An Examination of the Trans-Nationality and Applicability of Nonaka's Theory in the Knowledge Management Context in the West

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Abstract

This paper aims to examine the trans-nationality and applicability of Nonaka's theory to the context of *knowledge management (KM) in the West*. In order to accomplish this aim, a range of literature related to KM in the West has been collected, presented and critiqued. Moreover, the discourse(s) of (the conceptualization of) KM in the West has been identified and examined in terms of the integrated framework, presented in the previous issue by the author. This has been done by utilizing an existing contents-analysis of journal article abstracts presented by European scholars.

This analysis suggests that the (three) approaches to KM identified by Raub & Rüling in the West require a much wider view of knowledge, one which incorporates Nonaka's four modes of knowledge conversion into their framework in a balanced way. In other words, it supported the possibility that Nonaka's theory offers a more comprehensive framework which covers all KM discourses in the West in a comprehensive manner.

Key words: Knowledge, Knowledge Management, Nonaka's theory, SECI model

1. Introduction

This paper aims to examine the trans-nationality and applicability of Nonaka's theory to the context of *knowledge management (KM)*, by using the integrated framework as criteria, which have been introduced in the previous issue of Yamanashi Global Studies.[1] In order to accomplish this aim, an range of literature related to KM in the West has been collected, presented and critiqued. Moreover, the discourse(s) of (the conceptualization of) KM in the West is identified and examined in terms of the integrated framework. This is done by utilizing an existing contents-analysis of journal article abstracts presented by European scholars. This will provide an opportunity to link Nonaka's SECI model to the discourse(s) of KM presented in existing literature related to KM in the West.

2. Definitions and trends of knowledge management

2.1 Definition of knowledge management

In spite of (or perhaps due to) the fact that KM has achieved considerable attention from academics and practitioners in the West over the decade, no unified definition of KM has as yet emerged. It seems that because of the complex and multifaceted nature of knowledge itself, the existing literature on KM defines knowledge according to the various authors' concerns about the topic. The following are some examples of the definitions of KM:

● Davenport & Prusak (1998): *Knowledge management is the process of increasing the efficiency of knowledge markets by generating, codifying, coordinating, and transferring knowledge*

● Alavi & Leidner (1999) : *Knowledge management*

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refers to a systemic and organizationally specified process for acquiring, organizing and communicating both tacit and explicit knowledge of employees so that other employees may make use of it to be more effective and productive in their work

● Swan et al. (1999)：*KM is defined very broadly, encompassing any processes and practices concerned with the creation, acquisition, capture, sharing and use of knowledge, skills and expertise whether these are explicitly labeled as 'KM' or not.*

Broadly speaking, from the above definitions, KM is largely seen as an organizational process and practice both at individual and group levels and regards knowledge as a crucial resource for sustaining and achieving organizational competitiveness. It also includes a variety of activities such as knowledge creation, codification, sharing, coordination, and transfer, all of which are associated with both tacit and explicit knowledge. All the definitions provided are roughly consistent with Nonaka's theory, which values organizational activities concerned with knowledge conversion between tacit and explicit knowledge through social interaction as the key for enhancing and sustaining organizational advantage.

2.2　*Proliferation of knowledge management in the West*

KM has received widespread attention in the West. For example, a keyword search in November 2011 on the web site of *Amazon.co.uk* generated 35,822 hits for 'knowledge management' (c.f. Amazon.com (USA) yielded 36,717 at the same words).[2] It is interesting to make a comparison between the above and Amazon.co.jp which found only 2,458 hits for the words 'knowledge management' in Japanese.[3] This suggests that the conceptualization (not practice) of KM is to date a phenomenon found mainly in the West.[4] In the UK the early 1990s heralded interest in KM and its continued popularity is evident by the

creation of a journal devoted to KM (e.g. *Journal of knowledge management*) in addition to a number of other works specially concerned with the topic (see *Journal of Information Technology*, 2001, vo.16, for example).

