-992), secretary of one of the emperors of Song dynasty in ancient China, said that a nation can be managed with only half of the contents of the Analects. Perhaps he was exaggerating when making such claim but he believed that China would be benefited from the guiding ethos of the Confucian philosophy. As a heuristic discovery I could say that I am coming to think that our firm could manage our knowledge, and manage our information systems, with one half of the contents of the Analects.

Dr Williams: These are major heuristic discoveries that really should lead to further research.

Fergus: Yes, I agree. I would like to conduct further research in this area. One research topic could be: “Can Confucianism provide a basis for knowledge management in China”. Researching this is my next challenge.

References

- Ackoff, R. L. (1996) "On Learning and the Systems that Facilitate It", *Center for Quality of Management Journal*, (5)2, 27-35.
- Agger, B. (1991). *A Critical Theory of Public Life: Knowledge, Discourse and Politics in an Age of Decline*. London: Palmer Press.
- Alavi, M. & Leidner, D. E. (1999). "Knowledge Management Systems: Issues, Challenges, and Benefits" *Communications of the AIS*, 1 Article 7.
- Alavi, M. & Leidner, D. E. (2001). "Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues" *MIS Quarterly*, 25 (1), 107-136.
- Audi, R. (1995). *The Cambridge Dictionary of Philosophy*. New York: Cambridge University Press.
- Barone, T. E. (1988). "Curriculum Platforms and Literature". In L. Beyer & W. Apple, (Eds.) *The Curriculum: Problems, Politics and Possibilities*, 64-89. New York: State University of New York Press.
- Bates, D. G. & Plog, F. (1980). *Cultural Anthropology*. 2nd Edition. New York: Alfred A. Knopf.
- Baumard, P. (1996). *From Infowar to Knowledge Warfare: Preparing for the Paradigm Shift*. [online]. Available from:
[http://gcc.uni-paderborn.de/www/WI/WI2/WI2_LIT.NSF/fb8fb1b65f7e25e3412568ce0052e511/6dee8c20b2de65004125692e00693585/\\$FILE/baumard.htm](http://gcc.uni-paderborn.de/www/WI/WI2/WI2_LIT.NSF/fb8fb1b65f7e25e3412568ce0052e511/6dee8c20b2de65004125692e00693585/$FILE/baumard.htm) [Accessed 9 September 2004].
- Bennet, D. & Bennet, A. (2003), "The Rise of the Knowledge Organisation". In Holsapple, C.W. (Ed.) *Handbook on Knowledge Management*, Volume 1, 5–20. Berlin: Springer.

- Biggam, J. (2001). "Defining Knowledge: An Epistemological Foundation for Knowledge Management" *Proceedings of the HICSS-34 Conference, IEEE, Virtual and Knowledge-based Information Minitrack*, Maui, Hawaii.
- Bond, M. H. (1991). *Beyond the Chinese Face: Insight from Psychology*. Oxford University Press.
- Blood, R. (2000). *Weblogs: A History and Perspective* [online]. Available from: http://www.rebeccablood.net/essays/weblog_history.html [Accessed 8 August 2003].
- Bloor, G. & Dawson (1994). "Understanding Professional Culture in Organizational Context" *Organizational Studies*, 15(2), 1994, 275-295.
- Boisot, M. H. (1995). *Information Space: A Framework for Learning in Organizations, Institutions and Culture*. London: Routledge.
- Boisot, M. H. (1998). *Knowledge Assets*. Oxford: Oxford University Press.
- Boland, R. J., Tenkasi, R. V., and Te'eni, D. (1994). "Designing Information Technology to Support Distributed Cognition" *Organization Science* (5), 1994, 456-475.
- Bruner, J. (1990). *Acts of Meaning*. Cambridge, Mass: Harvard University.
- Butler, T. (2003). "From Data to Knowledge and Back Again: Understanding the Limitations of KMS" *Knowledge and Process Management*, 10(3), 144-155.
- Burton-Jones, A. (1999), *Knowledge Capitalism: Business, Work, and Learning in the New Economy*. Oxford: Oxford University Press.
- Burrell, G, & Morgan, G. (1979). *Sociological Paradigms and Organisational Analysis*. Ashgate: Brookfield, USA.

