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# **Organizational Knowledge Creation in the Japanese Multinational Corporation: What U.S. Managers Can Learn from Nonaka**

CAPSTONE REPORT

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Running Head: Knowledge Creation in the Japanese MNC

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**Abstract**

This literature review examines the application of Ikujiro Nonaka's perspective on organizational knowledge creation in the Japanese Multinational Corporation (MNC). Focus is on the SECI model and the concept of *ba*. Literature published between 1994 and 2009 is synthesized to develop four guidelines for U.S. managers who work in Japanese MNCs, including the need to understand the Japanese view of tacit knowledge conversion and the important role of middle managers in translating top management vision.





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## **Introduction**

### ***Problem Area***

In the early to mid-1990s, researchers focused on defining tacit knowledge – and providing contrast to explicit knowledge – as it applies to organizations (see Kogut & Zander, 1992; Hedlund, 1994; Nonaka, 1994; Nonaka & Takeuchi, 1995) to better understand the larger concept of organizational knowledge. According to Nonaka and Takeuchi (1995), understanding how Western and Japanese approaches to knowledge differ lies in better comprehending “the distinction between explicit knowledge and tacit knowledge [. . .]” (p. 8).

Identifying common and clear definitions of knowledge and tacit knowledge is no small task. The definition of knowledge used in this study follows Kogut and Zander’s (1992) view and can be described as “know how” (p. 517). The definition of tacit knowledge most useful to this study is “personal knowledge embedded in individual experience, and involves tangible factors such as personal belief and perspective, and the value system [. . .]” (Ichijo & Nonaka, 2007, p. 298). Kogut and Zander (1992) note that tacit knowledge “represents a dramatically different vantage point by which to analyze the capabilities and boundaries of firms” (p. 383).

The first elements of organizational knowledge-creation theory grew out of scholarly attempts to classify unique organizational communications within Japanese companies in the 1970s and 1980s (Nonaka, 1988, 1994; Nonaka & Takeuchi, 1995). Nearly 20 years after the early research within Japanese companies, organizational knowledge creation theory has weathered significant scrutiny and is not only still viable, but continuing on with scholars probing new avenues for future research (Nonaka, von Krogh & Voelpel, 2006).

The assumption underlying this study is that Japanese Multinational Corporations (MNCs) provide a useful context for the exploration of organizational knowledge creation. As Nonaka and Takeuchi (1995) explain, concepts that are both theoretical and foreign in nature can be hard to understand. The Japanese MNC use of expatriates for communication and control is well documented in the literature (see Beechler & Bird, 1999). Managers working in U.S. subsidiaries of Japanese MNCs work with expatriates daily, and these managers also play a crucial role in organizational knowledge creation (Nonaka, 1988, 1994; Nonaka & Takeuchi, 1995; Ichijo & Nonaka, 2007).

Specifically, studying the importance the Japanese place on tacit knowledge (Nonaka & Takeuchi, 1995) along with Japanese MNC use of expatriates in foreign (to Japan) subsidiaries (Beechler & Bird, 1999; Keeley, 2001) can be approached in such a way as to create a useful framework to further understand Nonaka's perspective on organizational knowledge creation. Key references in this study include both early and more recent works. Imai, Nonaka, and Takeuchi (1985), Nonaka (1988), and Nonaka and Takeuchi (1995) provide foundational concepts. Nonaka and Konno (1998), Nonaka and Toyama, (2003; 2007), Nonaka, von Krogh and Voelpel, (2006), and Nonaka and von Krogh (2009) are later works expanding organizational knowledge-creation research.

### ***Purpose***

The purpose of this study is to collect, analyze and describe Nonaka's perspective on organizational knowledge creation and its application in the Japanese MNC. Much of the literature that covers organizational knowledge creation is complex and both theoretical and foreign in origin (Nonaka & Takeuchi, 1995). Based on nearly two decades of personal

experience, the perspective taken by this researcher is that the U.S. manager working for a Japanese MNC subsidiary is in a unique position to benefit from an increased understanding of the knowledge-creation processes and the documented roles played by the Japanese expatriate.

The research goal in this study is to examine organizational knowledge creation in the context of the Japanese MNC, as framed by Nonaka's unique perspective. Nonaka's SECI model (Socialization, Externalization, Combination, Internalization) describes four modes of tacit-to-explicit and explicit-to-tacit "knowledge conversion" (1994, p. 19) that are in tune with how Japanese organizations operate. As Nonaka and Nishiguchi (2001a) assert, "There remains much variety in terms of angles and approaches chosen to examine the knowledge-creation process" (p. 3), and this study follows the spirit of their assertion through collection and analysis of literature from two separate fields of inquiry driving toward synthesis of these two fields.

### *Significance*

Nonaka and Takeuchi (1995) describe the confusion that can result from disseminating new knowledge in an organization. They define the role of management at both the senior and middle levels as "[. . .] to direct this confusion toward purposeful knowledge creation" (p. 15). It is important for managers to be aware of organizational knowledge-creation theory, because "an understanding of the underlying concepts will give managers a better grasp of the powerful tool of knowledge creation in their organizations" (Nonaka & Toyama, 2007, p. 29).

The complexities in understanding the processes of organizational knowledge creation in an MNC are revealed by Perlmutter (1969), who puts forth "three primary attitudes" observable in an MNC (p. 11). First, he describes the ethnocentric style with high reflection in control, organization, and structure styles prevalent in the parent country. Second, he posits a polycentric

approach wherein a concerted effort to adapt to the host country is the norm. Third he offers a geocentric style that drives at a global focus wherein parents and subsidiaries collaborate. Perlmutter (1969) notes that no firm exhibits any one style exclusively, but tendencies are certainly observable and attributable to one of these attitudes.

Keeley (2001) supports this discussion when he suggests that Japanese MNCs' prevalent practice of using expatriate managers to control subsidiaries is a result of the "strong ethnocentrism found in Japanese social organizations and business enterprises" (p. 9). Edström and Galbraith (1977) provide foundational arguments in multinational organizational behavior focused on control and coordination of subsidiaries, several of which include socialization. For example, they note that an important aspect of the practice of transferring expatriate managers to other countries to further socialization often leads to the creation of "verbal information networks" (p. 248), which, in essence, provide knowledge channels a multinational can leverage.

### ***Audience***

As an employee of a Japanese Multinational Corporation working in a wholly owned U.S. subsidiary for 19 years, this researcher has long been fascinated by the role the Japanese expatriate plays in a U.S. subsidiary of the Japanese MNC. As a subsidiary employee of a Japanese MNC, I witnessed and experienced cultural differences on a daily basis, revealing what Hedlund (1994) describes as differences in "patterns" (p. 73) of how knowledge is managed by Japanese and Americans. This study is designed for managers in U.S. subsidiaries of Japanese MNCs as a way to provide these individuals with increased awareness of the unique role and position of the Japanese expatriate within the knowledge-creation process. With increased awareness, U.S. managers can better position themselves to impact the knowledge-creation

process within their own organizations and even with the parent company in Japan. The perspectives presented by Nonaka (1994) and Nonaka and Takeuchi (1995) are used to frame this study, because knowledge-creation theory emanated from their scholarly effort to describe how Japanese companies innovate.

### ***Outcome***

The intended outcome of this study is to develop a guide for U.S. managers in Japanese MNCs. The intent is that this guide will provide U.S. managers in the Japanese MNC with increased understanding of organizational knowledge creation by applying Nonaka's (1994) and Nonaka and Takeuchi's (1995) perspective to the Japanese MNC. From many years of work experience in a Japanese MNC, this researcher believes the intersection between the studies of the Japanese MNC and organizational knowledge-creation theory yield invaluable key information that is not covered in classes or seminars contributing to the usefulness of this guide. Nonaka and Takeuchi (1995) note the difficulties in understanding a theory that is foreign in origin, i.e. organizational knowledge-creation theory. Thus, a guide documenting key concepts of knowledge creation, such as the SECI model and *ba*, positions the U.S. manager to gain new knowledge with immediate practical applications in the Japanese MNC.

### ***Delimitations***

***Selection of definitions for the study.*** Definitions of tacit knowledge vary in the literature. The definition provided by Ichijo and Nonaka (2007) is used in this study. It is important to note that some researchers claim that tacit knowledge, as defined and framed by



Nonaka and his various co-authors, is an incorrect or incomplete interpretation of Polanyi (1958) and tacit knowing (Gourlay, 2006; Grant, 1996; Jashapara, 2007; Tsoukas, 1996). A recent work by Nonaka and von Krogh (2009) specifically addresses these claims: “[. . .] Important scholarly contributions have also raised issues with the theory and proposed alternative approaches to understand knowledge (in particular, tacit knowledge) in organizations” (p. 383). Yet, as organizational knowledge-creation theory has evolved, the value and organizational implications of continued and ongoing research are growing as well (Nonaka & von Krogh).