Moreover, the appearance of several major review articles on KM by researchers in the UK is testimony to KM's growing stature in the research community (see Blackler, 1995 (UK); Blackler et al., 1998 (UK); Scarbrough et al., 1999 (UK); Swan et al., 2001 (UK)). In addition to this, from 2000 onwards the *European Conference on Organizational knowledge, Learning, and Capability (OKLC)*[5] has taken place every year, focusing on KM with an explicitly European focus as an attempt to integrate insights from a variety of disciplines and fields, such as information systems management, strategic management, organization theory, marketing, entrepreneurship, accounting and strands of sociology, psychology, economics, and philosophy.[6] Taking these facts together, it would be natural to suppose that KM promises to be a dominant perspective with influence on both researchers and practices in various fields throughout Europe.

3. Examining knowledge management discourse(s) in the West

3.1 Contents-analysis of journal article abstracts

The sustained interest in KM and the rapid proliferation of KM articles in the West raise an important question associated with the research presented here. That is, whether or not the KM articles in the West have any affinity in their conceptualization to Nonaka's theory, or what the relationships in the perspective between KM in the West, and Nonaka's theory are. To address this, it seems appropriate to base the examination on a contents-analysis of journal article abstracts related to KM as a starting point, in order to grasp the KM discourse(s) in a Western context and compare it with the theoretical framework of Nonaka's SECI

model. However, owing to the limited research in this field as a whole, greater emphasis is given to the works produced by researchers in Europe; namely, Raub & Rüling (2001).

3.2 Methodological limitations

Raub & Rüling (2001) have comprehensively examined KM trends in the West, using a number of journal articles linked to 'knowledge management'. The main original source was the ABI/Inform database, an on-line journal, between 1975 and 1998, in which 434 abstracts (including article titles and article keywords) which hit the key word 'knowledge management' were utilized as the research materials. Based on a preliminary analysis of approximately one hundred randomly chosen articles, the authors inductively categorized a certain number of variables that appeared to be of theoretical interest and analyzed the articles.

It should be noted here that, as the authors acknowledge, there are certain methodological limitations of database research of journal article abstracts. Firstly, the results of these analyses are determined by the quality of the databases themselves and this, for example, does not take into account any books that may have significance in adding to the KM discourse(s). Secondly, the results of these analyses depend on the categorization. For

example, they excluded articles related to KM that do not contain the term 'knowledge management' in their abstracts. Thirdly, although it is assumed that the databases used here provide a representative sample which is relevant to the KM field in the West, the articles in their databases may include those written by non-Western researchers.

Although the kinds of limitations outlined above cannot ensure empirical rigour, the research required for the paper will at least be able to track a KM literature discourse(s) in the West.

3.3 Findings of Raub & Rüling's research

One of the main findings of Raub & Rüling's data base analysis is that the authors identified that there are at least two separate KM discourses in accordance with the variable journal affiliation related to KM; namely, an IS/IT-driven KM[7] and a KM which focuses on issues of general managerial interest (such as a management, human resources, marketing or finance). The latter was labeled *MGT-KM* (general-management-oriented). Although this term is somewhat vague, it seems to only mean that which isn't 'IS/IT'. Table 1 displays seven content variables that show a significant correlation with at least one of two journal groups. From the table, it can be analyzed that the two discourses, or rather research communities, exist separately. Separate

Table1: Associations with 'journal function' (Source: Raub & Rüling, 2001)

Article content	Journal affiliation: IS/IT	Journal affiliation: MGT
IT systems	0.160**	-0.123*
IT tools	0.228**	-0.178**
Knowledge management tools	0.116*	Not significant
Learning	-0.203**	0.126*
Intellectual capital	-0.166**	0.153**
Generic knowledge management processes	-0.105*	0.134**
Strategic implications	-0.145**	0.113*

Spearman's ρ, n-398.
*Correlation significant at the 0.5 level (two-tailed)
**Correlation significant at the 0.1 level (two-tailed).

journals examine each theme and issue related with KM with little overlapping or shared interest and with little collaboration beyond research communities.[8]

Based on the journal database, Table 2 shows a knowledge management discourse *from a temporal perspective*. If an article was mentioned at least

Table2: Share of abstracts in terms of condensed content categories (IS/IT vs. MGT) (Source, Raub & Rüling, 2001)

