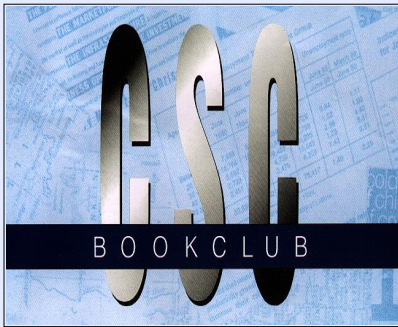


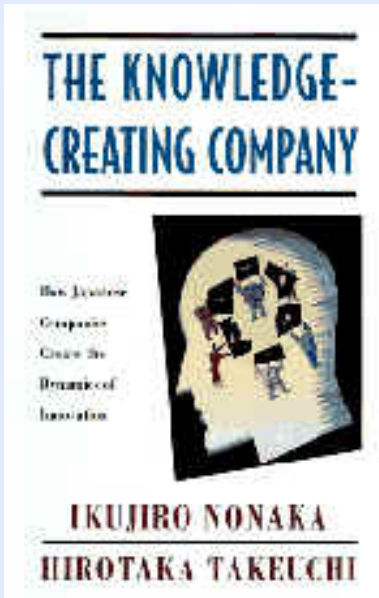
THE KNOWLEDGE-CREATING COMPANY



Why are Japanese companies so successful? The authors Ikujiro Nonaka and Hirotaka Takeuchi proposed an answer using their theory of "Organisational Knowledge Creation", i.e. the capability of a company as a whole to create new knowledge, disseminate it through the organisation and embody it in products, services and systems. This, according to the authors, is the key to the manner in which Japanese companies innovate continuously.

To understand the success of Japanese companies, one must understand the environment in which these companies underwent before their transformation. As they were neither dominant players nor successful companies, they did not acquire the usual complacency and arrogance that plagued their successful counterparts such as IBM and General Motors. Japanese firms turned to organisational knowledge creation because of the crises they faced. They existed in an environment where they were constantly forced to abandon what was once considered successful, and where the only certainty was uncertainty itself. Being vulnerable, they were sensitive to the changes taking place around them. This, it seems, is a trait of successful companies.

"A more fundamental need is to understand how organisations create new knowledge that makes (new) creations possible." (p50)



Tacit vs Explicit Knowledge

Due to the uncertainty of the future, Japanese companies had to turn to resources outside the organisation for new knowledge and insights. The socio-cultural and linguistic differences between Japan and the western world resulted in their contrasting approaches to knowledge creation. The western philosophy of knowledge, termed as explicit knowledge by the authors, had been grounded on manuals and printed materials, whilst the Japanese practiced a tacit form of knowledge creation.

Tacit knowledge cannot be communicated through manuals or theories. Instead, it is best communicated through experience. This can be achieved by harvesting knowledge from the company's employees - knowledge they gained through experience, and knowledge linked to their mental schemas, for instance, attitudes and beliefs. Individuals' ideas are highly valued in Japanese companies, and these suggestions and improvements are judged based on their merits, and not by the seniority or standing of the individuals in the company. The authors argued that it is the use of such tacit knowledge that enabled Japanese companies to break the mould and produce repeated innovations for competing in the international market.

Title: The Knowledge Creating Company
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Tacit Knowledge	Explicit Knowledge (Objective)
Knowledge of experience (body)	Knowledge of rationality (mind)
Simultaneous knowledge (here and now)	Sequential knowledge (there and then)

Analog knowledge (practice)	Digital knowledge (theory)
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TABLE 1: Two Types of Knowledge (p61)

According to the authors, the knowledge of experience tends to be tacit and subjective, as opposed to the rationality and objectivity of explicit knowledge. Due to its experiential nature, the sharing of tacit knowledge between individuals is akin to an analog process - requiring a simultaneous processing of information. Explicit knowledge, on the other hand, is created sequentially, and oriented towards a context-free theory.

**"We can know more than we can tell."
(p60)**

Bread Making and Dough Twisting

The authors highlighted the research conducted by Matsushita during the development of its Home Bread-making machine to showcase an example of how tacit knowledge (in this case the skills in kneading the dough) is converted to explicit knowledge. The book also uses many such case studies drawn from 3M, Honda, Canon, and many more to illustrate their theory of organisational knowledge creation.

Illustration: Matsushita Home Bakery

A team working to develop a bread-making machine understudied with a hotel that is famous for its bread in order to decipher the secret of dough making. After weeks of intensive apprenticeship, the team discovered that the chef not only kneaded the dough but also twisted it in the process of dough making. With this information, they successfully developed the home bakery machine. This is something, the authors argued, that cannot be articulated by the chef easily because the skill had been so ingrained in him that he was unaware of the fact that he was twisting the dough as well as kneading it.

Middle-Up-Down

In this book, the authors also introduced a revolutionary management system, known as the Middle-up-down management process. It emphasises the role of middle managers who partake actively in knowledge creation through a spiral conversion process involving both the top and front-line employees, since they serve as strategic knots that bind the two. This new system, they reasoned, is most suitable because it produces an environment conducive for tacit knowledge creation. It is an integration of the top-down and bottom-up management models that enables the creation and accumulation of knowledge at the individual level.

Top-Down

Bottom-up

Middle-up-down

Who	Agent of Knowledge creation	Top management	Entrepreneurial	Team (middle managers individual as knowledge Engineers)
What	Accumulated knowledge	Explicit	Tacit	Explicit and Tacit
Where	Knowledge Storage	Computerised database/manuals	Incarnated in individuals	Organisational knowledge base
How	Organisation	Hierarchy	Project Team and informal network	Hierarchy and task force (hypertext)
	Communication	Orders/instructions	Self-organising principle	Dialogue and use of metaphor/analogy
	Tolerance for ambiguity	Chaos/fluctuation not allowed	Chaos/fluctuation premised	Create and amplify chaos/fluctuation
	Weakness	High dependency on top management	Cost of coordinating individuals	Human exhaustion, cost of redundancy

TABLE 2: Three Management Models of Knowledge Creation (extract, p130)

Universal Model

However, having an unique innovation and improvement mechanism alone is not enough. The authors also looked at how organisational knowledge creation could be practised globally, either with international Japanese companies or Japanese companies working in conjunction with non-Japanese counterparts in a foreign country. Japan's over-emphasis on the use of figurative language and symbolism should be reconciled and mated with the Western methodology, which places more importance on analytical approaches and documentation. This would help develop a universal model of organisational knowledge creation that would be applicable throughout the world and not simply in Japanese companies.

Conclusion

Although the authors claimed that they were only interested in knowledge creation and not knowledge *per se*, they dedicated a chapter on the evolution of epistemology (theory of knowledge) from rationalism to empiricism, and from Cartesian Dualism to Zen Buddhism. Those who want a quick guide to the theories of knowledge by Plato, Aristotle, Descartes and their likes will find this chapter extremely comprehensive.

After reading this book, one cannot help but draw parallels between Japan and Singapore. Singapore has been hailed as a success story by many. However, we cannot afford to sit on our laurels and become numb and blind to changes around us. In our move towards a knowledge-based economy, the creation, dissemination and application of knowledge will become critical to our continued success and prosperity. This book draws experiences from the Japanese companies and offers interesting insights for us. §