Definitions of a Japanese MNC also vary in the literature. In this study, the MNC definition is taken from Dunning (1993) and defined as “a company that owns or controls value-adding activities in more than one country” (Westney, 1999, p. 20). As this study is specifically focused on helping increase awareness for U.S. managers working for a Japanese MNC, a further delimitation is assumed: The use of “Japanese MNC” implies a Japanese MNC with a U.S. subsidiary. The U.S. subsidiary would have both Japanese expatriates and U.S. managers working together to manage the U.S. business of the Japanese MNC in the North American region.

***Time frame.*** Though a few older references are used to provide historical context, the majority of the literature in this study originated from the early 1990s through the present. Prusak and Weiss (2007) note the period of 1992-1998 as the early stages in knowledge-management inquiry, and important works originated during the 1990s (see Kogut & Zander, 1992; Nonaka, 1994; Nonaka & Takeuchi, 1995; Tsoukas, 1996). The evolution of Nonaka’s perspective has led to more recent works of validation and exploration of areas for further research (Nonaka & von Krogh, 2006; Nonaka et al., 2009).

The literature on MNCs, and Japanese MNCs in particular, is selected from the same time frame (1990s-present) for consistency. Also, as Yasumuro and Westney (2001) note, since the mid-1980s, research on MNCs “shifted from the ownership and control patterns” (p. 180) to analysis focused on “strategies for cross border integration, local responsiveness and – most relevant to knowledge creation – learning and innovation” (p. 180).

***Types of sources.*** The academic literature search on both knowledge creation and MNCs results in a wealth of sources from peer-reviewed journals. Books from scholars in the respective fields are used, along with several compilations edited by leading scholars with chapters by respected authors in academia and business. In addition to being applicable to the topics of knowledge creation and Japanese MNCs, these sources also represent various types of scholarly research and analysis.

***Selection criteria.*** References are selected based on keyword searches with particular attention paid to important works as evidenced through several aspects, including author evaluation, topic pertinence, and frequent citation by other researchers (Bell & Smith, 2009). Works offering opposing or different points of view are also selected, along with checking for authoritative sources cited in all works (Bell & Smith).

***Choice of audience.*** As a former manager working in a U.S. subsidiary of a Japanese MNC, I spent much time in thought as to how to better understand and work with the Japanese. Yet, to attain even basic levels of understanding took many years. By combining my lengthy Japanese MNC work experience with academic study in both knowledge creation and Japanese

MNCs, I find I am gaining new insights: firms are dynamic knowledge-creating entities, and that can be a competitive edge for any firm (Nonaka & Toyama, p. 14). My belief is that this clearly demonstrates the usefulness and value of a study focused on knowledge creation and the Japanese MNC to managers working in U.S. subsidiaries of Japanese MNCs.

***Topic definition.*** Early studies of knowledge creation grew out of attempts to classify how Japanese companies strategize and innovate (Nonaka & Takeuchi, 1985; Nonaka, 1988; Nonaka, 1994; Nonaka & Takeuchi, 1995). Knowledge creation, as it applies to organizations, and how organizations facilitate creation of and use knowledge, can be a significant source of learning for those involved (Nonaka & Toyama, 2007). This perspective provided by Nonaka defines the pursuit of this study: to expand understanding of organizational knowledge creation as applied to the Japanese MNC.

***Choice of focus.*** Focus on Nonaka's perspective as applied to the Japanese MNC is beneficial to the U.S. manager in the Japanese MNC: Nonaka's knowledge-creation theory relies on foreign concepts difficult to understand for the non-Japanese (Nonaka & Takeuchi, 1995). If, as Nonaka and Takeuchi (1995) state, it is the role of managers to direct the confusion that can result from disseminating new knowledge in an organization "toward purposeful knowledge creation" (p. 15), then this perspective may give managers new insight.

***Data Analysis Plan Preview***

The data analysis approach selected for this study is a form of content analysis, as defined by Busch et al. (2005). This process, known as conceptual analysis, provides a research tool that can be used to verify the presence of certain words or concepts within texts or sets of texts. Initial terms used to code the selected literature, as a way to gather data, are: knowledge creation, tacit knowledge, organizational knowledge creation, SECI, *ba*, Japanese MNC, and Japanese expatriate.

***Writing Plan Preview***

The writing plan for this study structures the ideas presented in the Review of the Literature section of this document. It uses a “thematic” (Literature Reviews, 2007) approach organized around organizational knowledge creation as applied in the Japanese MNC. The results from the coding process, described above in the Data Analysis Plan Preview, are first examined to reveal emergent themes related to the purpose of the study. A brief overview of both organizational knowledge creation and the Japanese MNC is followed by an in-depth examination of the SECI model and the concept of *ba*. The writing plan, designed to facilitate the development of a guide for U.S. managers in the Japanese MNC, is geared toward synthesis of literature in organizational knowledge creation and Japanese MNCs.

### Definitions

The following definitions serve two purposes. First, the terms below are defined in relation to literature selected for use in this study as a way to provide clear context. Second, these definitions provide insight for readers unfamiliar with a given term or concept.

*Ba*. Introduced in 1998 by Nonaka and Konno, this concept is attributed to Japanese philosopher Kitaro Nishida, with further development by Shimizu (1995) (p. 40). As used in describing an aspect of knowledge creation, the Japanese concept of *ba* has no literal English translation but roughly means “space” (p. 40). As applied to knowledge-creation theory, it is clear this concept complements the SECI model in that it is used to mean “ a shared space that serves as a foundation for knowledge creation” (p. 40).

*Ethnocentric style*. Perlmutter (1969) describes several styles of management and communication organization in the MNC. The ethnocentric style-- indicated by a high reflection in control, organization, and structure styles prevalent in the parent country-- is particularly useful to this study (Perlmutter, 1969). The perpetuation of the ethnocentric style is revealed by recruitment and development of staff in the home country for positions throughout the world (Perlmutter, 1969). Kopp (1999) indicates the persistence of the ethnocentric style in Japanese MNCs through survey findings. Keeley (2001) supports this discussion when he suggests that Japanese MNCs’ prevalent practice of using expatriate managers to control subsidiaries is a result of the “strong ethnocentrism found in Japanese social organizations and business enterprises” (p. 9).

*Host Country Nationals (HCNs)*. In the MNC literature, Host Country Nationals are local Nationals of a country in which a foreign company is doing business; the integration of HCNs into management and decision-making processes of a subsidiary are crucial to globalization (Keeley, 2001). For example, U.S. managers could be assumed to have a better understanding of English, culture and dealing with American customers than a Parent Country National (Japanese expatriate for purposes of this study) (see Keeley, 2001 pp. 1-2).

*Japanese expatriate*. Edström and Galbraith (1977) use the term “expatriate” to “indicate employment outside one’s native country” (p. 249). As such, “Japanese expatriate” is defined, for purposes of this study, as a Japanese citizen working for a Japanese MNC tasked with traveling to a foreign country in the capacity of his or her job to assist with control and communication between a subsidiary and the parent company in Japan.

*Japanese Multinational Corporation (MNC)*. The Japanese MNC is a Japanese company with operations in a country or countries outside of Japan, as defined by Dunning (1993).

*Knowledge Spiral*. In his 1994 journal article, *Dynamic Theory of Organizational Knowledge creation*, Nonaka devotes significant discussion to the SECI model and the interaction between modes (*socialization, externalization, combination and internalization*) are spiral in nature. Nonaka and Takeuchi (1995) take this further and use the term *knowledge spiral* to indicate the spiral nature of organizational knowledge creation stating, “[. . .] the interaction between tacit knowledge and explicit knowledge will become larger in scale as it moves up the ontological levels” (p. 72). Adding further discussion of another knowledge spiral on an

epistemological (or theory of knowledge and distinguishing between justified true belief and opinion (1995, pp. 20-22) level, they depict this interaction in pictorial form (p. 73).

*Knowledge-creation theory.* Put forth by Nonaka (1994) and further explored with organizational examples by Nonaka and Takeuchi (1995), organizational knowledge-creation theory describes components providing a unique view into how organizations create knowledge.

*Middle-up-down management.* Nonaka (1988) coined this term to describe a management style wherein middle management is given a central role. He acknowledges both top-down and bottom-up management but shows how Honda uses this style effectively.

*Organizational knowledge creation.* “Organizational knowledge creation is the process of making available and amplifying knowledge created by individuals as well as crystallizing and connecting it with an organization’s knowledge system” (Nonaka, von Krogh & Voelpel, 2006). Nonaka (1994) introduced the theory of organizational knowledge creation in a journal article and Nonaka and Takeuchi (1995) introduced the theory into the mainstream of Western management practice with a book, the *Knowledge Creating Company*. Based on years of research into the success of Japanese companies and how they innovate, Nonaka and Takeuchi added a Japanese perspective knowledge management (1995). Ikujiro Nonaka’s numerous followups with other co-authors and the true breadth of his academic work are evident in the Annotated Bibliography section of this document and an English sampling of his work in Appendix B.

