290701_gb

IMP 2001

Work in Progress

Mapping Mindscapes as a Diagnostic Tool to Understanding Cultivation Processes in Emerging Economic Landscapes

gay.bjercke@bi.no

Abstract

This paper reports on a longitudinal case study of the interplay between two partners collaborating in an international joint venture. The paper develops a diagnostic tool for investigating, conceptualizing and discussing the collaboration process in a parternship and alliance. It draws on the Industrial Network Approach (Håkansson 1987) and I Ching (Wilhelm and Baynes 1967) in developing an analytical framework that is dynamic, holistic and internally consistent, where RAA configurations are used as conceptual tools for characterizing core elements of corporate culture. The diagnostic tool – the hexagram – endeavors to allow for dynamic dimensions to play a greater role in management research by pointing to the significance of mapping mindscapes as a tool to understanding cultivation processes in emerging economic landscapes.

The core ideas presented herein comes form a creative and unique mindscape, attempting to bridge old and new, but mindful that the receptive is also required if these ideas are to gain hold and grow. It follows that I shall look forward to receiving your comments and ideas.

Introduction

This study holds the premise that new knowledge grows from old. In a world, which is increasingly changing it becomes increasingly important to master diagnostic tools adapted to dynamic and rapidly changing economic landscapes. Accordingly, this study endeavors to uncover the wisdom laid down in the ancient Chinese trigrams of the I Ching and The Book of Changes to*" provide a systematic ordering of events …and later provide for meaningful action… of everything that happens under the heavens".* The challenge is humbly attempted by researching a Sino-Scandinavian JV and building on Chinese and Scandinavian theoretical guidelines of I Ching (Wilhelm and Baynes 1967) and the Industrial Network Approach (Håkansson 1987). Mindscapes are developed as a dynamic tool to understand cultivation processes in emerging economic landscapes.

The last decades have witnessed a significant increase in the frequencies, magnitude and complexities of inter-firm collaborations (Contractor and Lorange 1988; Hagedoorn 1995; Smith, Carroll et al. 1995). Much has been written on the general phenomenon, but there is little empirical evidence on the dynamic aspects of collaboration (Parkhe 1993; Yan and Gray 1994; Arino and de la Torre 1998). Research on the phenomenon of alliances and collaboration have focused on the their formation and less on dealing with their evolutionary properties and operational challenges.

The traditional economic view of alliances (Hennart 1988; Buckley and Casson 1996) builds on a firm's need for complimentary resources in order to pursue a particular product/market strategy. The firm may turn to collaboration in form of an alliance as the most efficient choice when comparing either *green field* investment, an arms' length market transaction or acquisition. Another and potentially more promising path has called for integrating social sciences with economic theory (Granovetter 1985) as a guideline for researching alliances and joint ventures e.g.(Gulati 1998). This path expands dimensions of contextualization to involve sources of embeddedness and the encompassing cultural landscape.

Increasingly, focus is being shifted from static approaches to acknowledging the significance and importance of dynamic considerations influencing the alliance evolution. Recent work by Ring and Van de Ven (1994), Doz (1996) and Arino and de la Torre (1998) develop the efficiency and equity arguments within a more dynamic framework by proposing evolutionary models.

In emerging complex and dynamic business landscapes there is a need to develop the tools for diagnosis[1] of dynamic processes related to collaboration inside and outside formal structures. It is the informal dimensions that are gaining importance and attention among an increasing number of researchers. Focus is shifted from structures to what happens between the structures and here the organizational culture is seen as

[1] and understand i) the perception of particular landscape, ii) meaning of that landscape; iii) the way we form our meaning of the landscape and iv) the different mindscapes found to characterize the landscape.

the essence of an organizations informal structure e.g. (Teece 2000). Cultivation may be considered a process of reciprocal causality where the cultivator himself also is being cultivated. In this way the economic landscape becomes an arena that allows unique mindscapes to form, which in turn becomes focal in the cultivation process. What I have done in this paper is to explore into landscapes and mindscapes and their interplay by studying the emergence of an international joint venture, which develops out of two different corporate contexts and how it is affected by embedded cultures in which it evolves and becomes a part.

In this work the landscape – mindscape (L-M) metaphor is developed within the external/internal analytical perspective. Whereas the term "mindscape" finds no reference in the dictionary, a *scape* is defined (Webster Longman 1988) as *a special type of a scene*, or a pictorial representation of a scene. A landscape is defined as an area of land that can be seen within a single view. An economic landscape becomes a pictorial representation of economic structural dimensions within that scene, which allow for unique mindscapes to form. A mindscape is here seen as "something rich and varied" and is referred to in this work as a special type of scene, which is perceived, becomes meaningful and is acted upon. The economic landscape is identified in terms of specific structures that reflects the dimensions of actors, activities and resources.

Mindscapes are established in this work as a central concept when cultivating in economic landscapes. The emerging Chinese landscape is seen as both complex and dynamic. But whereas the objective reality of the Chinese economic landscape recently has received ample study among researcher and scholars alike, less focus has been placed on the subjective reality in terms of what is being perceived by those who find themselves as actors in a particular landscape. The underlying proposition to be extracted from this study is that it is not the objective reality or landscape alone which is important for economizing resources and activities, but perhaps more so how it is being perceived and enacted by focal actors cultivating in this landscape.

By shifting focus from the landscape to the mindscape, we shift the level of analysis from the model to the model of the model in terms of a particular mindscape. However as mindscapes are seen embedded in unique landscapes, the two are interrelated and seen to have dynamic properties which mutually interact and influence each other in a process of enactment (Weick 1979). In terms of the landscape metaphor we can extend the perspective to allow for cultivation processes forming where the two meet. Cultivation is seen to occur on the interface and in the interplay between landscapes and mindscapes. Does the fact that actors as interpretive systems (Weick 1995) function partly on basis of internal representations of the environments that they respond to, place them beyond analytical reach of a case study such as ours? For they respond, if at all, to the economic landscape as managers and decision makers and perceive, interpret and respond to it rather than to any objectively given complexity in their environment. Boisot and Child (1999) find this perspective relevant among foreign managers operating in China. It follows that in this study on a Sino-Scandinavian joint venture we focus on mindscapes and their significance in cultivation processes.

"Mindscape" - A Tentative Concept

The term "mindscape" is not widely used in the management literature, nor do most dictionaries define it. Yet it is a concept which is seen to become increasingly useful as it points to possible new and more dynamic ways of identifying and conceptualizing elements impacting on organizational behavior and performance. Unlike culture when defined in the traditional sense, mindscapes are seen as flexible, where the individual can switch from one to another and does this with ease by a process of reframing the problem at hand or considering it within a different context. Mindscapes opens for new paths within management research to understanding diverse behaviors of managers and actors. This is important because before behavior is changed it has to be understood. Study of mindscapes involves study into perceptions, meanings, actions and their differences. It follows that a theory of mindscapes calls for serious attention and study.

A mindscape is a way of viewing a set of phenomenon at a given point in time and/or over a given period in time. It is objective in the sense that structures have an observable effect on the interaction and vice versa. It is subjective in the sense that actors make subjective interpretations of its meanings in a process of sensemaking and base their perceptions and actions on those meanings. On one side it is like viewing a sunset – i.e. it is a process that changes and impacts on the observer. On the other it is like participating in a meeting for the first time where the observer become the observed with consequences for the outcome, or where the focus shifts because a new actor enters the room – e.g the President.