- Brown, J. S., & Duguid, P. (1998). "Organizing Knowledge" *California Management Review*, 40(3), 90-111.
- Brown, J. S., & Duguid, P. (2000). "Balancing Act: How to Capture Knowledge Without Killing It" *Harvard Business Review*, 78(3), 73-78.
- Carlsson, S., El Sawy, O. A., Eriksson, I. and Raven, A. (1996), "Gaining Competitive Advantage through Shared Knowledge Creation: In Search of a New Design Theory for Strategic Information Systems" *4th European Conference on Information Systems*, Lisbon, Portugal
- Cecez-Kecmanovic, D. (2001). "Doing Critical IS Research: The Question of Methodology". In E.M. Trauth (Ed.) *Qualitative Research in IS: Issues and Trends*, 141-162. Hershey: IDEA Group Publishing.
- Checkland, P. & Scholes, J. (1990). *Soft Systems Methodology in Practice*. London: Wiley.
- Chen, M. J. (2001). *Inside Chinese Business: A Guide For Managers Worldwide*. Boston: Harvard Business School Press.
- Cheng, C. Y. (2002). "An Onto-Hermeneutic Interpretation of Twentieth-Century Chinese Philosophy: Identity and Vision". In Chung-ying Cheng and Nick Bunnin (Eds.) *Contemporary Chinese Philosophy*, 365-404. Oxford: Blackwell Publishers Ltd.
- Child, J. & Warner, M. (2003). "Culture and Management in China" In Warner, M. (ed.) *Culture and Management in Asia*, 25-47. New York: Routledge.
- Chua, W. F. (1986). "Radical Developments in Accounting Thought", *The Accounting Review* 61(4): 601-32.
- Clandinin, D. (1993). *Personal Experience Methods in Research on Teaching*. Paper presented at the 1993 International Conference on Interpretive Research in Science Education, Taiwan Normal University, Taipei.

- Clandinin, D. & Connelly, F. (1994). "Personal Experience Methods" In N. Denzin & Y. Lincoln (Eds.), *Handbook of Qualitative Research*, 138-157. California: Sage.
- Conner, K. R., and Prahalad, C. K. (1996) "A Resource-Based Theory of the Firm: Knowledge Versus Opportunism," *Organization Science* (7), 1996, 477-501.
- Cook, S. D. N., & Brown, J. S. (1999). "Bridging Epistemologies: The Generative Dance Between Organizational Knowledge and Organizational Knowing" *Organization Science*, 10(4), 381-400.
- Creel, H. G. (1953). *Chinese Thought from Confucius to Mao Tse-Tung*. The University of Chicago Press.
- Crossan, M & Lane H. W. & White, R.E. (1999). "An organisational Learning Framework: From Intuition to Institution", *Academy of Management Review*. 24(3), 522-537.
- Dahlman, C. & Aubert, J. E. (2001). *China and the Knowledge Economy: Seizing The 21st Century*. Washington, D.C: World Bank.
- Davenport, T. H. & Jarvenpa, S. L. & Beers, M. C., (1996), "Improving Knowledge Work Process", *Sloan Management Review*, 37(4), 53-65.
- Davenport, T. H. & Prusak, L. (1998). *Working Knowledge*. Harvard University Press.
- Deetz, S. (1996). "Describing Differences in Approaches to Organization Science: Rethinking Burrell and Morgan and Their Legacy." *Organization Science*, 7(2), 191-207.
- Delong, D. W. & Fahey, L. (2000). "Diagnosing Cultural Barriers to Knowledge Management", *Academy of Management Executive*, 14(4) 2000, 113-127.
- Denzin, N. K. (1994). "The Art and Politics of Interpretation". In N. K. Denzin & Y. S. Lincoln (Eds.) *Handbook of qualitative research*, 500-515. California: Sage.

- Denzin, N. K. and Lincoln, Y. S. (2005). *The Sage Handbook of Qualitative Research*. 3rd Edition, London: Sage.
- Douglas, B. & Moustakas, C. (1984). *Heuristic Inquiry: The Internal Search to Know*. Detroit: Center for Humanistic Studies.
- Dretske, F. (1981). *Knowledge and the Flow of Information*. Cambridge, MA: MIT Press.
- Drucker, P. F. (1993). "The Rise of the Knowledge Society", *The Wilson Quarterly*, 17(2), 52-71.
- Eisner, E. (1992). "A Slice of Advice". *Educational Researcher*, June-July, 29-30.
- Erickson, F. (1986). "Qualitative Methods in Research on Teaching". In M. C. Wittrock (Ed.) *Handbook of Research on Teaching (3rd ed.)*, 119-161. New York: MacMillan.
- Fahey, L. and L. Prusak. (1998). "The Eleven Deadliest Sins of Knowledge Management.", *California Management Review*, 40(3): 265-277.
- Fairbank, J. K. (1987). *The Great Chinese Revolution, 1800-1985*. London: Chatto and Windus.
- Fang, T. (1981). *Chinese Philosophy, Its Spirit and Its Development*. Taipei: Linking Pub. Co.
- Fay, B. (1987). *Critical Social Science: Liberation and Its Limits*. Ithaca, NY: Cornell University Press.
- Fingarette, H. (1972). *Confucius - the Secular as Sacred*. Harper & Row.
- Foster, M. (1972), "An Introduction to the Theory and Practice of Action Research in Work Organizations", *Human Relations*, 25(6), 529-556.
- Fung, Y. L. (1947). *The spirit of Chinese philosophy*. (E. R. Hughes, Trans.). Boston: Beacon Press.