*SECI model/process.* Nonaka (1994) and Nonaka and Takeuchi (1995) used this construct to describe the process or modes for knowledge conversion from explicit-to-tacit and tacit-to-explicit. SECI stands for *Socialization, Externalization, Combination, Internalization*. An example of the *socialization* mode for tacit-to-tacit knowledge conversion would be how an apprentice learns from a master craftsman (Nonaka & Takeuchi, 1995). The knowledge a master craftsman holds cannot be easily transferred, thus the “shared experience” (Nonaka & Takeuchi, p. 63) between master and apprentice is indicative of the *socialization* mode of knowledge transfer.

*Seishain.* Defined as a regular or full-time employee (Keeley, 2001, p. xi) but effectively considered “real employees” (Kopp, 1994, p. 12). The term is important in the study of the Japanese MNC with its implications on advancement and career development for non-*seishain* (Kopp, 1994; Keeley, 2001). *Seishain* are viewed as core employees to the Japanese company with virtual lifetime employment and focused career development opportunities (Kopp, 1994). Non-*seishain*, which would include U.S. employees of a Japanese MNC, are viewed as a flex factor from the company perspective similar to the use of full-time regular employees vs. temporary employees in the U.S. (Kopp, 1994).

*Tacit knowledge.* The definition of tacit knowledge most useful to this study is “personal knowledge embedded in individual experience, and involves tangible factors such as personal belief and perspective, and the value system[. . .]” (Ichijo & Nonaka, 2007).



*U.S. manager.* For purposes of this study, a U.S. manager is defined as a manager working for a U.S. subsidiary of a Japanese MNC. This term can be correlated to Host Country National (HCN) in the MNC literature (see Keeley, 2001, p. 1). In the context of the Japanese MNC subsidiary, two types of managers are prevalent: Japanese expatriate managers, also called Parent Country Nationals or PCNs, and HCN managers (Keeley, p. 1).

### **Research Parameters**

This section provides background on the research process. The research questions used to frame this study are included. The search strategy for literature collection is described along with resources used in the literature search, including search engines and databases, as well as evaluation criteria for literature selection. The fully detailed Data Analysis and Writing Plans are included.

### ***Research Questions***

#### ***Main research question.***

What can U.S. managers learn through the application of Nonaka's perspective on organizational knowledge creation within the Japanese MNC?

#### ***Subquestions.***

1. What is organizational knowledge-creation theory in general (Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998)?
2. Why do Japanese MNCs use expatriates, and what are their roles in the organizational knowledge-creation process (Beechler & Bird, 1999; Keeley, 2001; Yasumuro & Westney, 2001)?
3. What key concepts of organizational knowledge creation, giving insight into Japanese MNC behavior, are revealed through application of Nonaka's SECI model and *ba* (Nonaka, 1991, 1994; Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998; Nonaka & Toyama, 2007)?

4. How can a deeper understanding of both organizational knowledge creation (Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998) and the roles of the Japanese expatriate help the U.S. manager better understand the actions of a Japanese MNC (parent) and better position the manager to participate actively in the knowledge-creation process?

### ***Search Strategy Report***

References for the literature review will be collected using the search terms and combinations noted below. These search terms were mined from the literature after merging an initial interest in Japanese Multinational Corporations and Knowledge Management. Key search terms include:

- Knowledge Creation/Knowledge-Creation Theory
- Organizational Knowledge Creation
- Nonaka and Knowledge Creation
- Nonaka and Knowledge Management
- Japanese Multinational Company/Japanese Multinational Corporation
- Japanese MNC
- Japanese MNC and Expatriate
- Expatriate and Knowledge Creation
- Japanese MNC and Knowledge Creation

Subtopic search terms include:

- Tacit Knowledge

### ***Literature Resources***

Using the key search terms and controlled vocabulary noted above, literature review resources are located and collected via various methods using the tools and information sources outlined below.

***Search Engines.*** Literature review sources are located using the UO WorldCat and Google Scholar. These sources proved most useful in locating both peer-reviewed journal articles and important works.

***Databases.*** Though mostly transparent to the user of UO Libraries or UO Find Text on Google Scholar, Business Source Premier and EBSCO HOST databases have proven most useful. Additionally, significant peer-reviewed works in the Knowledge Creation area of research have been collected through ArticleReach Automated Article Delivery. This method has proven useful for many older works.

### ***Evaluation Criteria***

References are collected based on keyword searches. Once a reference is collected, it is evaluated with particular attention paid to several aspects, including author evaluation, topic pertinence, and frequent citation by other researchers (Bell & Smith, 2009). Works offering opposing or different points of view were also selected along with checking for authoritative sources cited in all works (Bell & Smith).

### ***Data Analysis Plan***

The data analysis approach selected for this study is a form of content analysis, as defined by Busch et al. (2005). This process, known as conceptual analysis, provides a research tool that

can be used to verify the presence of certain words or concepts within texts or sets of texts. Initial coding terms are chosen in relation to the main research question – how has Nonaka’s perspective on organizational knowledge creation been applied in the context of the Japanese MNC? Following the approach described by Busch et al. (2005), the coding process is applied according to these eight steps:

***Level of analysis.*** The level of analysis is at the key phrase level. Initial phrases used to code the selected literature, as a way to gather data, are: knowledge creation, tacit knowledge, organizational knowledge creation, SECI, *ba*, Japanese MNC, and Japanese expatriate.

***Decide how many concepts to code for.*** Eight concepts are initially established for coding, which directly match the coding phrases described above: knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, *ba*, MNC, Japanese MNC, and Japanese expatriate.

***Existence or frequency of a concept.*** This plan focuses on identification of the existence of a concept within the literature selected for coding.

***Distinguishing concepts.*** Concepts are grouped where possible. For example, “MNC” appears in the literature as “multinational company,” “multinational corporation,” and “multinational enterprise,” and concept variations are used to group and capture key concepts.

***Rules for coding.*** In line with concept grouping, coding rules are used for consistent application to concepts to allow for easier organization. (Note: Example to be added when coding commences.)

***Irrelevant information.*** Decisions are made to ignore irrelevant information on a case-by-case basis. For example, “European MNC” might not yield usable information to this study, yet if it proves useful to this study, it may be used.

**Code the texts.** A combination of manual and automated coding is employed. Automated coding, in the form of the Find feature in Adobe Acrobat or Microsoft Word or the Search This Book feature on the Amazon Kindle, is used to code selected literature available in electronic format.

**Result Analysis.** Results of the coding process are examined for relevance to the research questions. Emergent themes are developed as a way to provide direction to the development of targeted material focused on increasing understanding of organizational knowledge creation for the U.S. manager in the Japanese MNC. Anticipated themes are further described below, in the Writing Plan.

### **Writing Plan**

The Writing Plan for this study structures the ideas presented in the Review of the Literature section of this document. It uses a “thematic” (Literature Reviews, 2007) approach organized around organizational knowledge creation as applied in the Japanese MNC. The results from the coding process, described above in the Data Analysis Plan, are first examined to reveal emergent themes related to the purpose of the study. Anticipated themes, including brief overview of both organizational knowledge creation and the Japanese MNC, are followed by in-depth examination of the SECI model and the concept of *ba*.

This thematic plan allows for focus on the key topics of this study: organizational knowledge creation in the Japanese MNC and what U.S. managers can learn from Nonaka’s perspective. Synthesis of these two topics provides the information necessary to reach the goal to develop a guide focused on increasing understanding of organizational knowledge creation for

managers in U.S. subsidiaries of the Japanese MNC. The following thematic outline depicts the writing plan.

1. Brief overview of knowledge-creation theory
2. Brief overview of the Japanese MNC
  - 1.1. Purpose and role of the Japanese expatriate
3. Detailed examination of the SECI model and *ba*
4. Synthesis
  - 1.1. Organizational knowledge creation applied in the Japanese MNC
  - 1.2. The expatriate role in the knowledge-creation process
  - 1.3. What U.S. managers can learn

### Annotated Bibliography

This section contains key references used to develop this study. Abstracts are included to provide an overview of the content of each entry, as well as a brief explanation of how the reference is used to support particular aspects of this study, and how the credibility of the reference is established. These key references are inclusive of the data set for coding described in the Data Analysis Plan section of this study.

Beechler, S. L., & Bird, A. (1999). The end of innocence: Japanese multinationals abroad. In S.

L. Beechler & A. Bird (Eds.), *Japanese multinationals abroad: Individual and organizational learning*, (pp. 3-10) New York: Oxford University Press.

**Abstract.** Geared to better understanding organizational learning and Japanese management practices overseas (from Japan), this introductory chapter to a compilation edited by the same authors gathers “empirical contributions” (p. v) from experts in the field. This chapter introduces the compilation, frames the book’s sections, and gives context surrounding academic research and study of Japanese MNCs.

**Comments.** This work’s focus on Japanese MNC behavior is useful to this study specifically contributing the Japanese MNC overview section of this paper. As part of a series from Oxford University Press geared toward furthering both empirical and theoretical research on Japanese business, this compilation explores Japanese MNCs in action around the globe. Beechler (University of Michigan) and Bird (University of Oregon) are both PhDs in International Management and Organization Studies respectively establishing credibility of this reference.