However, the term is not without trace in the literature. One of the earliest studies of this sort may have been undertaken by Kurt Lewin (1951) upon returning from the war. His mindscape going to battle reflected on identifying possible gun replacements, safe terrain, the enemy, etc. On returning from the war, his mindscape was set on family, the farm, friends etc. Another reference is Magoroh Maruyama (1980) and his discussion on causal metatypes in science theories, where he did not find labels such as "models", "logics", "paradigms" and "epistemologies" satisfactory to describe structures under study and used the term "mindscapes" to suggest something rich and varied. He later defined "mindscape" to mean *a structure of reasoning, cognition, perception, conceptualization, design, planning, and decision making that may vary from one individual, profession, culture, or social group to another* (Caley and Sawada 1994:7).

Summing up, mindscapes are seen as useful and relevant in the diagnosis of dynamic processes related to collaboration. Mindscapes are tied to actors and are seen as rich and varied. There are possibly as many mindscapes as there are actors. A mindscape is seen to gain identity from i) the unique perception of a given landscape; ii) the meaning given to that landscape; iii) the way meaning is derived; and iv) differences in mindscapes found to characterize a given landscape. In this study we have characterized mindscapes in terms of RAA configurations where the dimensions of resources, activities and actors become focal. The study further draws on the analytical principles of I Ching to allow for inclusion of dynamic properties into our diagnosis and analysis. Here interaction within the internal/ external perspective allows for conditions of both relatively stability and volatile change.

This work explores into the cultivation of economic landscapes by focusing on collaboration within a joint venture across national and conceptual borders. The evidence points to a high degree of failure in international collaborations and alliances and reflects a central problem in economic theory concerning the coordination of different frames of minds into cohesive and profitable economic activity. To study this interface and the unique interplay occurring among actors focal to a given collaboration, I selected a medium sized Sino-Scandinavian joint venture emerging within the complex and demanding Chinese context. What I found were rich and varied mindscapes reflecting both similar and different landscapes. In one way this confirms the scientific premise that similar conditions will result in similar states. However, there was also ample evidence that similar conditions resulted in different states. In fact on a number of important strategic issues, a given landscape reflected substantial variations in terms of mindscapes. Accordingly, a given landscape is perceived differently, carries different meaning, and is acted upon differently by focal actors. The underlying challenge is that different mindscapes or "meanings" of a given reality will impact on the collaboration and hence on the effectiveness and efficiency of cultivating in economic landscapes. In this way mindscapes may impact on corporate survival. Understanding mindscapes may provide a basis for systematic ordering of events and issues, which will allow for meaningful action with impact on corporate survival and performance. It follows that investigation, conceptualization and analysis of mindscapes becomes important and is at the core of this paper.

Method and Research Design

Many have argued for the need for qualitative research that allows us to understand the core issues underlying inter- and intra-organizational collaboration (Parkhe 1993; Håkansson and Snehota 1995). Smith, Carroll and Ashford (1995:19) call for more longitudinal case studies "that are capable of capturing the complexities and dynamics of cooperation" This analysis attempts such a route and follows a design by Yin (1984). The study tracks perceptions of JV managers as focal actors of the collaboration.

As is typical for inductive research, study begins with a description of a grounded theory building methodology. The research investigates, conceptualize and analyze mindscapes and present findings in terms of identifiable patterns. We conclude with a discussion of our findings on mindscapes and propose a model – the Hexagram - linking RAA structures, culture and process, combining economic and social logic to make up what we term corporate culture with significance for the collaboration and the evolution of the joint venture.

In this way the Hexagram becomes a diagnostic tool to identify corporate culture characterized by degrees of cultural tensions as well as identifying conditions which are likely to occur as different organizational cultures meet. Hexagrams provide a basis for ordering events and points to meaningful action as response those events.

Research Design

The research design is based on multiple cases of the focal event/issue (RAA issues) allowing replication logic whereby each case was used to test emerging theoretical insights (Yin 1984). This method allows for a close correspondence between theory

and data, whereby the emergent theory is grounded in the data (Glaser and Strauss 1967; Eisenhardt 1989). This strategy seems appropriate given the inductive nature of the study

The study is the result of a four-year field-study of RAA changes within a Sino-Scandinavian JV functioning as a jointly owned collaboration between Norwegian and Chinese interests operating within the same industry. The JV is situated 180 km outside Shanghai and is a medium sized Chinese company with approx. 2000 employees. Business areas include heavy mechanical equipment within turbines (hydro, steam and gas), generators (turbo, electric) and related equipment for the hydropower industry. The company is divided into functional departments each containing its own related expertise and skills. Each department is treated as its own cost and/or profit center and most activities are complimentary or closely complimentary.

The unit of analysis was the RAA strategic issue episode experienced by focal actors. One such RAA episode was the issue of quality and on-time delivery. Did the issue represent a strategic strength or weakness of the JV? On the issue, Chinese JV managers were seen to hold very different perceptions from the Scandinavian managers during the early operating period, but views were seen converging over time, although these reflected varying degrees of consistency within each group.

Data were collected through interviews, Questionnaires, observations and company archives. The main source was semi-structured individual interviews and structured Questionnaires. Informants in the interview process included the Managing Director, Deputy Managing Director, Department Directors acting as functional managers, functional middle managers and project managers on various levels. In addition, interviews were made with owners' representatives regarding owner positions and perspective. Interviews were conducted during multiple site visits to the JV and every department. Informants were briefed on beforehand regarding the research scope and the vast majority of interviews were transcribed. Notes of the interviews were normally taken during the interview and were written up.

A semi-structured interview guide was used to conduct the investigations, including questions on the informant's history with the company and department. Informants were given freedom to develop the RAA issue/event story as they observed it and they were encouraged to relate facts. Probing questions were used to get details (e.g. What did you see as the main resources provided by the owners. Which resources were not provided? Why do you think not? What is the main activity within your department? How is the integration with other departments? If not working why not? What do you see as strength/weakness of the JV? Who was responsible for the strike at the factory? What did you do?). These data were supplemented with company documents. Strategic discussions on RAA episodes among top management team were observed during attendance of management meetings. This allowed for rich and varied contextualized landscape to emerge.

Data Analysis

Data analysis used familiar approaches for inductive studies (Glaser and Strauss 1967; Miles and Huberman 1984; Yin 1984; Eisenhardt 1989). Investigation and analysis began

with written accounts and schematic representations of each major RAA issue episode either observed or documented. First a draft of the issue story was written immediately after each site visit. These were followed by more extensive accounts of the RAA process, making full use of quotations in from the transcripts and combining accounts of multiple informants. Agreement among the respondents on critical issues was found, but substantial richness and variety was observed in terms of individual perception.

Within case analysis. After constructing the case histories, within case analyses were conducted. These analyses were the basis for developing early constructs regarding a particular RAA configuration as experienced by a focal actor (e.g. within a given department). Significant dimensions (and structures) emerged in describing each change episode and an interactive process was followed of going into data for insights, suggesting constructs, then going back into data to check for inconsistencies and so forward again.

Cross-case analysis produced the working framework analyzing the RAA episode process. RAA episode cases were compared and contrasted using methods suggested by (Miles and Huberman 1984) and (Eisenhardt 1989). This meant developing tables and matrices to examine the emergent dimensions across cases. Typically, sets of two (or more) cases were compared at one time to identify events and traceable patterns. These were conceptualized as events and patters and were compared across the whole sample.