Article year	Condensed content category				
	Others	IS/IT only	MGT only	IS/IT and MGT	Total
1975 (Count/percentage)	4	-	-	-	4
	100.0	-	-	-	100.0
1983	-	1	1	-	2
	-	50.0	50.0	-	100.0
1984	-	1	-	-	1
	-	100.0	-	-	100.0
1985	-	2	-	-	2
	-	100.0	-	-	100.0
1986	1	1	-	-	2
	50.0	50.0	-	-	100.0
1987	1	3	-	4	8
	12.5	37.5	-	50.0	100.0
1988	1	2	-	1	4
	25.0	50.0	-	25.0	100.0
1989	1	1	1	-	3
	33.3	33.3	33.3	-	100.0
1991	-	2	-	-	2
	-	100.0	-	-	100.0
1992	-	3	-	-	3
	-	100.0	-	-	100.0
1993	-	2	-	-	2
	-	100.0	-	-	100.0
1994		1	4	-	5
		20.0	80.0	-	100.0
1995		3	7	1	11
		27.3	63.6	9.1	100.0
1996	2	8	16	11	37
	5.4	21.6	43.2	29.7	100.0
1997	3	27	26	22	78
	3.8	34.6	33.3	28.2	100.0
1998	18	91	96	65	270
	6.7	33.7	35.6	24.1	100.0
Total	31	148	151	104	434
	7.1	34.1	34.8	24.0	100.0

one of the three elements；IT systems, IT tools or knowledge management tools, it was coded IS/IT. If at least one of the elements；processes, intellectual capital, measurement, strategic implications, human resources implications, organizational implications or learning was mentioned, it was coded MGT. Articles mentioning neither of these topics were coded others. From the table, it can be analyzed that whilst before 1994 articles related to KM were dominated by IS/IT approaches, from 1994 to 1996 MGT articles dominated the KM debate. This distinctive shift is consistent with the views expressed by Swan et al. (2001) who view the shift as 'a backlash of criticism against the 'KM' emphasis on technology'. In 1997 and 1998 both categories were represented on equal terms.

4. Examining knowledge management discourse(s) in the West in terms of Nonaka's SECI model

4.1 Applying the analysis to the integrated framework

It is interesting to apply the findings of Raub & Rüling to the integrated framework of the TEAM linguistic structure and Nonaka's SECI model (see Figure 1).[9] Figure 1 shows that *the IS/IT community* fall into the quadrant of the combination mode of knowledge conversion in Nonaka's terms (or the language function of transmitting meaning in the TEAM linguistic framework). This is because it views knowledge as explicit, readily codified as well as stored, say, in a computer, and easily transmitted to others. *The MGT community* may be divided into the quadrants of socialization and internalization modes (or the language functions of accumulating and measuring meaning) (e.g. learning, intellectual capital and strategic implication → the internalization mode, generic knowledge management processes → the socialization mode). This is because it has to deal with the human, context-specific and therefore tacit (implicit) dimension of knowledge.

This suggests that the majority of the different

communities fail to adequately grasp the totality of these diverse knowledge activities in a coherent and comprehensive manner and highlight only a few of the aspects of Nonaka's SECI model.

4.2 The emergence of the integrative perspective and its limitation

The other interesting result from Raub & Rüling's (2001) analysis is the rise of an integrative perspective between IS/IT implications and managerial issues in KM articles which have appeared from 1995 onwards (see Table 2). The emergence of the integrative perspective between those offering different viewpoints implies that both research communities in KM are communicating in order to overcome their theoretical limitations and to find the better or more practical solutions to organization needs. However, a close look at this new approach shows it remains a narrow perspective

of knowledge, limiting its focus on the successful implementation of IT. For example, Taylor et al. (2001), whose research is typical of the integrative approach to KM, produced case study research of the 25 organizations in the northwest of England, and identified a need for employees internalizing the skills and knowledge required for computer network support activities in order for IT tools to work effectively. The finding from this research is amply supported by Robey et al. (2000) who claim that the successful implementation of technologies will depend on organizational learning capacity.