- Fung, Y. L. (1952). *A History of Chinese Philosophy: Vol. 1. The Period of the Philosophers*. (Derk Bodde, Trans.). Princeton: Princeton University Press.
- Fung, Y. L. (1953). *A History of Chinese Philosophy: Vol. 2. The Period of Classical Learning*. (Derk Bodde, Trans.). Princeton: Princeton University Press.
- Galliers, R. D. & Land, F. F. (1987) "Choosing Appropriate Information Systems Research Methodologies", *Communications of the ACM*, 30(11), 900-902.
- Graham, A. C. (1989). *Disputers of the Tao*. LaSalle: Open Court.
- Grant, R. M. (1996). "Toward a Knowledge-based Theory of The Firm" *Strategic Management Journal*, 17(1), 109-122.
- Grover, V., & Davenport, T. H. (2001). "General Perspectives on Knowledge Management: Fostering a Research Agenda", *Journal of Management Information Systems*, 18(1), 5-21.
- Guba, E. G. and Lincoln, Y. S. (1989). *Fourth Generation Evaluation*. California: Sage Publications.
- Habermas, J. (1972). *Knowledge and Human Interests* (Jeremy J. Shapiro, Trans.). London: Heinemann.
- Habermas, J. (1984). *The Theory of Communicative Action: Vol. 1. Lifeworld and System Critique of Functionalist Reason* (Thomas McCarthy, Trans.). Boston: Beacon.
- Habermas, J. (1987). *The Theory of Communicative Action: Vol. 2. Reason and the Rationalization of Society* (Thomas McCarthy, Trans.). Boston: Beacon.
- Hall, D. L. and Roger, T. A. (1998). Chinese Philosophy. In E. Craig (Ed.), *Routledge Encyclopedia of Philosophy*. London: Routledge. [online]. Available from: <http://www.rep.routledge.com/article/G001sect10> [Accessed 4 June 2006].
- Hansen, M. T., Nohria, N., & Tierney, T. (1999). "What's Your Strategy for Managing Knowledge?" *Harvard Business Review*, 77(2), 106-116.

- Hassard, J. & Pym, D. (1990). *The Theory and Philosophy of Organizations: Critical Issues and New Perspectives*. Routledge: London.
- Hassell, L. (2003). "A Philosophical Look at Knowledge Management" *Paper Presented at the Workshop on Knowledge Management and Philosophy*, Luzern, Germany.
- Heaslet, J. P. (1972). "The Red Guards: Instruments of Destruction in the Cultural Revolution", *Asian Survey*, 12(12), *The Cultural Revolution and Its Aftermath* (Dec., 1972), 1032-1047.
- Held, D. (1980). *Introduction to Critical Theory*. Cambridge: Polity.
- Heron, J. (1988). Validity in Co-operative Inquiry. In P. Reason (Ed.), *Human Inquiry in Action: Developments in New Paradigm Research* (pp. 40-59). London: Sage.
- Hicks, M. (1994). *Problem Solving in Business and Management*. London: Chapman and Hall.
- Ho, J. E. (1992). *East Asian Philosophy with Historical Background and Present Influence*. Peter Lang.
- Horkheimer, M. (1982). *Critical Theory*. New York: Seabury Press.
- Hirschheim R. (1985) "Information Systems Epistemology: An Historical Perspective". In Mumford, Hirschheim, Fitzgerald and Wood-Harper (Eds.) *Research Methods in Information Systems*, 13-36. Amsterdam: Elsevier.
- Hirschheim, R. & Klein, H. (1989). "Four Paradigms of Information Systems Development." *Communications of the ACM*. 32(10), 1199-1216.
- Hirschheim, R. & Klein, H. (1994) "Realizing Emancipatory Principle in Information Systems Development: The case for ETHICS", *MIS Quarterly*, 18 (1), 83-109.