In order to identify RAA configurations and describe emergent patterns within a process framework, the research in terms of the underlying case study adopting a contextualized research focus. Triangulation was undertaken in an attempted to reveal different mindscapes and to test the robustness of the model framework employed. The empirical research direction developed a cross sectional study of managers' mindscapes across the dominant corporate cultures building on a survey undertaken among 51 mangers placed at the top and mid-management level of the JV. In this survey the Chinese side was represented by 42 managers while the Scandinavian side was represented by 9 managers and expatriate experts most closely related to operational matters of the JV. Based on the survey we identified two main groups of mindscape configurations drawing out the two cultural sides. In the table and figures laid out on the following pages, we investigate mindscapes in terms of mean values categorizing perceptions held by the Chinese and Scandinavian managers across a number of key strategic issues relating to RAA configurations. The mindscapes are identified for two distinct periods. The 1st period relates to the early JV operational period in 1996, while the 2nd period of observation relates to the later JV operational period in 1999 during which the Scandinavian owner (Kvaerner Energy) negotiated sale to an American competitor within the hydropower industry. Accordingly, we have selected to focus on the near 4 year period from early JV formation in Mai 1996 till the parent ownership change in fall 1999.

A Model Framework – The Hexagram

Turning next to the JV under study, we identified two main groups of mindscapes drawing out the two cultural sides. In the tables and figures laid out on the following pages, we identify mindscapes in terms of mean values categorizing perceptions held

by the Chinese and Scandinavian managers across number of key variables related to RAA configurations. Developing mindscapes based on cultural elements is seen difficult and complex. Accordingly a structured approach is attempted by building on different typologies to discuss the three dimensions and their interrelationships. By applying the framework and principles of I Ching, we build on an ancient analytical structure, which is holistic, dynamic and internally consistent. Within this dynamic framework of continuous change – the Hexagram - we employ the dimensions of resources, activities and actors to categorize corporate culture in terms of trigrams and expressed as mindscapes. Two trigrams make up a hexagram describing two states and a relation. Not only does the hexagram allow for diagnosis, it also allows for meaningful action and interaction. Below we lay out the hexagrams containing 64 possible combinations identified in terms of RAA configurations.

Table 1 – The Hexagrams

STABILITY ***Corporate Cultural Code - Scandinavian* (Sn)** ***CHANGE***

RAA Configuration	**_ _ 0 _ _ 0 _ _ 0**	**___ 1 _ _ 0 _ _ 0**	**_ _ 0 ___ 1 _ _ 0**	**___ 1 ___ 1 _ _ 0**	**_ _ 0 _ _ 0 ___ 1**	**___1 _ _0 ___1**	**_ _ 0 ___ 1 ___ 1**	**___ 1 ___ 1 ___ 1**
_ _ 0 _ _ 0 _ _ 0	RAA RAA							RAA **RAA**
___ 1 _ _ 0 _ _ 0		**R**AA						
_ _ 0 ___ 1 _ _ 0			R**A**A					
___ 1 ___ 1 _ _ 0				**RA**A[2]				
_ _ 0 _ _ 0 ___ 1					RA**A**			
___ 1 _ _ 0 ___ 1						**R**A**A**		
_ _ 0 ___ 1 ___ 1							R**AA**	
___ 1 ___ 1 ___ 1	**RAA** RAA							**RAA** **RAA**

CHANGE

STABILITY ***Corporate Cultural Code - Chinese* (Cn)**

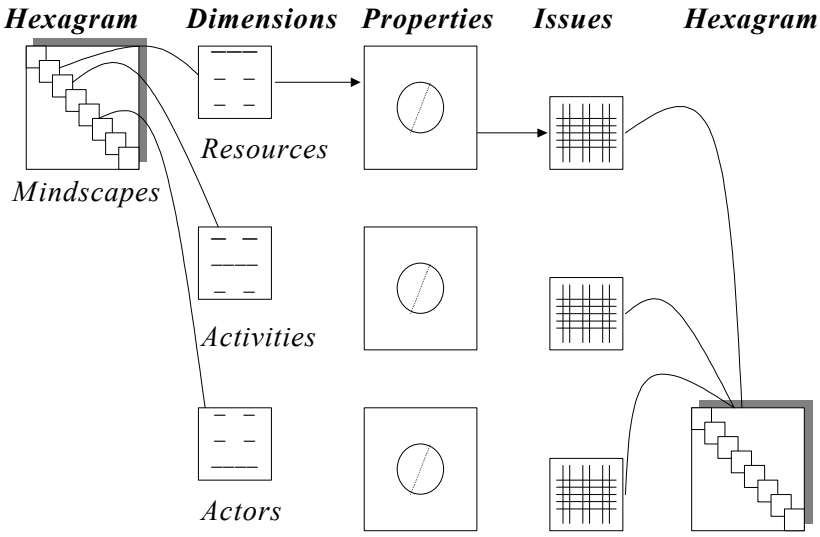
[2] RAA configuration relates to R-resources, A-activities, and A-actor determined outcomes where **RA**A implies cultural charge – 110 in terms of resources and activities.

To simplify our discussion we convert divided and undivided lines into binary numbers. Within this model framework we find that values of 1 and 0 are significant with respect to the corporate culture.[3] When the RAA configuration display 111 – i.e. when resources, activities and actor determined outcomes are all 1, the corporate culture is identified to be in a state that is highly culturally charged and characterized by high cultural temperature and tension. When the RAA configuration displays 000 – i.e. when all dimensions reflect 0 states, the corporate culture is found to be in a state carrying minimal cultural charge and becomes characterized by low cultural temperature and tension.

The Mapping of Mindscapes

The hexagram presented at the previous page is used as a diagnostic tool to reveal cultural patterns and underlying structures of formal and informal nature. It is seen to display elements and functional relationships as well as important artifacts to the shrewd observer. The trigrams when combined make up the hexagram and establish a systematic framework for diagnosis. In a diagnosis the first step is to identify each relevant dimension for analysis, one at a time and then to undertake the appropriate in-depth analysis before attempting to integrate across levels. A tentative diagnostic process is shown below.

Figure 1 – Mapping Mindscapes



How is it done? Starting with the Hexagram our focus is on the resource dimension. In order to understand the resources, it becomes important to understand its unique properties within the event of things. This is laid out in terms of a resource landscape differentiated within the framework in terms of relative stability and change. Issues and events are seen as reflections of underlying patterns and structures, revealing both old and new layers, which in turn materialize into stable (old) or changing (new) mindscapes.

[3] in terms of binary numbers; undivided lines = 1 = high cultural charge/tension, divided line = 0 = low cultural charge/tension.

In this way the hexagrams (see above Hexagram) represents not only a holistic map but also a layered approach to each of the dimensions (Dimensions), where the overall map is used to identify and investigate the relevant dimensions. From the relevant dimension we move into the identifying properties (Properties), which are considered dominant in a given mindscape before moving into the events and issue analysis (Issues). In this way we move into successive landscapes which allow for a successively deeper understanding of the forces and patterns governing a particular dimension.

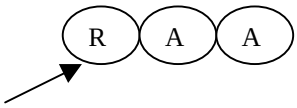
On the following pages, we discuss each dimension separately before attempting to integrate various mindscapes into a final RAA mindscape based on the underlying logic of hexagrams.

Findings: Events and Issues in the JV's Development

The narrative below describes 34 major issues that received varying degree of focal actor attention by managers of the JV during the near four years of observation. Figures 2,3 and 4 derived from the analysis described summarize issues across respective dimensions. Hexagrams attempt to integrate across the three dimensions and present a cultural typology seen focal to the operation of the JV collaboration and ultimately its overall performance.

On the following pages, we first present each dimension (R-A-A) separately, before presenting the integrated RAA hexagram (figure 5) seen to reflect the overall JV mindscapes.