Again, applying the integrated framework of the TEAM linguistic framework and Nonaka's SECI model to the arguments of the integrative perspective of KM, the result is most interesting (Figure 2). Figure 2 suggests that the *integrative perspective* of KM mainly expands focus or interest from the combination mode to the internalization
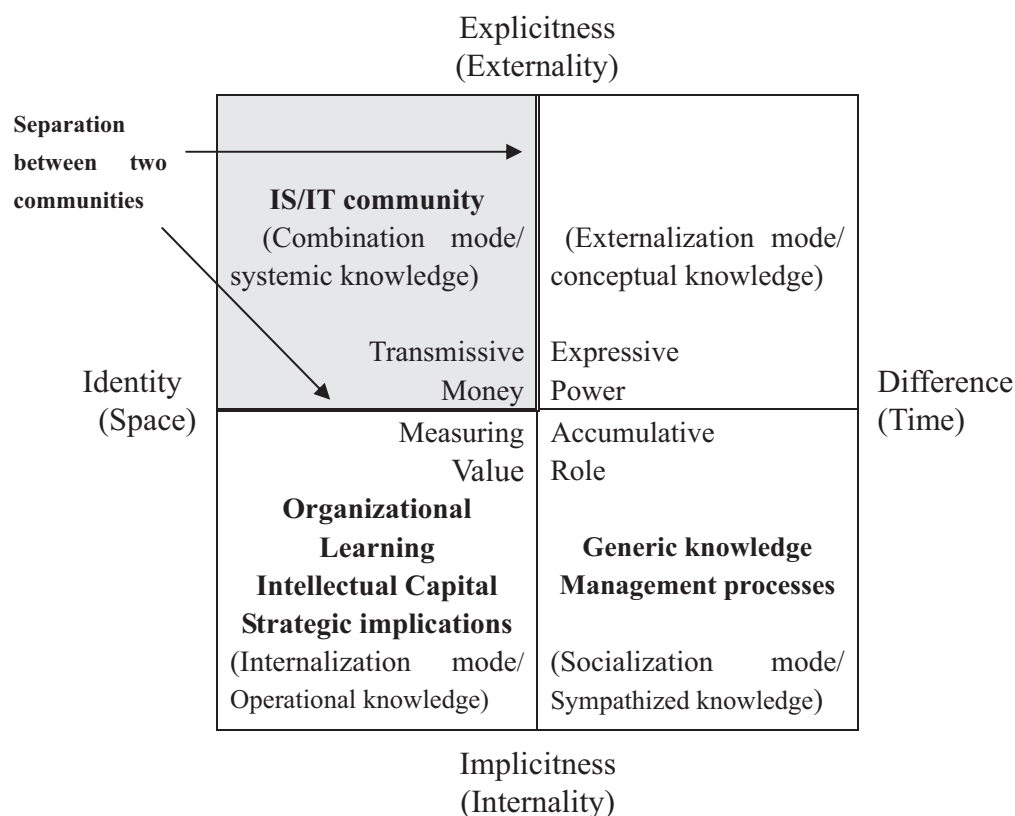
Figure 1: Relationship between two separated KM communities and Nonaka's SECI model (Source: Author)

mode of knowledge conversion in order to derive benefit from a KM project. In other words, there is still a failure to adequately grasp the whole level of the knowledge activity in an organization, ignoring aspects of the externalization mode and placing less emphasis on the socialization mode as expressed in Nonaka's terms.

5. Conclusions

This paper has grasped the KM discourses in the West which mainly focus on Information Technologies and identified their limitations in terms of the integrated framework of the TEAM linguistic framework and Nonaka's SECI model. This analysis suggests that the (three) approaches to KM identified by Raub & Rüling (2001) in the West require a much wider view of knowledge, one which incorporates the four modes of knowledge conversion into their framework in a balanced way.

In other words, it supported the possibility that Nonaka's theory offers a more comprehensive framework which covers all KM discourses in the West in a comprehensive manner.

Notes

1 ） In the previous paper (see Yamanashi Global Studies No.6), in addition to the examination of the relationships of various concepts between Nonaka's theory and organization studies in the West, it also created an integrated framework from the TEAM structure and Nonaka's SECI model (see p31 Figure 4-1).