- Hirschheim, R., Klein H. K. and Lyytinen, K., (1995). *Information Systems Development and Data Modeling: Conceptual and Philosophical Foundations*. Cambridge: Cambridge University Press.
- Hult, M. & Lennung, S. (1980). "Towards A Definition of Action Research: A Note and Bibliography", *Journal of Management Studies*, 17, 241-250.
- Hutchings, K. and Michailova, S. (2004). "Facilitating Knowledge Sharing in Russian and Chinese Subsidiaries: The Role of Personal Networks", *Journal of Knowledge Management*, 8(2):84-94.
- Hutchings, K. and Michailova, S. (2006). "National Cultural Influences on Knowledge Sharing: A Comparison of China and Russia", *Journal of Management Studies*, 43(3), 383-405.
- Hutchinson, W. & Warren, M. (2001). "Principles of Information Warfare", *Journal of Information Warfare*, (2001), 1 (1), 1-6.
- Kaplan, B. & Maxwell, J. A. (1994). "Qualitative Research Methods for Evaluating Computer Information Systems". In J. G. Anderson, C. E. Aydin & S. J. Jay (Eds.) *Evaluating Health Care Information Systems: Methods and Applications*, 45-68. Thousand Oaks, CA: Sage.
- Kaptschuk, T. J. (1983). *Chinese Medicine: The Web That Has No Weaver*. Rider.
- Kayworth, T. & Leidner, D. (2003). "Organizational Culture as a Knowledge Resource". In Holsapple, C.W. (Ed.) *Handbook on Knowledge Management*, Volume 1, 235-252, Berlin: Springer.
- Kemmis, S. & McTaggart, R. (1982). *The Action Research Planner*. Victoria, Australia: Deakin University Press.
- Khazanchi D. & Munkvold B. E. (2002). "On the Rhetoric and Relevance of IS Research Paradigms: A Conceptual Framework and Some Propositions", *Proceedings of the 36th Hawaii International Conference on System Sciences*, IEEE.

- Klein, H.K. (1999). "Knowledge and Methods in IS research: From Beginnings to the Future." In Ngwenyama, O., Introna, L., Myers, M.D. & DeGross, J.I. (Eds.). *New Information Technologies in Organizational Processes - Field Studies and Theoretical Reflections on the Future of Work*. (13-25). IFIP, Boston: Kluwer Academic Publishers.
- Klein, H. & Hirschheim, R. (1991). "Rationality Concepts in Information System Development", *Accounting, Management and Information Technology*, 1 (2), 157-187.
- Knight, R. D. L. (2001). *Knowledge Warfare: Vulnerability or Opportunity*. CSC28/CCEM28, Canadian Forces College. [online] . Available from: <http://198.231.69.12/papers/csc28/knight.doc> [Accessed 23 September 2004].
- Kreisher, O. (1999). "Next Steps in Information Warfare", *Journal of the Air Force Association*, June 1999, 82, (6), [online] . Available from: <http://www.afa.org/magazine/june1999/0699nextstep.asp> [Accessed 27 December 2003].
- Jennex, M. E. & Olfman, L. (2003). "Organizational Memory". In Holsapple, C.W. (Ed.) *Handbook on Knowledge Management*, Volume 1, 207-234, Berlin: Springer.
- Laaksonen, O. (1988). *Management in China During and After Mao in Enterprises, Government, and Party*. Berlin: W. de Gruyter.
- Lather, P. (1992). "Critical Frames in Educational Research: Feminist and Post-structural Perspectives", *Theory into Practice*, 31(2), 87-99.
- Lancy, D. F. (1993). *Qualitative Research in Education: An Introduction to The Major Traditions*. New York: Longman.
- Laudon, K.C. and Laudon, J.P. (1998). *Management Information Systems – New Approaches to Organization & Technology*, Prentice Hall, 5th Ed. London.