The Resource Dimension (R)



Resources are viewed in a two dimensional space; *real resources* and *relational resources*. It follows that the resource map is rich and varied. As we deal with a mature industry, the external landscape is characterized by relative stability. Focus is shifted from external adaptation to internal integration. The main challenge becomes to integrate homogeneous and heterogeneous resources of two cultures efficiently and effectively within the JV collaboration to ensure performance and survival. The resource map laid out below reflects different mindscapes held by members of the Chinese (Cn) and Scandinavian (Sn) corporate cultures being surveyed. We start by mapping real and tangible asset also found qualified in the JV balance sheet. One exception is *management,* which is not quantified but qualified as a tangible resource by managers of the JV.

Table 2 – Resource mindscapes (real and tangible asset focus) at t0

Issues	*Mindscapes*	*Mean Score 1-5 (significance)*	*Comments*
Building and facilities 000 - 010	Cn Sn _ _ _ _ _ _ ___ _ _ _ _	3,7 – 3,7 MH-MH	- represent stable values across dimensions for Chinese. Scandinavians also recognize buildings and facilities as resources but see changes in terms of how it is to be used (variable activity dimension)
Machines and equipment 000 - 011	Cn Sn _ _ _ _ _ _ ___ _ _ ___	4,2 - 4,0 HH-HH	- machines carry another change dimension in the sense that Sn see changing activities and changing operators (actors)
Cash contributions 000 - 000	Cn Sn _ _ _ _ _ _ _ _ _ _ _ _	4,6 – 4,7 VH-VH	- cash is cash and is considered to reflect stable mindscapes by both.
Technology from Kvaerner 101 - 010	Cn Sn ___ _ _ _ _ ___ ___ _ _	4,2 – 5,0 HH- VH	- technology represents more of challenge. Kvaerner technology is ofcouse well known to KEN people but its application in local activity structures is less certain. To Cn the resource is unknown and so is the actor(s)
Technology from Hangfa 010 - 101	Cn Sn _ _ ___ ___ _ _ _ _ ___	4,6 – 4,4 VH-HH	- similarly, the technology is known locally, integration does represent a challenge but most is known. To Sn the Hangfa technology is both a resource question and an actor question in the sense of where it is and who controls it.
JV management 011 - 111	Cn Sn _ _ ___ ___ ___ ___ ___	4,5 – 4,2 VH-HH	- management is seen as an actor determined resource by both, but is given a wider view by the Scandinavians to also include governance over activities and resources. Resources are traditionally seen as externally determined by the Chinese

V – very, H – high, M - medium

Mindscapes within this resource dimension reflect moderate to high perceived values with respect to relative significance of a particular resource to the JV. On a Likert scale from 1-5 (least –most important), mean scores reflect high to very high values. The greatest difference is observed in terms of perceptions concerning value of technology provided by Kvaerner as the foreign partner. Kvaerner members give high score on value of own technology relative to Chinese provided technology while the Chinese members from the local environment rank own technology contribution as more important than the foreign contribution. We observe that each corporate culture have a higher preference for own technology contribution in terms of value to the JV. Such differences in observed mindscapes also point to more fundamental challenges of transferring technology and knowledge across national and conceptual borders. Within the model, an increasing need for change is displayed by conditions identified with high numbers of 1's and their combinations. Accordingly, 111 in succession display strong underlying forces of change.

From the table below, we observe that *JV management* (representing both artifacts and espoused behavior) display mindscape characteristics (011-111), which reflect

strong underlying forces of change. *Supplier relationship* with mindscape characteristics of 000-100 are seen to reflect less cultural tension and hence more stable and continuous change. Turning next to relational resources, seven focal relationships are identified and briefly analyzed on the next page.

-Table 3 – Resource mindscapes (relational asset focus)

Issues	Mindscapes		Mean score (significance)	Comments
Labor Union relations 000 - 101	Cn _ _ _ _ _ _	Sn _ _ _ _ ___	t0: 4,3 – 3,7 MH-M t1: 4,5 – 3,2 MH-M	- labor relations represent a stable and known part of the Cn organization. Sn acknowledges importance but less sure about LU as resource. Actor outcome is partly unknown
Customer Relationships 001 - 111	Cn _ _ _ _ ___	Sn ___ ___ ___	t0: 6,0- 7,0 VH-VH t1: 6,4 – 6,8 VH-VH	- existing and old customer relationships are well known to the Cn side. New customer relations represent a challenge. Sn see challenges across all three dimensions
Purchasing relationships 000 - 100	Cn _ _ _ _ _ _	Sn ___ _ _ _ _	t0: 2,9 – 2,7 ML-ML t1: 3,2 – 4,4 M - MH	- supplier relationship are seen as stable mindscapes by Cn. Sn see changes in resource collections and activity structures. Both place low priority on relationship.
Competitor relationship 001 - 001	Cn _ _ _ _ ___	Sn _ _ _ _ ___	t0: 2,7 - 1,6 ML- VL t1: 2,5 – 2,9 LM - LM	- competitor relationships (Chinese) are not maintained and little is know of competitors move ex ante. Competitive structure is seen changing, but minimal priority is place on this relationship
Government & Local Authorities 001 - 011	Cn _ _ _ _ ___	Sn _ _ ___ ___	t0: 4,7 – 4,0 MH-MH t1: 4,6 – 4,1 MH-MH	- stable local culture reflected in local mindscapes. Actors and responsibilities within gov't changes over time. To Sn this relationship include new activities and new actors
Hangfa relationship 000 - 111	Cn _ _ _ _ _ _	Sn ___ ___ ___	t0: 5,1 - 3,6 HH-MM t1: 4,4 – 2,8 MH-LM	- Hangfa is known locally and relationship with Hangfa seen as highly important. Hangfa relationship is new to KEN in all respects, hence change across dimensions
Kvaerner relationship 111 - 000	Cn ___ ___ ___	Sn _ _ _ _ _ _	t0: 5,3 – 5,0 HH-HH t1: 5,0 – 4,7 HH-MH	- Kvaerner is not known locally and hence represent changes across Cn dimensions. Kvaerner is well know to the foreign side reflected in stability across dimensions

The resource mindscapes displayed above also include an added dynamic dimension in the sense that the same members were surveyed twice (early, 1996 - t0 and late, 1999 - t1) . From the above table high mean scores are observed in terms of *customer relations* and low mean values in terms of *purchasing* and *competitor relationships* and values are seen to remain stable or display increasing values over time. One exception is *purchasing relationships*, which are perceived by the Scandinavian managers, contrary to their Chinese colleagues, to gain in significance as the JV matures (mean values at t0 – 1,6 and t1 – 2,9).

The *Labor Union relationship* is seen by the Chinese members to increase in importance, while the Scandinavian managers' place decreased significance on this relationship. Both corporate cultures place less significance on *Government and relationship to local authorities* once the JV was established and had entered the

operational stage. But perhaps most interesting are the mindscapes reflecting perceptions of the collaboration itself. The Chinese members of the JV see the relationship to the Chinese owner and the foreign ownership organization as important. Over time the significance of relationship to own ownership organization is seen to reflect a clear decline, but the relationship to the foreign owner less so. The Scandinavian members of the JV values relationship to the Chinese parent organization as less significant for the JV and this significance is seen to drop to a 'low' mean value of 3,6 over time. The relationship to own organization, Kvaerner is considered important but also reflecting decreasing values over time.

By identifying focal issues among managers and ranking these in terms of perceived importance to the JV, a method is developed allowing for characterizing issues in terms of as mindscapes (RAA configurations) across dimensions. These mindscapes characterize perceptions held by JV managers, are laid out in the hexagram below and are seen to reflect underlying patterns and structures of both a formal and informal nature.