Gourlay, S. (2006). Conceptualizing knowledge creation: A critique of Nonaka's theory. *Journal of Management Studies*, 43(7), 1415-1436.

**Abstract.** The author asserts that Nonaka's proposition that knowledge is created through the interaction of tacit and explicit knowledge involving four modes of knowledge conversion is flawed. Three of the modes appear plausible, but none is supported by evidence that cannot be explained more simply. The conceptual framework omits inherently tacit knowledge and uses a radically subjective definition of knowledge: Knowledge is in effect created by managers. A new framework is proposed suggesting that different kinds of knowledge are created by different kinds of behavior. Following Dewey, non-reflective behavior is distinguished from reflective behavior, the former associated with tacit knowledge and the latter with explicit knowledge. Some of the implications for academic and managerial practice are considered.

**Comments.** This work's contrarian view of tacit knowledge is useful to this study in the SECI model section of this paper. As a critic of Nonaka's view on tacit knowledge, Gourlay's view provides contrast to Nonaka's perspective and describes perceived empirical shortcomings in Nonaka's work. It should be noted this work appears in many forms (and over many years) before being published in a peer-reviewed journal. Gourlay is Director of Doctoral Training at Kingston University (London) and is a PhD and this reference is deemed credible.

Hedlund, G. (1994). A model of knowledge management and the n-form corporation. *Strategic Management Journal*, 15, 73-90.

**Abstract.** A model of knowledge management is developed. It builds on the interplay between articulated and tacit knowledge at four different levels: the individual, the small group, the organization, and the interorganizational domain. The model is applied on differences between Western and Japanese patterns of knowledge management. These are related to organizational characteristics, such as employment systems, career patterns, and organization structure. Effective knowledge management is argued to require departures from the logic of hierarchical organization and the M-form structure. The alternative N-form is characterized and suggested as more appropriate. It entails combination of knowledge rather than its division, which is the basic principle in the M-form. Other attributes of the N-form are: temporary constellations of people, the importance of personnel at “lower levels,” lateral communication, a catalytic and architectural role for top management, strategies aimed at focusing and economies of depth, and heterarchical structures.

**Comments.** This work is useful to the study due to common elements with Nonaka and Takeuchi's (1995) knowledge creation theory and helps frame the overview of knowledge creation section of this paper. Hedlund provides a foundational view of tacit knowledge and its importance as a competitive factor in corporate advantage indicated in the Hedlund collaborated with Nonaka in a work contrasting knowledge management between the west and Japan (Hedlund and Nonaka, 1993). Hedlund was a PhD and an annual award for the best worldwide PhD dissertation in international business is named after him.

Ichijo, K., & Nonaka, I. (2007). Introduction: Knowledge as competitive advantage in the age of increasing globalization. In K. Ichijo & I. Nonaka (Eds.), *Knowledge creation and management: New challenges for managers* (pp. 32-43). New York: Oxford University Press.

**Abstract.** This introductory chapter in a compilation by the same authors focuses on what should be management's goals today in an increasingly globalized economy (p. 3).

Context is given on the importance of knowledge creation today. Several works in the compilation are central to the continued emphasis on knowledge creation and why managers should be aware of how knowledge creation can help their organizations.

**Comments.** Providing context on the importance of knowledge creation to corporate competitive advantage today, this recent compilation is central to the purpose of this study as indicated in the Synthesis, presented in the Review of Literature section of this study. Ichijo and Nonaka (2007) clearly state their position on the importance of organizational knowledge creation to managers. Ichijo has a PhD (University of Michigan) and is Professor of Graduate School of Social Sciences, Graduate School of International Corporate Strategy, at Hitotsubashi University, Tokyo. Nonaka is a PhD and originally proposed knowledge-creation theory with an extensive body of academic work (Nonaka Information, n.d.).

Imai, K., Nonaka, I., & Takeuchi H. (1985). "Managing the new product development process: How Japanese companies learn and unlearn." In K. B. Clark, R. H. Hayes, and C. Lorenz (Eds.), *The uneasy alliance: Managing the productivity-technology dilemma* (pp. 337-381). Boston: Harvard Business School Press.

**Abstract.** This early work predates published knowledge-creation theory but contains easily visible foundational elements of knowledge-creation theory. The work provides insight into how knowledge-creation theory may have evolved in that the authors note they were continually asked how Japanese companies operate. Specific mention of some of the companies later included in Nonaka and Takeuchi's (1995) case studies are evident: Honda and Canon.

**Comments.** As an early foundational work, this reference is useful to the study of knowledge creation and contributes to the Synthesis, presented in the Review of Literature section of this study. Nonaka's early pursuit of knowledge creation as an academic theory is clearly visible. The authors are PhDs with long careers of research in both the West and Japan establishing the credibility of this reference. Nonaka is a PhD and originally proposed knowledge-creation theory with an extensive body of academic work (Nonaka Information, n.d.).

Keeley, T. D. (2001). *International human resource management in Japanese firms: Their greatest challenge*. Hampshire: Palgrave.

**Abstract.** This work is useful to this study in several ways. First, Keeley's extensive experience with the Japanese language, both written and spoken, allows him to represent the larger body of work on Japanese multinationals: Some Japanese research is never translated into English. Second, his dealings with more than 200 Japanese companies give him specific insights into how Japanese companies operate.

**Comments.** This reference presents quantitative findings on integration of local managers into the decision-making processes. Information derived from the reference informs the description of the Japanese MNC in the Problem Area and the Synthesis, presented in the Review of Literature section of this study. Dean is a PhD in International Human Resource Management and is Professor of International Management, Kyushu Sangyo University in Japan, lending to the credibility of this reference.

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3), 383-397. Retrieved from <http://search.ebscohost.com.libproxy.uoregon.edu/login.aspx?direct=true&db=buh&AN=4434732&loginpage=Login.asp&site=ehost-live&scope=site>.

**Abstract.** How should we understand why firms exist? One prevailing view holds that they serve to keep in check the transaction costs arising from the self-interested motivations of individuals. We develop in this article the argument that what firms do better than markets is share and transfer the knowledge of individuals and groups within an organization. This knowledge consists of information (e.g., who knows what) and know-how (e.g., how to organize a research team). What is central to our argument is that knowledge is held by individuals but is also expressed in regularities by which members cooperate in a social community (e.g., group, organization, or network). If knowledge is only held at the individual level, then firms could change simply by employee turnover. Because we know that hiring new workers is not equivalent to changing the skills of a firm, an analysis of what firms can do must understand knowledge as embedded in the organizing principles by which people cooperate within organizations. Based on this

discussion, a paradox is identified: Efforts by a firm to grow by the replication of its technology enhance the potential for imitation. By considering how firms can deter imitation by innovation, we develop a more dynamic view of how firms create new knowledge. We build up this dynamic perspective by suggesting that firms learn new skills via recombining their current capabilities. Because new ways of cooperating cannot be easily acquired, growth occurs by building on the social relationships that currently exist in a firm. What a firm has done before tends to predict what it can do in the future. In this sense, the cumulative knowledge of the firm provides options to expand in new but uncertain markets in the future. We discuss at length the example of the make/buy decision and propose several testable hypotheses regarding the boundaries of the firm, without appealing to the notion of “opportunism.”

**Comments.** Published in a peer-reviewed journal, this article by Kogut and Zander describes an early foundational position of the importance of knowledge in the firm. This oft-cited work is useful to the study for contextual purposes, presented in the Overview of Knowledge Creation, presented in the Review of Literature section of the paper. The authors are both PhDs, lending to the credibility of this reference.

Kopp, R. (1999). The rice-paper ceiling in Japanese companies: Why it exists and persists. In S. L. Beechler & A. Bird (Eds.), *Japanese multinationals abroad: Individual and organizational learning*, (pp. 3-10) New York: Oxford University Press.

**Abstract.** Japanese MNC behavior overseas is discussed. Limited opportunities for advancement by local nationals and the reasons why this phenomenon exists relate to Japanese MNCs management styles at home in Japan. In a corollary to the glass ceiling

experienced by women in the U.S., “the rice-paper ceiling” (Kopp, 1999, p. 108) describes the advancement and participation ceiling experienced by local national managers in the Japanese MNC. Kopp’s survey findings confirm the persistence of the ethnocentric style in Japanese MNC’s and she notes the root causes of these behaviors.

**Comments.** This work’s focus on Japanese MNC behavior is useful to this study contributing to the Overview of the Japanese MNC in the Review of the Literature section. As part of a series from Oxford University Press geared toward furthering both empirical and theoretical research on Japanese business, this chapter explores root Japanese MNC behaviors overseas. Kopp is Managing Principle of Japan Intercultural Consulting and is fluent in Japanese even authoring 12 books in Japanese. Kopp has an M.B.A from University of Chicago.