- Lee A. (1991). "Integrating Positivist and Interpretive Approaches to Organisational Research.", *Organisation Science*, 2(4), 342-365.
- Lenzo, K. (1995). "Validity and Self-reflexivity Meet Post Structuralism: Scientific Ethos and the Transgressive self". *Educational Researcher*, 24 (4), 17-23.
- Lewin, K. (1946). "Action Research and Minority Problems". *Journal of Social Issues*, 2, 34-46.
- Lomax, P. & Parker, Z. (1995). "Accounting for Ourselves: The Problematic of Representing Action Research" *Cambridge Journal of Education*, 25 (3), 301-314.
- Lyytinen, K. (1992) "Information Systems and Critical Theory", in M. Alvesson and H. Willmott (Eds.) *Critical Management Studies*, 59-180. London: Sage.
- Lyytinen, K. & Klein, H. (1985). "The Critical Theory of Jurgen Habermas As a Basis For a Theory of Information Systems", in E. Mumford, R. Hirschheim, G. Fitzgerald, and T. Wood-Harper (Eds.) *Research Methods in Information Systems*, 219-236. North Holland: Elsevier Science Publishers.
- Malhotra, Y. (2003). "Why Knowledge Management System Fail: Enablers and Constraints of Knowledge Management in Human Enterprises", In Holsapple, C.W. (Ed.) *Handbook on Knowledge Management*, Volume 1, 577-600. Berlin: Springer.
- Malhotra, Y. (1999). "Beyond 'Hi-Tech Hidebound' Knowledge Management: Strategic Information Systems for the New World of Business," Working Paper, BRINT Research Institute.
- Maslow, A. H. (1996). *The Psychology of Science*. New York: Viking
- McAdam, R. and McCreedy, S. (1999). "A Critical Review of Knowledge Management Models" *The Learning Organization*, 6(3), 91-100.
- McCarthy, T. (1978). *The Critical Theory of Jurgen Habermas*. Cambridge, Massachusetts: MIT Press.

- McGregor, Douglas. (1960). *The Human Side of Enterprise*. New York: McGraw-Hill.
- McGregor, D. (2000). "New Concepts of Management". In G. Heil, W. Bennis & D.C. Stephens (Eds) *Douglas McGregor, Revisited: Managing the Human Side of The Enterprise*, 145-153. New York: John Wiley.
- McNiff, J., Lomax, P. & Whitehead, J. (1996). *You and Your Action Research Project*. London: Routledge.
- Merriam-Webster Online Dictionary. [online] . Available from: <http://www.m-w.com/info/04words.htm> [Accessed 27 December 2004].
- Mezirow, J. (1990). *Fostering Critical Reflection in Adulthood: A Guide to Transformative and Emancipatory Learning*. (1st Ed.). Jossey-Bass: San Francisco.
- Michailova, S. and Hutchings, K. (2006). "National Cultural Influences on Knowledge Sharing in China and Russia", *Journal of Management Studies*, 43(3): 383-405
- Miles, M. and Huberman, M. (1994). *Qualitative Data Analysis*. Thousand Oaks, CA: Sage.
- Moustakas, C. (1990). *Heuristic Research: Design, Methodology and Applications*. Newbury Park: Sage.
- Muller, C. (2004). "The Analects of Confucius" (Trans.). [online] Available from: <http://www.hm.tyg.jp/~acmuller/contao/analects.htm> [Accessed 3 March 2006].
- Myers, M. D. (1997). "Qualitative Research in Information Systems," *MIS Quarterly* (21:2), June 1997, 241-242.
- Ngwinyama, O. K. (1998). "Groupware, Social Action and Organizational Emergence: on the Process Dynamics of Computer Mediated Distributed Work", *Accounting, Management and Information Technologies*, 8, 127-146.

- Na Ubon, A. and Kimble, C. (2002). "Knowledge Management in Online Distance Education", in *Proceedings of the 3rd International Conference Networked Learning 2002*, University of Sheffield, UK, March 2002, 465-473.
- Ngwonyama, O. K. & Lee, A. S. (1997). "Communication Richness in Electronic Mail: Critical Social Theory and the Contextuality of Meaning", *MIS Quarterly*, 21 (2), 145-167.
- Nonaka, I. (1994). "A Dynamic Theory of Organizational Knowledge Creation", *Organization Science*, February 1994, 5 (1), 14-37.
- Nonaka, I., & Konno, N. (1998). "The Concept of 'Ba': Building a Foundation for Knowledge Creation." *California Management Review*, 40(3), 40-54.
- Nonaka, I. & Takeuchi, H. (1995). *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation?* New York: Oxford University Press.
- Nonaka, I., Toyama, R. and Konno, N. (2000). "SECI, Ba and Leadership: a Unified Model of Dynamic Knowledge Creation." *Long Range Planning* 33: 5-34.
- Orlikowski, W. J. (2002). "Knowing in Practice: Enacting a Collective Capability in Distributed Organizing." *Organization Science*, 13(3): 249-273.
- Orlikowski W. J. & Baroudi, J. J. (1991). "Studying Information Technology in Organizations: Research Approaches and Assumptions" *Information Systems Research*. 2(1), 1-28.
- Overmeer, W. J. A. M. & Friedman, V. J. & Lanzara, G. F. (1998). "Managing as Design: Business Education for the 21st Century", *Reflective Practitioner: Paper #4, Online Conference in Memory of Don Schon, and his 'The Reflective Practitioner'*. [Online] Available from: <http://www.lupinworks.com/ar/Schon/Paper4.html> [Accessed 6 June 2005].