Figure 2 – The Resource Hexagrams

Cn - Sn Mindscapes

RAA config	_ _ _ _ _ _	___ _ _ _ _	_ _ ___ _ _	___ ___ _ _	_ _ _ _ ___	___ _ _ ___	_ _ ___ ___	___ ___ ___
_ _ _ _ _ _	Cash contributio n		Buildings & facilities	Purchase relations	Labor union relations		Machine & Equipment	Hangfa relations
___ _ _ _ _								
_ _ ___ _ _						Hangfa Techn-ology		
___ ___ _ _								
_ _ _ _ ___						Competitor relations	Gov't & Local auth relations	Customer relations
___ _ _ ___			KEN Techn-ology					
_ _ ___ ___								JV managemt
___ ___ ___	KEN relationshp							

On viewing the resource hexagram, we observe substantial diversity and spread in terms of mindscapes. Different mindscapes are seen to reflect a variety in terms of underlying patterns and structures. Few issues are found on the diagonal in the hexagram, which confirm the likelihood of substantial variety in terms of Chinese and Scandinavian mindscapes even when cultivating in the same economic landscape.

At the extreme positions in the hexagram we find 000-111 and 111-000 configurations of resources, activities and actor determined outcomes. Such sets imply dominant RAA configurations with respect to each corporate culture. In other words, we identify specific perceptions held by members of the Chinese and Scandinavian

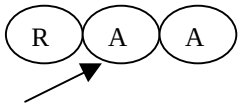
corporate cultures. When we identify a configuration with increasing numbers of 1's we have identified a state, which is increasingly culturally charged, compared with an increasing 0-state, which is seen to exhibit low cultural charge and carrying low cultural tension. In this way the hexagram becomes an analytical tool for identification of conditions and states characterized in terms of degree of cultural charge and tension and also indicate what types of changes a given condition is expected to reflect.

Relationships to the owners are reflected in the extreme positions of the map as 000-111 configurations (upper right-hand and lower left-hand corner of the hexagram). The relationship to each respective parent organization is found embedded in the employees core value sets and is found to provide stable dimensions with low cultural tension, while relationship to the collaborator's owner is unknown and represents changing patterns across all three dimensions (111). From the data we observe that to the Chinese, the foreign technology is seen to provide valued resources (101). However, the same local managers see local technology as more important to the JV then the foreign technology (010). We observe that each culture value relationship to own parent organization along with technology provided from own parent organization as most favorable. Hence as one side interfaces with the other's technological or relational domain, cultural tension is expected to increase.

Low cultural tension is exhibited in the 000-000 domain. While value of *cash contribution* to the JV by the foreign owner may be viewed differently by the Chinese and Scandinavian corporate culture, it is seen as a culturally stable configuration not likely to raise culturally charged contingencies. Both *facilities* (000-010) and *purchasing relationships* (000 – 100) are also found within the A domain of the hexagram and are likewise not likely to create cultural tension. The *KEN relationship* (111-000) and *technology* (101-010) as well as the *Hangfa relationship* (000-111) and *technology* (010-101) is found respectively in the B and C domain. These states are found to create conditions, which are culturally charged where tension is high and will require adaptation, by one or both sides. In the D domain of the hexagram we find *relations to customer* (001-111), *government* (001-011) and *competitors* (001-101) along with the *JV management* (011-111) function itself. In terms of our analysis, the states and conditions they create (created by interfaces), identified in this domain call for compromises or new solutions and a search for the "third way". It follows that dynamic patterns reveal new problems requiring new solutions in order to ensure survival of the collaboration. If so does not happen, it will likely die.

We shift our focus to the activity dimension within the RAA configurations.

Activity Dimension



The activity dimension is connected to resources, where resources are defined in terms of provisions and uses. In this part, the activity dimension is mapped in terms of perceived importance of a given strategic activity to the JV. In the table below we find strategic activities listed in terms of seven core issues, where each is identified and described in terms of 2 mindscapes, one reflecting Chinese JV managers (Cn) and the other Scandinavian JV managers (Sn).

Table 4 – Activity mindscapes (strategic activity focus)

Issues	Mindscapes		Mean score (significance)	Comments
Sales activity focus 010-101	Cn _ _ ___ _ _	Sn ___ _ _ ___	t0: 6,3 – 6,0 VH-VH t1: 6,2 – 4,8 VH-MH	- represent stable values across actor and resource dimensions for Chinese. Scandinavians recognize good sales activity but see changes in the actor and resource dimension. Looking at customer as a resource.
Improve external environment 010-110	Cn _ _ ___ _ _	Sn ___ ___ _ _	t0: 4,2 - 5,1 MH-HH t1: 2,3 – 1,8 ML-VL	- Sn see a need to clean up the premises, making it more representative. Locals believe greater priorities should be placed work processes, not on “gardening”
Product Technology and Design 111-110	Cn ___ ___ ___	Sn ___ ___ _ _	t0: 5,9 – 5,3 HH-HH t1: 5,3 – 5,0 HH-HH	- as a consequence of the JV collaboration, Cn are seeing innovating processes taking place across dimensions. Sn perceive development across resources and activities
Modern production process 111-001	Cn ___ ___ ___	Sn _ _ _ _ ___	t0: 4,4 – 4,9 MH- MH t1: 4,4 – 3,1 MH-MM	- Cn same as above Sn see changing actor determined output, within existing resource and activity dimensions
Cutting costs 110-111	Cn ___ ___ _ _	Sn ___ ___ ___	t0: 4,5 – 2,3 MH-ML t1: 6,1 – 6,3 VH-VH	- cost represent relevant concept in both cultures, changes are related to how (activities) and whom (resources) related to reduction of labor force. Sn see cutting costs across all dimensions
Improving employee skills 001-010	Cn _ _ _ _ ___	Sn _ _ ___ _ _	t0: 5,8 – 3,9 HH-MM t1: 3,9 – 4,7 MM- MH	- Chinese see improvement related to actors and managers, whereas Scandinavians focus on tasks, activities. Significance of priority is varied, different patterns
Improve information systems 010-000	Cn _ _ ___ _ _	Sn _ _ _ _ _ _	t0: 4,5 – 4,2 MH-MH t1: 2,7 – 3,2 ML-MM	- information system building on IT is an integrated part of the KEN culture. To Cn it represent challenges in terms of resource collections and activity chains

V-very, H – high, M – medium, L-low

From the activity mindscapes we observe that *sales focus* (0110-101) receive high score in terms of perceived significance by both corporate cultures. However, while Chinese mindscapes reflect stable values over time (mean values 6,3-6,2), Scandinavian mindscapes reflect a marked decline in terms of perceived importance

(6,0-4,8), which may signal a shift from external to internal focus on integration and efficiency. One verification of this point may be found in *cutting costs* which is found to receive increased attention by both sides and particularly among the Scandinavians managers from mean value of 2,3 to 6,3 over time. Improving *external environment* is reflecting a perceived need to clean up the factory premises both inside and outside, along with establishing proper entry and exit routes for the employee with appropriate check-in/check-out procedures. The declining priority on the external/internal environment over time may reflect progress made during the period of observation. *Product technology and design* receive high scores in both periods, while in terms of *modern production process* issues Chinese and Scandinavian mangers display different patterns. While one maintains stable mindscapes the other reflect sharp declines in terms of significance. We also observe different patterns in the need to improve *employees' skills*. The Chinese side perceives a declining need, while Scandinavian managers perceive an increasing need over time. It follows that different perceptions prevail and are found to increase over time with expectations of increases in cultural tension.