2 ） c.f. the keyword search in May 2002 on the web site of *Amazon.co.uk* gave rise to 557 hits for 'knowledge management' (c.f. *Amazon.com* yields 617 at the same words)

3 ） This includes the words 'narreji manejimento' (knowledge management in Japanese)' and 'chishiki keiei' (translated words of knowledge management into Japanese)

4 ） In addition, between 1989 and 2000, the EBSCO Business Source Premier database comprised 1,397 article abstracts that include the key words 'knowledge
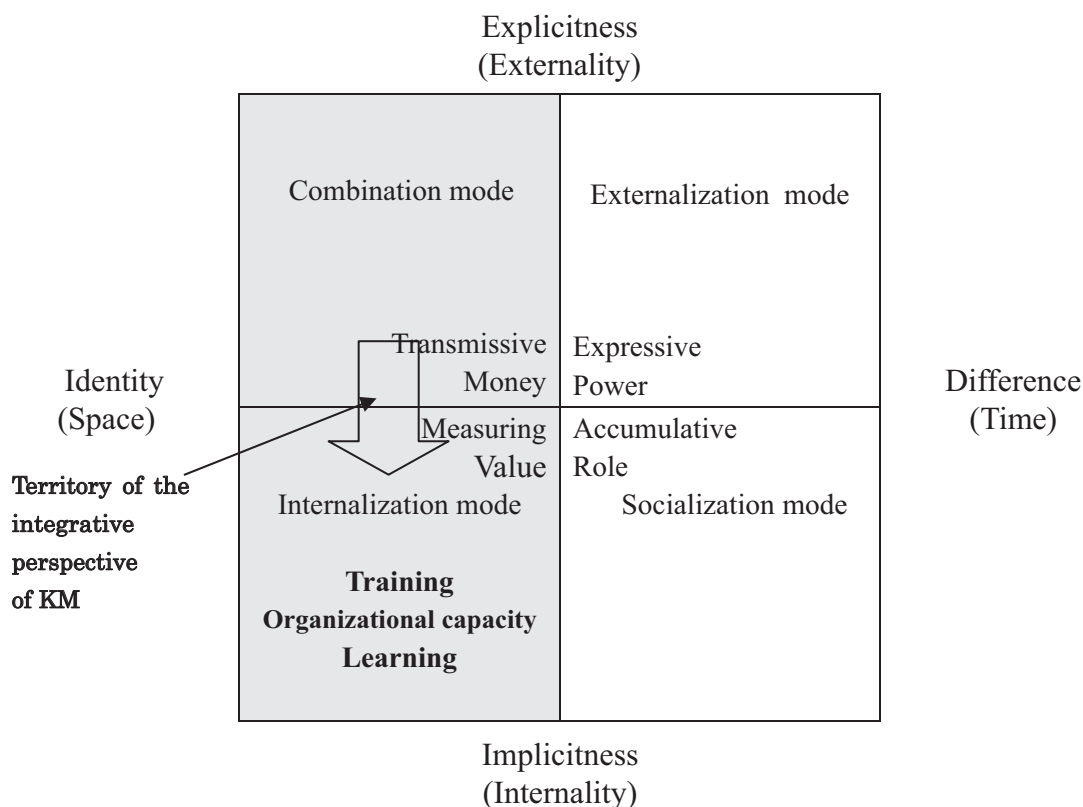
Figure2: Relationship between the IT driven integrative approach to KM and Nonaka's SECI model (Source: Author)

management', within excess of 95% concentrated in the 4-years period from 1997 to 2000 (see Raub & Rüling, 2001).

5 ）The conference changed the name to Organizational Learning, Knowledge and Capabilities(OLKC)

6 ）The first OKLC was held in the University of Warwick and the second in University of Leicester. The third conference was organized outside the UK for the first time and took a more explicitly European focus. See the Web-site http://www.alba.edu.gr/OKLC2002.

7 ）A IS/IT-driven KM is a KM approach which focuses on the 'Knowledge System' constructed by Information System (IS) or Information Technology (IT).

8 ）That is, while IS/IT-oriented journals show a positive correlation with the topics of IT systems, IT tools and knowledge management tools, they are negatively correlated with the remaining content variables. Conversely, while the MGT category of journals shows positive correlations with mention of learning, intellectual capital, processes and strategic implication, they are negatively correlated with IT systems and IT tools.

9 ）Again, regarding the integrated framework of the TEAM linguistic structure and Nonaka's SECI model, see Figure 4-1 (p31) in Yamanashi Global Studies No.6

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