Makela, K. (2007). Knowledge sharing through expatriate relationships: A social capital perspective. *International Studies of Management and Organization*, 37(3), 108-125.

**Abstract.** This work describes the importance of expatriate channels of communication in the MNC. Speaking to several factors that can enhance knowledge sharing in an MNC – for example, expatriate assignment length – Makela uncovers aspects of MNC behavior regarding expatriates useful to this study.

**Comments.** Published in a peer-reviewed journal, this work is focused on the expatriate and potential communication channels growing out of the expatriate process. It is useful to the study in examining expatriate relationships to knowledge creation as indicated in the Synthesis, presented in the Review of Literature section of this study. Makela is a PhD, lending to the credibility of this reference.

Nonaka, I. (1988). Toward middle-up-down management: Accelerating information creation. *Sloan Management Review*, 29(3), 9-18.

**Abstract.** In this early work by Nonaka, he asserts that Honda “City” (p. 9) is indicative of middle-management-focused style wherein middle management has a key role influencing both upper and lower management while also being central to the knowledge-creation process. Honda is used to illustrate that a broad goal from top management can be taken by middle managers, who have a keen perspective on and the resources of lower-management knowledge to create new knowledge or innovations. It is clear this is a foundational work as it contains some of the elements of knowledge-creation theory.

**Comments.** Published in a peer-reviewed journal, this early work by Nonaka (1988) emphasizes the concept of middle-up-down management. This concept is necessary to further the understanding of Japanese perspective by managers in the Japanese MNC. The information informs the Synthesis, presented in the Review of Literature section of this study. Nonaka is a PhD and originally proposed knowledge-creation theory with an extensive body of academic work (Nonaka Information, n.d.).

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14-37. Retrieved from Business Source Premier database.

**Abstract.** This paper proposes a paradigm for managing the dynamic aspects of organizational knowledge-creating processes. Its central theme is that organizational knowledge is created through a continuous dialogue between tacit and explicit knowledge. The nature of this dialogue is examined and four patterns of interaction involving tacit and explicit knowledge are identified. It is argued that while new



knowledge is developed by individuals, organizations play a critical role in articulating and amplifying that knowledge. A theoretical framework is developed that provides an analytical perspective on the constituent dimensions of knowledge creation. This framework is then applied in two operational models for facilitating the dynamic creation of appropriate organizational knowledge.

**Comments.** This is Nonaka's (1994) first extensive work on organizational knowledge - creation theory published in English in a peer-reviewed journal and is useful to this study in its coverage of knowledge creation. Heavily based on initial presentation of organizational knowledge creation theory to a Western audience, this work is useful to the study for establishment of the theory. This reference is significant and informs the Overview of Knowledge Creation, presented in the Review of Literature section of this study, and particularly the SECI Model. Nonaka is a PhD and originally proposed knowledge-creation theory with an extensive body of academic work (Nonaka Information, n.d.).

Nonaka, I., & Konno, N. (1998) The concept of *ba*: Building a foundation for knowledge creation. *California Management Review*, 40(3), 40-54.

**Abstract.** Introduced in 1998 by Nonaka and Konno, this concept is attributed to Japanese philosopher Kitaro Nishida, with further development by Shimizu (p. 40). The Japanese concept of *ba* has no literal English translation but roughly means “space” (p. 40). As applied to knowledge-creation theory, this concept complements the SECI model in that it is used to mean “a shared space that serves as a foundation for knowledge creation” (p. 40).

**Comments.** This work, published in a peer-reviewed journal, is an attempt by Nonaka and Konno to expand understanding of how knowledge is created in an organization. *Ba* is a key aspect of organizational knowledge creation theory and a central topic useful both for this study and for educating managers as indicated in the section of this paper that examines *ba*. It provides the explanation of *ba* as targeted at assisting those foreign to this Japanese concept and backs up Nonaka and Takeuchi's (1995) earlier assertion that a construct both theoretical and foreign in nature can be hard to understand. Nonaka is a PhD and originally proposed knowledge-creation theory with an extensive body of academic work (Nonaka Information, n.d.). Konno is a professor and President of the Knowledge Innovation Research Organization in Japan.

Nonaka, I., & Nishiguchi, T. (2001a). Introduction: Knowledge emergence. In I. Nonaka & T. Nishiguchi (Eds.), *Knowledge emergence: Social, technical, and evolutionary dimensions of knowledge creation* (pp. 3-9). Oxford: Oxford University Press.

**Abstract.** The introduction to this compilation, edited by Nonaka and Nishiguchi, notes continuing research and advancement in the field of knowledge creation. The work is a result of a project initiated by The Sasakawa Peace Foundation on the study of knowledge creation. Researchers and practitioners combined to contribute research in the new field of knowledge creation.

**Comments.** This introductory chapter is useful to this study in that Nonaka and Nishiguchi (2001a), both PhDs and academic researchers at Hitotsubashi University in Japan, note ongoing research in the field of knowledge creation. They posit the field is still in its infancy and the collection of works contained here probe varying aspects of

knowledge creation validating this notion. All contributors' qualifications or academic positions are detailed and this work is global in nature, which is useful in the application of Nonaka's perspective to the Japanese MNC. This reference is deemed credible and informs the Synthesis, presented in the Review of Literature section of this study.

Nonaka, I., & Nishiguchi, T. (2001b). Conclusion: Social, technical, and evolutionary dimensions of knowledge creation. In I. Nonaka & T. Nishiguchi (Eds.), *Knowledge emergence: Social, technical, and evolutionary dimensions of knowledge creation* (pp. 286-289). Oxford: Oxford University Press.

**Abstract.** The conclusion to this compilation, edited by Nonaka and Nishiguchi, attempts to bring together the varying common factors contained in the works of thirteen chapters by a variety of academic authors. This chapter summarizes the work and notes areas for continued research.

**Comments.** This conclusion is useful to this study in that Nonaka and Nishiguchi identify common conceptual aspects in ongoing research in knowledge creation and suggest unification of these concepts moving forward. The authors are both PhDs. This reference is deemed credible and informs the Synthesis, presented in the Review of Literature section of this study.

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York: Oxford University Press.

**Abstract.** This is Nonaka and Takeuchi's landmark work fully documenting their initial knowledge-creation theory. This work is central to the study in that it is the first work to

use extensive case studies driving at the theory of knowledge creation. Honda, Canon, Matsushita, NEC, Nissan, 3M, GE, and the U.S. Marines are all used to show tacit knowledge conversion and the importance of organizational knowledge creation.

**Comments.** Considered the central work on organizational knowledge creation, this book lays out knowledge-creation theory in detail with specific examples and academic research of Japanese and American global organizations. A simple search on Google Scholar shows the book cited over 17,000 times as of this writing (Google Scholar, n.d.). This reference is deemed credible, central to this study and informs the discussions of knowledge-creation theory throughout the paper.

Nonaka, I., & Toyama, R. (2003). The knowledge-creating theory revisited: Knowledge creation as a synthesizing process. *Knowledge Management Research & Practice*, 1, 2-10.

**Abstract.** Nonaka and Toyama attempt to further knowledge-creation theory, adding dialectic thinking, by stating: “This paper is a part of our attempt to build a new knowledge-based theory of the firm and organization to explain the dynamic process of knowledge creation and utilization. For this, we revisit the theory of knowledge creation through the SECI process and *ba*, and try to advance them further by incorporating the dialectic thinking. In this paper, knowledge creation is conceptualized as a dialectical process, in which various contradictions are synthesized through dynamic interactions among individuals, the organization, and the environment. With the view of a firm as a dialectic being, strategy and organization should be re-examined as the synthesizing and self-transcending process instead of a logical analysis of structure or action. An organization is not an information-processing machine that is composed of small tasks to

carry out a given task, but an organic configuration of *ba*. *Ba*, which is conceptualized as a shared context in motion, can transcend time, space, and organization boundaries to create knowledge.”

**Comments.** Published in a peer-reviewed journal, this work is useful to the study through its offering of supplemental information to organizational knowledge-creation theory.

This work attempts to back up the validity of the SECI model and *ba* as key concepts in knowledge creation as indicated in the SECI Model and *Ba* sections of this study. The authors are both PhDs.

Nonaka, I., & Toyama, R. (2007). Why do firms differ? The theory of the knowledge creating firm. In K. Ichijo & I. Nonaka (Eds.), *Knowledge creation and management: New challenges for managers* (pp. 32-43). New York: Oxford University Press.

**Abstract.** The first chapter in a compilation edited by Ichijo and Nonaka (2007), this work stresses the importance of knowledge creation to managers. Nonaka and Toyama ask the reader to return to this chapter after reading the rest of the book with the hope that additional context will be gained. This work implies that awareness of organizational knowledge creation will be helpful to any manager.

**Comments.** This work is useful to the study for its focus on the role of the manager in organizational knowledge creation and arming the manager with concepts key to understanding knowledge creation. The work addresses the ongoing importance of knowledge creation and the state of knowledge creation. As such, the work is most useful in informing the Overview of Knowledge Creation and Synthesis, presented in the

Review of Literature section of this study. The authors are both PhDs and this reference is deemed credible.