- Pauleen, D. J. and Murphy, P. (2005). 'In Praise of Cultural Bias', *MIT Sloan Management Review*, Winter 2005, 46(2), 21-22.
- Patton, M. Q. (1980). *Qualitative Evaluation Methods*. Beverly Hills: Sage.
- Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods* (2nd edition.). Newbury Park, CA: Sage Publications.
- Patterson, L. & Shannon, P. (1993). "Reflection, Inquiry, Action". In L. Patterson, C.M. Santa, K.G. Short & K. Smith (Eds) *Teachers are Researchers: Reflection and Action*. Portsmouth: Heinemann.
- Pitman, M. A. & Maxwell, J. A. (1992). "Qualitative approaches to evaluation: Models and methods," In M.D. LeCompte, W.L. Millroy and J. Preissle (Eds) *The Handbook of Qualitative Research in Education*, 729-770. San Diego, Calif.: Academic Press.
- Polanyi, M. (1962). *Personal Knowledge*. University of Chicago Press.
- Polanyi, M. (1967). *The Tacit Dimension*. London: Routledge and Kegan Paul.
- Pusey, M. (1987). *Jurgen Habermas*. Chichester, U.K: Ellis Horwood.
- Rapoport, R. (1970). "Three Dilemmas in Action Research", *Human Relations*, 23 (6), 499-513.
- Reason, P. & Goodwin, B. (1999). *Towards a Science of Qualities in Organisations: Lessons From Complexity Theory and Postmodern Biology*. [online] Available: <http://www.bath.ac.uk/~mnsppwr/Papers/sciencequalities.htm> (viewed on 20 September 2006).
- Reason, P. & Torbert, W. (2001). *The Action Turn: Toward a Transformational Social Science*, [Online]. Available: <http://www.bath.ac.uk/~mnsppwr/Papers/TransformationalSocialScience.htm> (viewed on 17 August 2006)

- Remenyi, D. and Williams, B. (1996). "The Nature of Research: Qualitative or Quantitative, Narrative or Paradigmatic?" *Information Systems Journal*, 6: 131 - 146.
- Richardson, L. (1994). "Writing: A Method of Inquiry". In N. Denzin & Y. Lincoln (Eds.) *Handbook of Qualitative Research*, 516-522. California: Sage.
- Rong, J. J. (2006). "Unmasking All Bloggers: A Cure or A Killjoy? ", *China Daily*, 27 December, 13.
- Sayer, A. (1992). *Method in Social Science: A Realist Approach*. Second Edition. London: Routledge.
- Schon, D. (1983). *The Reflective Practitioner*. U.S.A.: Basic Books.
- Schutz, A. (1954). "Concept and Theory Formation in The Social Sciences", *The Journal of Philosophy*, LI (9):257-272.
- Schultze, U. (1998). "Investigating the Contradictions in Knowledge Management", *IFIP WG8.2 & WG8.6 Joint Working Conference on Information Systems: Current Issues and Future Changes*, Helsinki, Finland, Omnipress, Wisconsin, USA.
- Schultze, U., & Boland, R. J. (2000). "Knowledge Management Technology and the Reproduction of Knowledge Work Practices" *Journal of Strategic Information Systems*, 9(2-3), 193-212.
- Schwartau, W. (1996). *Information Warfare*. Thunder's Mouth Press.
- Schwartz, B. I. (1985). *The World of Thought in Ancient China*. Cambridge, Mass: Harvard University Press.
- Shi, Z. (1997). "The Ontology of Contemporary Confucianism and Modernization". In Liu, F. & Huang, S. & McLean, G. F. (Eds.) "Philosophy and Modernization in China – Chinese Philosophical Studies XIII". Washington, D.C: The Council for Research in Values and Philosophy.