Figure 3 – The Activity Hexagrams

Cn – Sn Mindscapes

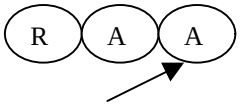
RAA config	⚋ ⚋ ⚋	⚊ ⚋ ⚋	⚋ ⚋ ⚊	⚊ ⚊ ⚋	⚋ ⚋ ⚊	⚊ ⚋ ⚋	⚋ ⚊ ⚊	⚊ ⚊ ⚊
⚋ ⚋ ⚋								
⚊ ⚋ ⚋								
⚋ ⚊ ⚋	Improve informat system			Improve external environmt		Sales and activity focus		
⚊ ⚊ ⚋								Cutting costs
⚋ ⚋ ⚊			Improve employees skills					
⚊ ⚋ ⚊								
⚋ ⚊ ⚊								
⚊ ⚊ ⚊				Product technology and design	Modern production process			

In terms of the hexagram, we observe issues such as *improving information systems* (011-000) and the *external environment* (010-110) within the A domain, reflecting stable patterns and little expected cultural tension. Moving into the B and C domains we observe that respective states reflect expectations of increased cultural tension in terms of *sales activity* 010-101) and *cost issues (110-111)*. Similarly, differences are observed in terms of*; improving employees' skills (001-010)* and *the need for product technology and design* (111-110). Such issues of tension are perceived handled through adoption or adaptation by one or both parties. Within the activity dimension, it is the *production processes* (111-001) that represent the greatest cultural tension issue between the parties. Both corporate cultures have strong views but differ in

terms of perceived significance to the JV and hence they differ in terms of mindscapes of resources, activities and actors.

Finally, we move our analysis to the actor dimension within the RAA configuration.

The Actor Dimension



Actors are seen as focal in the RAA configuration as they control and coordinate resources and activities and thereby are determining outcomes. Because the actor is given identity and diversity in terms of outcomes, this dimension is seen outcome driven. In the tables below, we identify strategic outcome issues in terms of relative strengths and weaknesses as perceived by the JV managers and characterized through their respective mindscapes.

Table 5 – Actor mindscapes (strategic focus on JV strengths)

Issues	Mindscapes		Mean Score 1-7 (significance)	Comments
JV products and services 100-110	Cn ___ _ _ _ _	Sn ___ ___ _ _	t0: 4,6 – 4,6 MH-MH t1: 6,2 – 4,8 VH-MH	- Cn see need for new resources Sn further see need to change activity structure and chains
Motivated workers 000-111	Cn _ _ _ _ _ _	Sn ___ ___ ___	t0: 4,2 - 3,4 MH-MM t1: 2,3 – 1,8 ML-VL	- Cn characterize own workers as skilled and competent. Sn see need to change activities and resources (layoffs) with impact on outcomes
Superior technology 101-011	Cn ___ _ _ ___	Sn _ _ ___ ___	t0: 5,9 – 3,9 HH-MM t1: 5,3 – 4,9 HH-MH	- Cn are seeing innovating processes taking place across dimensions and view this as strength of JV with impact on outcomes. Sn is more skeptical and see needed changes across activities and actors
Quality and On-Time delivery 000-111	Cn _ _ _ _ _ _	Sn ___ ___ ___	t0: 4,5 – 1,6 MH- VL t1: 5,4 – 5,2 HH-HH	- Cn does not see as strategic problem while Sn see changes required across dimensions to correct the situation. Values vary and change over time. Outcome dependent.
Capable management 001-011	Cn _ _ _ _ ___	Sn _ _ ___ ___	t0: 4,9 – 4,6 MH-MH t1: 4,3 – 3,3 MH-MM	- Cn seen focusing on actor dimension. Sn seen focusing on activity and actor dimension. Values declining over time as a perceived JV strength, implying greater skepticism to the JV mgmt over time.
Relationship with customers 001-000	Cn _ _ _ _ ___	Sn _ _ _ _ _ _	t0: 4,5 – 6,7 MH-VH t1: 4,2 – 5,6 MM- HH	- Chinese see improvements needed in terms of existing customer relations, Scandinavians perceive existing customer relations as very good and as an asset to the JV. Declining values over time
Relationship with suppliers 010-000	Cn _ _ ___ _ _	Sn _ _ _ _ _ _	t0: 2,3 – 3,9 LM-MM t1: 2,4 – 2,1 ML-MM	- relations with suppliers are not given strategic priority by focal actors

V–very, H–high. M-medium, L-low

Mindscapes relating to the actor dimension draw attention to perceived strategic strengths and weaknesses of the JV. In terms of strengths, Chinese and Scandinavian managers exhibit different mindscapes with respect to *products and services (100-110), workers' motivation (000-111), technology (101-011), quality and delivery (000-111)* and *management (001-011).*

One issue surveyed was quality and on-time delivery where customers were found be complaining about late delivery and corporate data was found confirming this. In terms of the particular issue surveyed and the RAA configuration, Chinese managers perceived activities as the dominant dimension. *"Through correct activity planning, the problem will be resolved"*[4]. The Scandinavian managers saw this as an integrated problem also related to quality. Poor quality will lead to halts in production, potential remakes and rejects which will represents variability and uncertainty in terms of the activity chain. "*By focusing on quality <u>and</u> time the delivery record should improve to 95%"* according to the Scandinavian Production Manager.[5] To the Chinese production manager and middle managers, quality requirements were seen to delay the delivery schedule. By the Quality Department undertaking increased quality controls, the activity chains were seen held up causing delays. It follows that the Production people did not want interference from the Quality people during production runs.

On-site interviews and company documents from the start-up period confirm that the Scandinavians saw quality and delays as major problems during the early period. There was strong agreement among Scandinavian managers on this point. The Chinese did not see late delivery as particular problem as long as customers accepted and paid. Such "acceptability" may be explained in terms of the dominant Chinese SOE culture where are expected in long and capital intensive chains of activities. Mindscapes were different (000-111) also in terms of perceived JV strengths (mean values of 4,5 and 1,6) with Chinese managers perceiving this as a strength by giving high scores, while Scandinavians saw this as a weakness by giving low scores. However, mean values reflect positive and converging development over time. Accordingly the data confirm a convergence of mindscapes over time. From an analytical perspective it is interesting to note that the Scandinavian JV managers who strongly agreed on the weakness of quality and delivery during the early period (t0), were less homogeneous in terms of agreeing on the potential strength of quality and delivery in later period (t1)[6]

On the next page we turn to strategic weaknesses, Chinese and Scandinavian managers exhibit different mindscapes especially in terms of *capacity (010-011), technology (111-110), financial situation (010-001),* and *cost levels (010-001)*

[4] according to Chinese production manager interviewed at Xiaoshan in October 1997.
[5] according to interview at Xiaoshan in October 1997.
[6] mean values t0 (4,5-1,6) std0 (1,6-0,7) and t1(5,4-5,2), std1 (1,5-1,6)

Table 6 – Actor mindscapes (strategic focus on JV weaknesses)

Issues	Mindscapes		Mean score (significance)	Comments
Old products, design and machines 010-000	Cn _ _ ___ _ _	Sn _ _ _ _ _ _	t0: 5,1 – 5,6 HH-HH t1: 3,7 – 3,2 MM-MM	- represent stable values across actor and resource dimensions for Chinese. Scandinavians recognize the weakness across dimensions. Situation seen to improve over time
Capacity limitations 010-011	Cn _ _ ___ _ _	Sn _ _ ___ ___	t0: 4,4 – 4,3 MM-ML t1: 3,1 - 2,4 ML-VL	- Sn see capacity limitation as not being able to undertake certain activities. Sn find bottlenecks and poor coordination among departments. Certain types of qualified actors are lacking. Declining values
Special technology is lacking 111-110	Cn ___ ___ ___	Sn ___ ___ _ _	t0: 5,0 – 5,4 HH-HH t1: 5,5 – 4,4 HH-HH	- as a consequence of the JV collaboration, Cn are seeing innovating processes taking place across dimensions. Sn see resource and activity structures needing change. Values move in opposite directions
Employee skills are lacking 010-010	Cn _ _ ___ _ _	Sn _ _ ___ _ _	t0: 2,8 – 3,2 LM- MM t1: 2,8 – 4,8 MH-MM	- not seen as strategically significant, but values are diverging
Financial situation 010-001	Cn _ _ ___ _ _	Sn _ _ _ _ ___	t0: 3,0 – 3,0 MH-ML t1: 5,5 – 4,1 VH-VH	- cost represent relevant concept in both cultures, changes are related to how (activities) and whom (actors) related to reduction of labor force. Values increase sharply over time
Information system (IT) 001-010	Cn _ _ _ _ ___	Sn _ _ ___ _ _	t0: 3,2 – 3,7 HH-MM t1: 2,8 – 3,3 MM- MH	- medium on the strategic weakness scale among both cultures and values are seen falling over time.
High cost level at the JV 010-001	Cn _ _ ___ _ _	Sn _ _ _ _ ___	t0: 5,5 – 3,4 HH-MM t1: 6,2 – 5,0 VH-HH	- cost perspective is different in early period of the JV. Seen converging over time.