Nonaka, I., & von Krogh, G. (2009). Tacit knowledge and knowledge conversion: Controversy and advancement in organizational knowledge creation theory. *Organization Science*, 20(3), 635-652.

**Abstract.** Nonaka's (1994) paper, [A dynamic theory of organizational knowledge creation. *Org. Sci.* 5 (1): 14–37] contributed to the concepts of “tacit knowledge” and “knowledge conversion” in organization science. We present work that shaped the development of organizational knowledge-creation theory and identify two premises upon which more than 15 years of extensive academic work has been conducted: (1) tacit and explicit knowledge can be conceptually distinguished along a continuum; and (2) knowledge conversion explains, theoretically and empirically, the interaction between tacit and explicit knowledge. Recently, scholars have raised several issues regarding the understanding of tacit knowledge as well as the interaction between tacit and explicit knowledge in the theory. The purpose of this article is to introduce and comment on the debate about organizational knowledge-creation theory. We aim to help scholars make sense of this debate by synthesizing six fundamental questions on organizational knowledge-creation theory. Next, we seek to elaborate and advance the theory by responding to questions and incorporating new research. Finally, we discuss implications of our endeavor for organization science.

**Comments.** Published in a peer-reviewed journal and authored by scholars in the field of knowledge creation, this reference is useful to the study in several ways. The work is

recent and addresses controversy surrounding the definition of tacit knowledge. The work also demonstrates ongoing research in the field of knowledge creation. The authors are both PhDs. This reference informs the Synthesis, presented in the Review of Literature section of this study.

Nonaka, I., von Krogh, G., & Voelpel, S. (2006). Organizational knowledge creation theory: Evolutionary paths and future advances. *Organization Studies*, 27(8), 1179-1208.

Retrieved from <http://oss.sagepub.com/cgi/content/abstract/27/8/1179>.

**Abstract.** Organizational knowledge creation is the process of making available and amplifying knowledge created by individuals as well as crystallizing and connecting it to an organization's knowledge system. In other words, what individuals come to know in their (work)life benefits their colleagues and, eventually, the larger organization. The theory explaining this process – the organizational knowledge-creation theory – has developed rapidly in academia and has been broadly diffused in management practice over the past 15 years. This article reviews the theory's central elements and identifies the evolving paths taken by academic work that uses the theory as a point of departure. The article furthermore proposes areas in which future research can advance the theory of organizational knowledge creation.

**Comments.** Published in a peer-reviewed journal, this work is useful to the study via its focus on the state of knowledge creation and potential avenues for future academic research demonstrating the continuance of knowledge creation as a field of study. The authors are PhDs. This reference informs the Synthesis, presented in the Review of Literature section of this study.

Prusak, L., & Weiss, L. (2007). Knowledge in organizational settings: How organizations generate, disseminate and use knowledge for their competitive advantage. In K. Ichijo & I. Nonaka (Eds.), *Knowledge creation and management: New challenges for managers* (pp. 32-43). New York: Oxford University Press.

**Abstract.** Speaking to competitive advantage, this early chapter in the Ichijo and Nonaka compilation puts context around knowledge management and knowledge creation by organizations.

**Comments.** Published by Oxford University Press, this work covers various perspectives useful to this study: strategy, culture, knowledge worker, and a forward-looking view. This reference helps frame the Overview of Knowledge Creation presented in the Review of Literature section of this study.

Tsoukas, H. (1996). The firm as a distributed knowledge system: A constructionist approach.

*Strategic Management Journal*, 17, 109-122.

**Abstract.** This work is useful in contrasting Nonaka's (1994) work with a differing view on organizational knowledge. The organizational problem firms face is the use of knowledge that is not, and cannot be, known by a single agent. Even more important, no single agent can fully specify in advance the kind of practical knowledge that is going to be relevant, when and where. Firms, therefore, are distributed knowledge systems in a strong sense: They are decentered systems, lacking an overseeing "mind." The knowledge they need to draw upon is inherently indeterminate and continually emerging; it is not self-contained. Individuals' stock of knowledge consists of (1) role-related normative expectations; (2) dispositions, which have been formed in the course of past



socializations; and (3) local knowledge of particular circumstances of time and place. A firm has greater-or-lesser control over normative expectations but very limited control over the other two. At any point, a firm's knowledge is the indeterminate outcome of individuals attempting to manage the inevitable tensions among normative expectations, dispositions, and local contexts.

**Comments.** Published in a peer-reviewed journal, this work focuses on a differing view of knowledge as compared to Nonaka. This work serves the purpose of contrasting Nonaka's perspective (1988, 1994) views on tacit knowledge and its role in organizational knowledge creation. As such, this reference is most useful in the SECI Model section of this study. Tsoukas is a PhD and editor-in-chief of *Organization Studies*, a European management journal.

von Krogh, G., Ichijo, K., & Nonaka, I. (2000). *Enabling knowledge creation: How to unlock the mystery of tacit knowledge and release the power of innovation*. New York: Oxford University Press.

**Abstract.** In a collaborative followup to Nonaka and Takeuchi's (1995) *The Knowledge-Creating Company*, this work focuses on enabling knowledge. The work grew out of a perceived need to demonstrate and move knowledge creation beyond a theory and provide useful guidelines with practical applications and examples. Specifically useful to this study is the authors' premise that knowledge creation cannot be controlled or managed, but managers should strive to support knowledge creation.

**Comments.** This collaborative work is useful to the study as it focuses on the application of knowledge creation in the organization. This work follows up Nonaka and Takeuchi's

(1995) work with practical examples useful to managers. The authors are PhDs and this work is deemed credible.

## Review of the Literature

### *Introduction*

This review of the literature focuses on the synthesis of two specific topical areas – organizational knowledge creation and the Japanese MNC, with a goal to aid development of a set of guidelines helpful to U.S. managers in the Japanese MNC. The set of guidelines is designed to provide insight into how a perspective developed by Ikujiro Nonaka, when applied in the Japanese MNC, can assist U.S. managers in better understanding knowledge creation and create the foundation for furthering the U.S. manager's own role within the organizational knowledge-creation process. While individual Japanese MNCs provide significant amounts of training for U.S. managers in the form of classes and seminars, the intent is that this review fills a void by better positioning the manager to participate actively in the organizational knowledge-creation process.

This study is designed as a literature review. Literature selected for coding during data analysis is presented in the Annotated Bibliography section of this paper. The goal during the coding process is to identify eight concepts that include: knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, *ba*, MNC, Japanese MNC, and Japanese expatriate. A report of the coding results is presented in Appendix A.

Concepts are reviewed and synthesized into emergent themes, related to the application of Nonaka's (1994) perspective on organizational knowledge creation to the Japanese MNC. The following set of research questions establishes further context and provides a way to organize the Review of Literature and the Conclusions sections of the paper.

1. What is organizational knowledge-creation theory in general and the SECI model and *ba* in particular (Nonaka, 1994; Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998)?
2. Why do Japanese MNCs use expatriates, and what are their roles in the organizational knowledge-creation process (Beechler & Bird, 1999; Keeley, 2001; Yasumuro & Westney, 2001)?
3. What key concepts of organizational knowledge creation, giving insight into Japanese MNC behavior, are revealed through application of Nonaka's SECI model and *ba* (Nonaka, 1991, 1994; Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998; Nonaka & Toyama, 2007)?
4. How can a deeper understanding of both organizational knowledge creation (Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998) and the roles of the Japanese expatriate help the U.S. manager better understand the actions of a Japanese MNC (parent) and better position the manager to participate actively in the knowledge-creation process?

### ***Overview of Organizational Knowledge-Creation Theory***

Arie Y. Lewin, founding editor-in-chief of Organization Science, accurately predicts the future research on organizational learning, by identifying the potential effect of Nonaka's (1994) theory of organizational knowledge:

I recommend this paper to Organization Science readers because I believe that it has the potential to stimulate the next wave of research on organizational learning.

It provides a conceptual framework for research on the differences and similarities of learning by individuals, groups and organizations (p. 14).

Lewin's accurate prediction is evident more than 15 years later, as Nonaka & Takeuchi (1995) are cited 17,000 times (Google Scholar, n.d.). Researchers continue to test the theory and its many aspects and look for new ways to apply it (Nonaka, von Krogh, & Voelpel, 2006). For example, Prusak and Weiss (2007) target 1992 as a time when organizations first recognized the potential role knowledge plays in competitive advantage. Kogut and Zander (1992) probed a knowledge-based view of the firm focused on tacit knowledge. Hedlund (1994) goes further by noting the importance in the interaction between explicit and tacit knowledge and how Western and Japanese firms differ in their treatment of knowledge. Yasumuro and Westney (2001) also note the consistency with which Nonaka contrasts Japan with the West in relation to the emphasis the Japanese place on tacit knowledge. Research by Nonaka offers a knowledge-based view of the firm and new ways of looking at competitive advantage and why firms exist (Brown & Duguid, 1998).