- Shor, I. (1987). *Critical Teaching and Everyday Life*. Chicago: University of Chicago Press.
- Somasundaram, R. & Karlsbjerg, J. (2003) "Research Philosophies in the IOS Adoption Field", *Proceedings of the 11th European Conference on Information Systems*, ECIS 2003, Naples, Italy 16-21 June 2003.
- Spence, J. D. (1999). *The Search for Modern China*. Second edition. New York: W. W. Norton.
- Spender, J. C. (1996). "Making Knowledge the Basis of a Dynamic Theory of the Firm", *Strategic Management Journal*, 17(Special Winter issue), 45-62.
- Standing, C. & Campbell Williams, M. (1993 a). "Methodological Pluralism for Managing Departmental Change: An Interpretive Action-Research Case Study within a University Information Systems Department". In A. Herrman & Colin Latchem (Ed.) *Proceedings of the Forum for Teaching and Learning in Higher Education*, 173-184. Perth, Western Australia: Curtin University.
- Standing, C. & Campbell Williams, M. (1993 b). *Business Re-engineering From an IS Perspective*. Paper presented at the Information Technology Update'93 conference, Edith Cowan University, Perth, Western Australia.
- Standing, C. & Campbell Williams, M. (1993 c). "Methodological Pluralism in a Rapidly Changing IT Environment". In B. Glasson & V. Pervan (Eds.), *Proceedings of the International Federation of Information Processing Professionals Conference*, 23-25. Perth, Western Australia: Curtin University.
- Storey, J. and Barnett, E. (2000). "Knowledge Management Initiatives: Learning From Failure" *Journal of Knowledge Management* 4(2): 145-56
- Susman, G. & Evered, R. (1978). "An Assessment of the Scientific Merits of Action Research," *Administrative Science Quarterly*, 23 (4), 582-603.
- Takeuchi, H. (2001). "Towards a Universal Management Concept of Knowledge" In Nonaka, I. and Teece, D. J. (Eds.) *Managing Industrial Knowledge: Creation, Transfer and Utilization*, 315-329. London: Sage Publications.

- Tesch, R. (1990). *Qualitative Research: Analysis Types and Software Tools*. New York: The Fulmer Press.
- Tiwana, A. (2002), *The Knowledge Management Toolkit: Orchestrating IT, Strategy, and Knowledge Platforms* (2nd Edition), Upper Saddle River, NJ: Prentice Hall.
- Tsoukas, H. & Vladimirou, E. (2001). "What is Organizational Knowledge?", *Journal of Management Studies*, 38(7) November 2001, 973-993.
- Tuomi, I. (1999). "Data is More Than Knowledge: Implications of the Reversed Hierarchy for Knowledge Management and Organizational Theory", *Proceedings of the Thirty-Second Hawaii International Conference on Systems Science, IEEE Computer Society Press*, Los Alamitos, CA.
- UKAIS. (1995). Information Systems-subject Definition and Scope. UKAIS newsletter, 1(3), 3.
- Van Maanen, J. (1988). *Tales of the Field: On Writing Ethnography*. Chicago: University of Chicago Press.
- Van Manen, M. (1989). *Researching Lived Experience: Human Science For An Action Sensitive Pedagogy*. London, Ontario: Althouse.
- von Krogh, G. (1998). "Care in Knowledge Creation" *California Management Review*, 40(3), 133-153.
- von Krogh, G., Ichijo, K., & Nonaka, I. (2000). *Enabling Knowledge Creation: How to Unlock the Mystery of Tacit Knowledge and Release the Power of Innovation*. Oxford, UK: Oxford University Press.
- Walsham, G. *Interpreting Information Systems in Organizations*, Wiley, Chichester, 1993.
- Walsham, G. (1995). "The Emergence of Interpretivism in IS Research", *Information Systems Research* 6(4): 376-94.

- Weber, R. (2004). "The Rhetoric of Positivism Versus Interpretivism: A Personal View" *MIS Quarterly* 28(1), iii-xii.
- Weir, D. & Hutchings, K. (2005). "Cultural Embeddedness of Knowledge Sharing in China and the Arab World", *Knowledge and Process Management*, 12(2): 89-98.
- Wijnia, E. (2004). "Understanding Weblogs: A Communicative Perspective". In T. Burg (Ed.) *BlogTalks 2.0: The European Conference on Weblogs*, 38-82.
- Williams, M. (1996a). *A Self-study of University Information Systems Teaching Reform: "It All Went Wrong ..."* Unpublished Doctoral Thesis. Perth, W.A.: Curtin University of Technology.
- Williams, M. (1996b). *Hidden Aspects of Our Selves in Self-study: Using Symbolic Pictures*. Paper presented at the Castle Conference, Herstmonceux, East Sussex, England.
- Williams, M. (2004). *Write a Doctoral Thesis about Work: Professional Action Research*. Williams, M. & Dick, B. (Eds.) Cottesloe WA 6911; Resource Press.
- Willis, P. (1999). "Looking for What It's Really Like: Phenomenology in Reflective Practice, *Studies in Continuing Education*, 21(1), 91-112.
- Wrede, O. (2003) *Weblogs and Discourse*. [online] . Available from: http://weblogs.design.fh-aachen.de/owrede/publikationen/weblogs_and_discourse. [Accessed 7 October 2004].
- Xu, Z. J. (2001). "Ancient Chinese Philosophers on the Methods of Inquiry", *New Waves Educational Research & Development* 6(3) September, 2001, Chinese American Educational Research and Development Association, CAERDA.
- Zack, M. (1998), "An Architecture for Managing Explicated Knowledge", *Sloan Management Review*, September 1998.
- Zack, M. (1999), "Developing a Knowledge Strategy", *California Management Review*, Vol.41 (3), 125-145.