From the table above, we observe that the Chinese managers perceive lack of *special technology* as being an important weakness (5,0) which is seen increasing over time (5,5). Scandinavian mangers see this as important (5,4), but decreasing in importance over time (4,4). Although viewed as moderately significant, *employee skills* are found lacking by Chinese managers and this remains very stable over time 2,8-2,8). It is seen more of a growing problem by the Scandinavian managers reflected by the increasing mean values (3,2-4,8). The *financial situation issue* reflects different mindscapes (010-001) but equal mean values (3,0) in terms of relative weakness during the initial operating period (t0). Over time both corporate cultures are seen to attach increased significance to the financial situation, but the Chinese side is clearly more concerned (5,5). Similar development is seen in perception on the development of the *cost level* at the JV.

Concluding, we observe rich and varied mindscapes related to the outcome determined actor dimension. Mindscapes are found to converge and diverge over

time, reflecting varying degrees of cultural tension with implications on direction of change as exhibited in the actor hexagram displayed below.

Figure 4 –The Actor Hexagrams

Cn – Sn Mindscapes

RAA config	_ _ _ _ _ _	___ _ _ _ _	_ _ ___ _ _	___ ___ _ _	_ _ _ _ ___	___ _ _ ___	_ _ ___ ___	___ ___ ___
_ _ _ _ _ _								Motivated workers Quality On-time delivery
___ _ _ _ _				JV products and services				
_ _ ___ _ _	Relations with suppliers Old prod design,mac		Employee skills are lacking		Financial situation High cost leve at JV		Capacity limitations	
___ ___ _ _								
_ _ _ _ ____	Relations with customers		Informatio n system (IT)				Capable manageme nt	
___ _ _ ___							Superior technology	
_ _ ___ ___								
___ ___ ___				Special technology is lacking				

The actor hexagram is integrated with the others, the resource and activity hexagrams into a final RAA hexagram in the following section.

Integrating the Hexagram and the RAA configurations

In the previous sections we have used the hexagram as an analytical tool to identify conditions and states where these are characterized in terms of cultural tension (or the cultural temperature found in a given state) and the type of change that these conditions are expected to create. It follows that in the A domain we identify stable mindscapes and expect no or little cultural change to take place. In domain B and C we find combinations of stable and changing mindscapes implying anticipation of learning and adaptation processes to evolve to bridge gaps in mindscapes and reduce culturally charged conditions. Finally within the D domain, we observe changing mindscapes implying dynamic underlying patterns and structures where compromise and new “ways” will be sought after.

Up to this point we have identified and analyzed each dimension within its own respective hexagram. The challenge in this final part is to integrate the three hexagrams as layers into a contextualized RAA configuration landscape. This allows for drawing a cultural map in which to analyze and conceptualize given conditions and states as well as the type of change a given condition is likely to create.

Figure 5 – RAA Configurations – integrated hexagrams

Cn –Sn Mindscapes

RAA config	_ _ _ _ _ _	___ _ _ _ _	_ _ ___ _ _	___ ___ _ _	_ _ _ _ ___	___ _ _ ___	_ _ ___ ___	___ ___ ___
_ _ _ _ _ _	*Cash contribut*		*Buildings & facilities*	*Purchase relations*		*Labor Union relations*	**Motivated workers** *Machine& equipmt Govt & Local rel*	**Quality On-time delivery** *Hangfa relations*
___ _ _ _ _				**JV products and services**				
_ _ ___ _ _	**Relations with suppl Old prod design,ma** Improve info syst		**Employee skills are lacking**	Improve external environmt	**Financial situation High cost leve at JV**	Sales and activity focus *Hangfa Technolog*	**Capacity limitations**	*Cutting costs*
___ ___ _ _								
_ _ _ _ ____	**Relations with customers**		**Informati on system (IT)** Improve skills			*Competitor relations*	**Capable managemt**	
___ _ _ ___			*KEN Technolog*				**Superior technolog**	
_ _ ___ ___								JV managemt
___ ___ ___	*KEN relations*		Product tech,design	**Special technolog is lacking** Modern production process				

resource - activity - **actor** typology

Building on observation from the hexagram – figure 5 – cultural tension between Chinese and Scandinavian managers in A is expected to be low and here we find resources such as; *cash contribution to the JV*; *buildings and facilities of the JV* and; *relations to purchasers and suppliers*. Activities include; *information systems* and the need to; *improve external/internal premises*. It relates to stability in perceived core JV *products and services*, and the agreement in terms of a general need to *develop employees' skills*. It follows that cultural tension is seen as low. Moving into the B and D domains we observe dominant and different mindscapes in terms of resources,

activities and actors. Resources such as; *equipment, technology and relations* reflect different mindscapes between Chinese and Scandinavian managers. Perceptions related to *sales activities* and *cost levels* are also found to differ. Actor determined outcomes are seen to relate to such issues as; *workers' motivation, quality and on-time delivery, relations with customers and the lack of special technology*, all reflecting unique mindscapes that are both dominant and different which allows for positioning within the hexagram. In terms of extreme values found in the hexagrams (higher righ-hand and lower left-hand corners), the *Hangfa relationship* represent different and dynamic forces to the Scandinavian corporate culture (111), which requires adoption and adaptation. Similarly, to the Chinese corporate culture, the *Kvaerner relationship* is new and unknown and learning the ways of the new majority owner becomes important to the local managers (111). In this way differences in mindscapes and underlying corporate cultures are bridged through learning processes where one side learns "new ways" from the other. It follows that adoption and adaptations contextualize change.

Finally in the last domain of the hexagram – the D domain – we observe issues such as; *capable management, superior technology and JV management,* all representing dominant but different perspectives in terms of the two corporate cultures. Management *capabilities* are perceived by the Chinese as deteriorating reflecting a possible view that the incumbent foreign dominant management is not particularly successful. Scandinavian values also reflect a decline, but this is seen less significant and is believed to relate to the hole management team. The technology issue represents a relative concept and is related to the special technical requirement of the Chinese market where Chinese sees the JV losing position in the local market while the Scandinavian managers sees this issue as less of a strategic problem. However, the condition is seen to represent increased cultural tension also on the more general issue of technology transfer. Finally, in the far bottom corner, we observe the issue of *JV management (011-111),* where both corporate cultures have views on what is required to succeed. Here we identify a position in the hexagram where high cultural tension is seen to be demanding compromise of some sort or the need for a "new solution". Both within and outside the JV there is an increased recognition both among the Chinese and the Scandinavian managers that their respective ways are not sufficient to ensure survival of the JV and synergies shall have to be developed to ensure survival of the collaboration. Data confirms that managers at various levels of the JV are calling for a "third way", which builds on best of both Chinese and Scandinavian corporate cultures. This is in congruence with predictions of the hexagram.