Nonaka's earliest work on organizational knowledge creation, published in 1994, focused on explaining the basic theory. The 1995 book written by Nonaka and Takeuchi, *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*, focused on a more complete explanation of the theory with examples from successful global organizations including Honda, Canon, Matsushita, NEC, Nissan, 3M, GE, and the U.S. Marines. The explanations of organizational knowledge creation, presented through research at Japanese companies, are particularly important to this study. A brief explanation of this knowledge-creation theory is presented below, followed by a detailed examination of Nonaka's SECI model and *ba*.

***What is organizational knowledge creation?*** Organizational knowledge creation is defined as “[. . .] the capability of a company as a whole to create new knowledge, disseminate it throughout the organization and embody it in products, services and systems” (Nonaka & Takeuchi, 1995). Figure 1 presents a model that represents how Nonaka and Takeuchi envision the role of organizational knowledge creation in relation to competitive advantage within the firm:

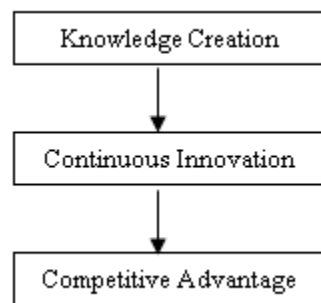


Figure 1. From knowledge into competitive advantage (Nonaka & Takeuchi, 1995, p. 6)

Yet, merely stating that knowledge creation leads to competitive advantage does not get to the heart of this theory. The Japanese view explicit knowledge, or knowledge that can be written down, as only a small part of the knowledge necessary to support this process. Tacit knowledge (see Definitions section) is viewed as more crucial, and as much more difficult to transmit or explain to others (Nonaka & Takeuchi, 1995, pp. 7-8). Nonaka and Takeuchi (1995) use the metaphor of a master craftsman training an apprentice to illustrate the difficulties in conveying tacit knowledge. They note there are techniques a craftsman has learned over many years that the apprentice might only master by observation and practice (p. 8).

According to Nonaka and Takeuchi (1995), the Japanese view of knowledge – and knowledge creation in particular – involves several components, key among them conversion

and interaction. As a way to explain these concepts to others, Nonaka (1994) developed the SECI (*Socialization, Externalization, Combination, Internalization*) model to illustrate the importance of interaction and conversion between explicit knowledge and tacit knowledge in creating new organizational knowledge.

Nonaka and Konno (1998) introduced the concept of *ba*, a Japanese word roughly translating to “place,” as a space in which knowledge creation is furthered and facilitated. This conceptual introduction in 1998 attempts to complement Nonaka’s previous works on organizational knowledge creation by offering additional context through which the conditions in creating knowledge are better understood. As Nonaka and Takeuchi (1995) note, knowledge-creation theory is Japanese in origin and can be hard for Westerners to understand (p. 16). *Ba* fits this description. Both the SECI model and *ba* are key to understanding Nonaka’s (1994) theory on organizational knowledge creation. As such, detailed explanations follow.

***The SECI model.*** Significant devotion to study of the firm is evident in the literature during the 1990s. Prahalad and Hamel (1990) conclude that the value of identifying core competencies of the corporation lies in their ability to guide ongoing assessment of the competitive advantage of the firm (p. 91). Following this path, Kogut and Zander focus on a firm’s knowledge or know-how as a key differentiator in competitive competence and even why firms exist (1992). They further point to a firm’s knowledge-creation abilities and note its place in examining competitiveness of the firm (p. 384).

Hedlund (1994) narrows the focus to an important distinction between explicit and tacit knowledge and how organizations might leverage, in effect, knowledge-creating abilities of a firm. At the same time, Hedlund (1994) points to the analysis of differing Western and Japanese

views on knowledge as crucial to advancement in theories of the firm – “a more general theory” (p. 78) not limited by analysis of any one view – which illustrates more evidence of the rethinking put forth by Prahalad and Hamel (1990).

Nonaka’s (1994) SECI model presents the study of how knowledge is created by Japanese companies through a diagrammatic representation. Depicted in Figure 2, the SECI model attempts to document the process of conversion from explicit-to-tacit and tacit-to-explicit knowledge. The model is used as a tool to better understand how a firm creates new knowledge.

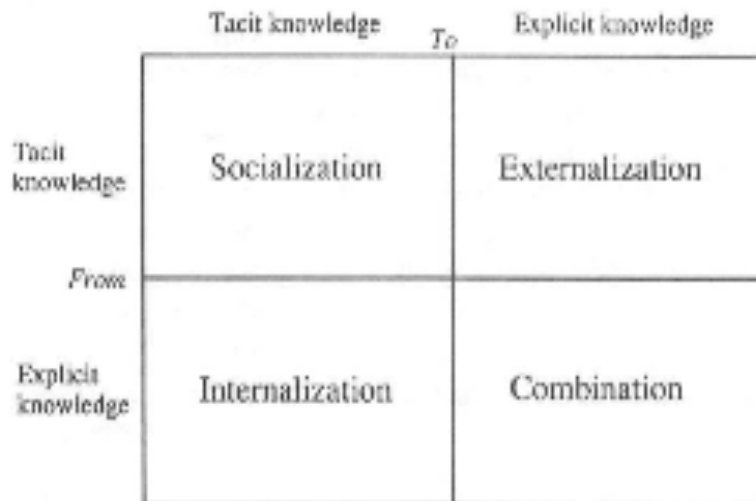


Figure 2. The SECI model (Nonaka, 1994, p. 19)



As presented in the model, *socialization*, from Nonaka's (1994) perspective, is a term that describes knowledge obtained through shared experience. Depicted as tacit-to-tacit knowledge conversion, *socialization* is exemplified through an apprentice working with a master or through individuals or groups working together (Nonaka & Takeuchi, 1995). In fact, Nonaka and Takeuchi (1995) note the difficulty of obtaining tacit knowledge without the interaction between individuals or groups. From an organizational point of view, creating conditions for experience(s) to be shared that have the potential to result in tacit knowledge creation is desirable; Nonaka (1994) points to a clear connection between *socialization* and organizational culture (p. 19).

*Externalization* is the term Nonaka (1994) uses to represent tacit-to-explicit knowledge conversion. Nonaka (1994) states that *externalization* is the least understood mode, and prior studies in organizational learning did little to capture the role of this mode in knowledge creation. A master writing down a procedure for an apprentice to follow is one clear example of *externalization*. Yet, this type of conversion does not fully cover this least-understood mode; metaphor and analogy are important notions in understanding *externalization* (Nonaka & Takeuchi, 1995). Canon's development of copier disposable drum cartridges is a useful example (pp. 65-66). Designing a disposable drum was a difficult task, and the team leader sent out for beer during a design task-force meeting at Canon. The following accidental and simple questioning of how much it cost to create the aluminum can to hold the beer led to a revolutionary cartridge design, making aluminum drum disposal copier cartridges possible.

*Combination* is the term used to represent an explicit-to-explicit mode of knowledge conversion (Nonaka, 1994). Individuals sharing existing explicit knowledge can obtain new knowledge through combining or operating on existing explicit knowledge. Analysis of collected

data driving new tactics in an organization exemplifies combination, where existing explicit data is used to drive new explicit actions. Middle managers taking concrete vision statements by top management and driving new action by lower levels of an organization is another example. The desire by Canon's top management to expand beyond their core large-copier business led to using existing expertise in a new way, resulting in development of the mini copier (Nonaka & Takeuchi, 1995, p. 68).

*Internalization* is the term used to define the explicit-to-tacit mode of knowledge conversion (Nonaka, 1994). For example, if a manager completes a successful project as part of a team and then moves into a new job, this helps frame internalization. The manager can then take what is their own new explicit knowledge and create new tacit knowledge, with others, by creating documentation or even telling stories about how or what they learned (Nonaka & Takeuchi, 1995). Thus, internalization sets the stage for the "knowledge creation spiral" (Nonaka, 1994), where the SECI process becomes iterative and results in continual organizational knowledge creation.

Knowledge creation cannot take place without leveraging the tacit knowledge of individuals. The SECI model describes a process that is spiral in nature: "[. . .] starting at the individual level and moving through expanding communities of interaction that crosses sectional, departmental, divisional and organizational boundaries" (Nonaka & Takeuchi, 1995, p. 72). As an organization implements ways to foster knowledge creation, the framework for the knowledge-creation spiral begins (Nonaka, 1994). A team might be formed (*socialization*), dialogue between team members occurs (*externalization*), existing collective explicit knowledge can be combined (*combination*), and the team can create new explicit knowledge from the tacit results of the team's work (Nonaka, 1994; Nonaka & Takeuchi 1995). The team members could

then disperse and, theoretically, their new individual tacit knowledge could lead to a continual process, whereby the crux of Nonaka's perspective would be realized. Nonaka and Konno (1998) attempt to further describe this aspect of the concept of SECI in an enhanced diagram of the SECI model. The roles of individuals, groups, and organizations are depicted, as are the directionality and the spiral nature of the SECI model (see Figure 3).