Zald, M. N. (1993). "Organizational Studies As a Scientific and Humanistic Enterprise: Towards a Reconceptualization of the Foundations of the Field". *Organization Science*, 4 (4), 513-528.

Zhu, Z. (2004). "Knowledge Management: Towards a Universal Concept or Cross-cultural Contexts?" *Knowledge Management Research & Practice*, 2(2), 67-79.

APPENDIX A

INFORMATION LETTER TO PARTICIPANTS

**Employing Action-Reflective Practitioner Research and Blogs to
Manage Knowledge in China: An Action-Reflective Practitioner Case Study**

Investigator: Mr. Chun Kwan LAW

Principal Supervisor: Professor Craig STANDING

GENERAL INFORMATION

You are invited to participate in a research project of building a low cost knowledge management system in China. This research project is being undertaken as part of the requirements of a DBA(IS) at Edith Cowan University. The goal of this study is to build a model for employing Blogs and Action-Reflective Practitioner Research to build a low cost knowledge management system for our interior design firm.

Before you sign the attached Informed Consent Document, please take your time to read and understand all the information that is provided in this letter.

STUDY PROCEDURE

Following materials will be critically reflected and analysed during the process of this study:

- (1) Qualitative data from previous interviews/discussions with staff members.
- (2) Minutes of meetings.
- (3) Staff appraisal reports.
- (4) Researcher's memos of reflection.
- (5) Company documents relevant to the research e.g. workshop handouts, internal circulars, etc.
- (6) Postings on the blog-based knowledge management reflective practitioner system.

As this is an Action-Reflective Practitioner study, no additional information will be sought from you during the process of this study.

BENEFITS

Benefits of participating in this study may include:

- (1) You may have a better understanding of your working environments.
- (2) You may use the knowledge management system to create, store and share knowledge with other staff members.
- (3) You may unveil any mistaken assumptions or ideologies through self reflections.

VOLUNTARY PARTICIPATION

You are free to participate in this study or withdraw from it at any time on verbal notice without having to explain the reasons of your decision; records (e.g. blogs, staff appraisals, etc.) of those staff members who do not give consent will not be used for the purposes of this research. If you decide not to participate or to withdraw, it will

have no bearing on my professional relationship with you. Whatever your decision, your current position will not be prejudiced.

CONFIDENTIALITY

Any data gathered during the process of this study will be kept strictly confidential and will be solely used for the purpose of this research. Fictive anonymous accounts will be used to ensure the confidentiality of participants' identities when writing up the thesis. Any report published as a result of this study will not identify you by name and all participants will receive a copy of research findings when they become available.

PERSONNEL RESOURCES

If you have any concerns or complaints about the research project and wish to talk to an independent person, you may contact:

Kim Gifkins

Research Ethics Officer

Edith Cowan University

100 Joondalup Drive

JOONDALUP WA 6027

Phone: (08) 6304 2170

Email: research.ethics@ecu.edu.au

I should be grateful if you would complete and return the attached Informed Consent Document in the self-addressed envelope provided. If you require more information

about the research project or if you have any problems or questions regarding this study, please feel free to contact:

Mr. Chun Kwan LAW

DBA(IS) Candidate

School of Management Information Systems

Faculty of Business and Law

Edith Cowan University

100 Joondalup Drive

JOONDALUP WA 6027

Phone: +86 13622210000

Email: mail2fergus@gmail.com

Yours sincerely,

Mr. Chun Kwan LAW

INFORMED CONSENT DOCUMENT

**Employing Action-Reflective Practitioner Research and Blogs to
Manage Knowledge in China: An Action-Reflective Practitioner Case Study**

Investigator: Mr. Chun Kwan LAW

Principal Supervisor: Professor Craig STANDING

(Please fill in the form below and return it in the self-addressed envelope provided.)

I _____ (The participant's full name) have been informed about all aspects of the above research project and any questions I have asked have been answered to my satisfaction.

I agree to participate in this activity, realizing that I may withdraw at any time. I also understand that it will have no bearing on my professional relationship with the researcher and my current position will not be prejudiced if I choose to withdraw from the study.

I agree that the research data gathered for this study may be published provided that I am not identifiable by name.

I hereby agree to take part in the captioned study.

Participant: _____ Date: _____

Investigator: _____ Date: _____