Concluding comments

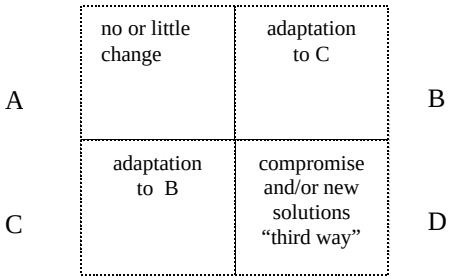
In this work we establish mindscapes as a central concept when cultivating in emerging landscapes and where the rapidly emerging Chinese economic landscape is seen as both complex and dynamic. The underlying proposition to be extracted from this work is that it is not the objective reality or landscape alone which is important for economizing resources and activities, but perhaps more so how it is being perceived and enacted by focal actors cultivating in this landscape.

Accordingly we shift focus from the landscape to the mindscape, as the key determinant of cultivation and cultural processes. In this study we have characterized mindscapes in terms of RAA configurations presented as trigrams where the

dimensions of resources, activities and actors become focal. The study further draws on the analytical principles of I Ching to allow for inclusion of dynamic properties into our diagnosis and analysis. Interaction within the internal/external perspective allows for conditions of both relatively stability and change. Within the model framework we find that values of 1 and 0 are significant with respect to the corporate culture. When the RAA configuration display 111 – i.e. when resources, activities and actor determined outcomes are all 1, the corporate culture is identified to be in a state that is highly culturally charged and characterized by high cultural temperature and tension. When the RAA configuration displays 000 – i.e. when all dimensions reflect 0 states, the corporate culture is found to be in a state carrying minimal cultural charge, characterized by low cultural temperature and tension.

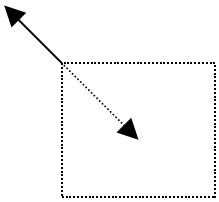
In this way the hexagram becomes a diagnostic tool to identify states characterized by degrees of cultural tension as well as identifying changes which are likely to occur as different cultures interface. By categorizing a given issue and a context in terms of cultural charge and tension the hexagram also displays predictive power in terms of indicating the type of the change a given situation will create. The analytical complexities of hexagram can be simplified to four fields an represented in terms of A-B-C-D or a 2x2 matrix where each field contains 16 possible combinations (16x4 = 64 hexagrams in total). In terms of the four fields we identify four possible change processes; i) in Field A – no or little change; ii) in Field B – adaptation to C; iii) in Field C – adaptation to B and finally iv) in Field D -compromises or search after new solutions.

Figure 6 – Types of change expected



The "field" borders are blurred and are not as sharply delineated as reflected in the matrix above because the hexagram is perceived to characterize states from relative stability to rapid change in terms of internal consistencies and successive change. Returning to the above example; identifying a 110-state, where a particular cultural charge is observed and the situation is characterized by variability in terms of resources and activities but stable actor outcome. Such a situation is found within the A field (lower right-hand corner) but is clearly more culturally loaded than a 000 state which is found in the upper left-hand corner of the field. Contingent on the given situation and the given contextualization, borders may change and the given situation may become part of an expanding neighboring field i.e. the D-Field.

Figure 7 – Expanding / contracting the force field



In this way the analytical tool itself is given dynamic properties and will gain in significance and strength according to the knowledge and skills of the user and the way it is being used. Action and no-action reflect the readiness to act the part of the phenomenal world assigned to man by time and his surroundings…

In concluding, this paper draws attention to how mindscapes can become a tool to understand cultivation processes in emerging economic landscapes. The diagnostic powers of trigrams characterized as RAA configurations and expressed as elements and their relationships in form of hexagrams, allowing new insight and understanding to grow from old.

However, the diagnostic tool as presented herein is fragile, crude and unarticulated so further empirical work is required to sharpen its analytical properties. The aim is to improve the basis for systematic ordering of events and issues in order to allow for meaningful action to take place important to the survival of the firm. In this process new mindscapes will be revealed exhibiting the significance of polarity in a landscape increasingly filled with paradoxes.

g.bjercke_290701

References

Arino, A. and J. de la Torre (1998). "Learning from Failure: Towards an Evolutionary Model of Collaborative Ventures." Organizational Science **9**(May-June): 306-325.

Boisot, M. and J. Child (1999). "Organizations as Adaptive Systems in Complex Environments: The Case of China." Organizational Science **10**(3): 237-252.

Buckley, P. J. and M. Casson (1996). "An Economic Model of International Joint Venture Strategy." Journal of International Business Studies **27**(Special Issue): 849-876.

Caley, M. T. and D. Sawada, Eds. (1994). Mindscapes: The Epistemology of Magoroh Maruyama. Langhorne, PENN, Gordion and Breach Science Publishers.

Contractor, F. J. and P. Lorange (1988). "Why Should Firms Cooperate? The Strategy and Economic Basis for Cooperative Ventures". Cooperative Strategies in International Business. F. J. Contractor and P. Lorange. Lexington, MA., Lexington Books**:** 3-28.

Doz, Y. (1996). "The Evolution of Cooperation in Strategic Alliances: Initial Conditions or Learning Processes?" Strategic Management Journal(17): 55-83.

Eisenhardt, K. M. (1989). "Building Theories from Case Study Research." Academy of Management Review **14**: 532-50.

Glaser, B. and A. L. Strauss (1967). Discovery of Grounded Theory: Strategies for Qualitative Research. New York, Aldine.

Granovetter, M. (1985). "Economic Action and Social Structure: The Problem of Embeddedness." American Journal of Sociology **91**(3): 481-510.

Gulati, R. (1998). "Alliances and networks." Strategic Management Journal **19**(4): 293-317.

Hagedoorn, J. (1995). "A Note on International Market Leaders and Networks of Strategic Technology Partnering." Strategic Management Journal **16**: 241-250.

Hennart, J. F. (1988). "A Transaction Costs Theory of Equity Joint Ventures." Strategic Management Journal **9**: 361-374.

Håkansson, H. (1987). Industrial Technological Development. A Network Approach. London, Croom Helm.

Håkansson, H. and I. Snehota (1995). Developing Relationships in Business Networks. London, Routledge.

Lewin, K. (1951). Field theory in social science: selected theoretical papers. New York, Harper and Row.

Maruyama, M. (1980). "Mindscapes and Science Theories." Current Anthropology **21**: 589-599.

Miles, M. B. and A. M. Huberman (1984). Qualitative Data Analysis. Newbury Park, CA, Sage.

Parkhe, A. (1993). "Messy research, methodological predispositions, and theory development in international joint ventures." Academy of Management Review **2**: 227-268.

Ring, P. S. and A. H. Van de Ven (1994). "Development Processes of Cooperative Interorganizational Relationships." Academy of Management Review **19**: 90-118.

Smith, K. G., S. J. Carroll, et al. (1995). "Intra- and Interorganizational Cooperation: Towards a Research Agenda." Academy of Management Journal **38**: 7-23.

Weick, K. E. (1979). The social psychology of organizing. New York, Random.

Weick, K. E. (1995). Sensemaking in Organizations. Thousand Oaks, CA, Sage Publications.

Wilhelm, R. and C. Baynes (1967). The I Ching. Princeton, Princeton University Press.

Yan, A. and B. Gray (1994). "Bargaining Power, Management Control and Performance in United States-China Joint Ventures: A Comparative Case Study." Academy of Management Journal **37**: 1478-1517.

Yin, R. K. (1984). Case study research. Beveley Hills, CA., Sage.