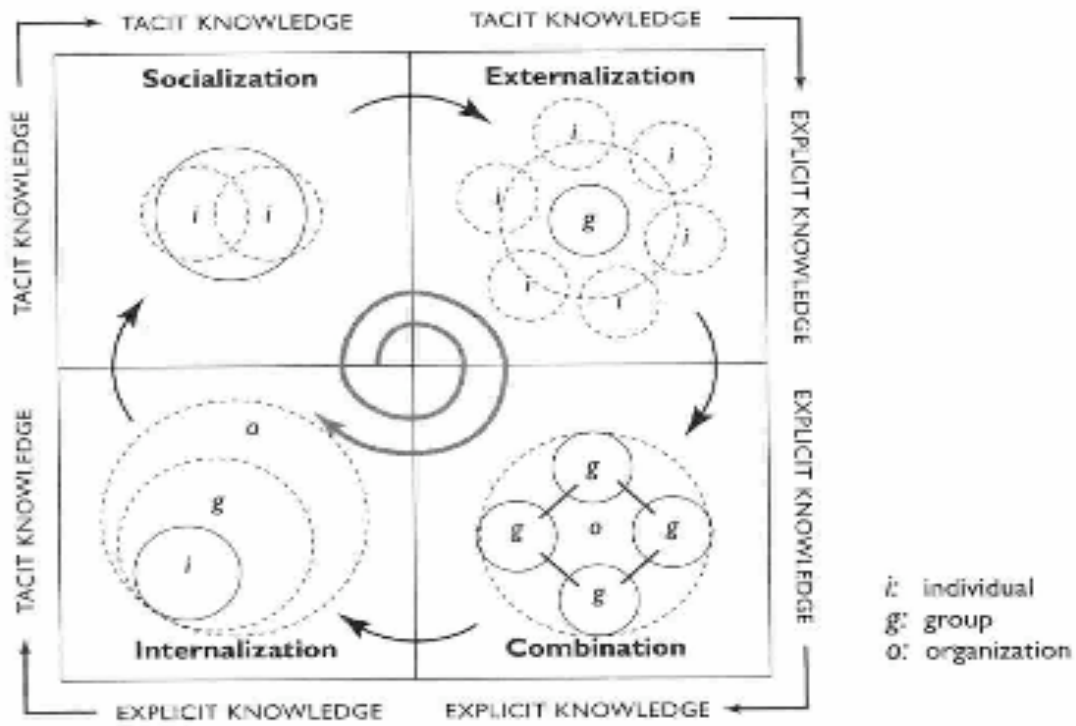


Figure 3. The SECI model enhanced (Nonaka & Konno, 1998, p. 43)

**Concept of *ba*.** Nonaka & Konno (1998) introduce an important Japanese term, *ba*, in trying to explain more thoroughly a theory grounded in a Japanese view of knowledge to Westerners (Nonaka & Takeuchi, p. 16). The concept of *ba* is attributed to the Japanese philosopher Kitaro Nishida, with further development by Shimizu (1995) (Nonaka & Konno, 1998, p. 40). When adapted for use in describing knowledge creation, the Japanese concept of *ba* has no literal English translation but roughly means “place” (p. 40). As applied to knowledge creation, *ba* is important conceptually and can be thought of as “[. . .] a shared space for emerging relationships” (p. 40). This concept serves as a foundation upon which knowledge creation is built. *Ba* applies to individuals, groups, and organizations.

*Ba* has particular applications within the SECI model. As pictured below in Figure 4, four types of *ba* correspond to the stages of the SECI model.

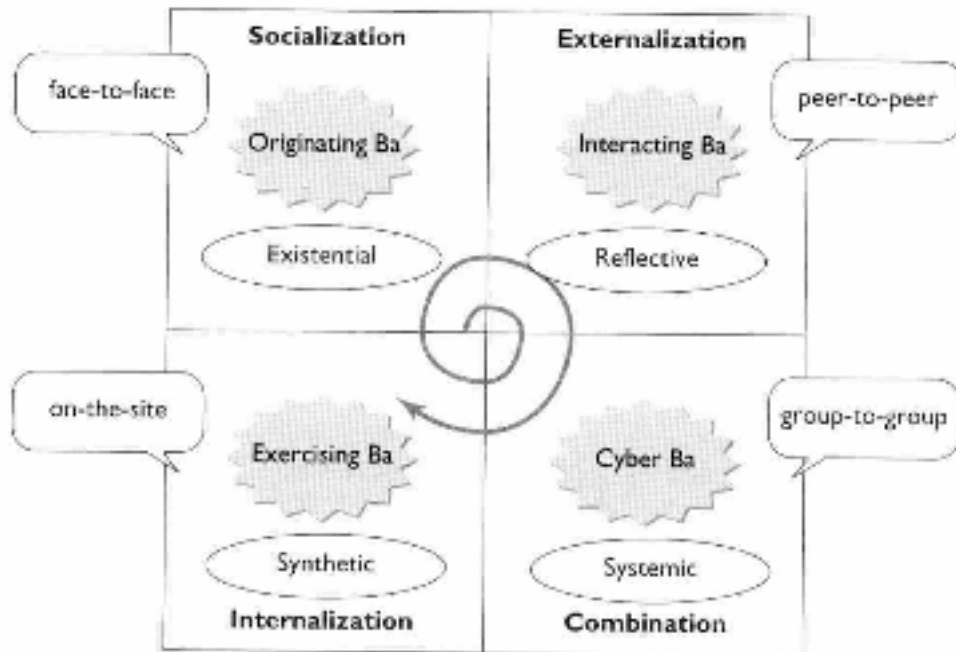


Figure 4. The SECI model and *ba* (Nonaka & Konno, 1998, p. 46)

The two types of *ba* most useful to this study are originating *ba* and interacting *ba*, in that managers play key roles corresponding to *socialization* and *externalization* in the SECI model, respectively. Originating *ba*, or shared space corresponding to *socialization*, is a base from which knowledge creation begins and can be useful in enabling vision and culture in an organization (p. 46). Interacting *ba* comes into play when creating teams – for example, selecting the right people when forming a team (p. 47).

Fostering *ba* is also an important role for top management in organizations, according to Nonaka and Konno (1998). If Nonaka's perspective is accepted – that *ba* serves as a foundation upon which knowledge can be created – then this concept is useful for managers to be aware of in a knowledge management context. As a Japanese concept, knowledge of *ba* is also helpful in understanding a knowledge-creation theory that is Japanese in origin (Nonaka & Takeuchi, 1995, p. 16).

A scenario provided by this researcher highlighting potential *ba* application in the Japanese MNC might prove helpful to the U.S. manager. The context is one of a Japanese expatriate who comes to the U.S. to assume the role of president of a U.S. subsidiary corresponding to the “top-manager” (Kopp, 1994, p. 115) expatriate role. As a *seishain* (or core lifetime employee), he is well indoctrinated in parent company culture and business practices. He knows HCN managers are not well integrated into the parent's decision-making processes, but he sees significant talent among the HCN staff upon arrival in the U.S. He also sees advanced and efficient business processes that the U.S. subsidiary uses to conduct business with its customers, which in his view pale in comparison to the parent company. As a result, the president sends HCNs to Japan to facilitate better communication and extend personal relationships between employees of the subsidiary and the parent. He explicitly instructs the HCNs to spend time

getting to know their counterparts outside of the work environment by taking them to dinner often. He informs the HCNs that his goal is to advance the notion of a global business process solution using a hybrid technology adaptable to differences between the U.S. subsidiary and the parent.

In the above scenario, the president is practicing *ba* origination. By emphasizing the social aspect of the trip, the president is creating a shared space (dinner with counterparts), or *ba*, whereby new relationships and connections are forged. The additional advantage of creating *ba* outside of the office fosters more open communication with the Japanese parent employees; Kopp (1994) notes that socializing helps to develop personal relationships, which the president desires in this scenario. The president creates *ba* that can result in new solutions to shared problems that would prove difficult to solve effectively in any other way. The potential difficulty, of course, lies in the ability of the U.S. subsidiary to successfully influence change to the parent's global business processes. The intent is that if the parent employees and HCNs return to work the next day and communicate what they learned at dinner to others, the entire group will become involved and a new forum will emerge to support interaction between individuals and within the group. Better still, this is not the end of *ba*, as these new interactions are only the beginning and support the notion of the knowledge spiral.

As demonstrated in this scenario, *ba* and the SECI model (as illustrated in Figures 2 and 3) are crucial concepts in understanding knowledge creation. The president is an expatriate. His unique insight into company culture and business practices, along with an awareness of Nonaka's perspective, position him to foster and enable organizational knowledge creation in a subsidiary, flowing bidirectionally between subsidiary and parent.

### *Overview of the Japanese MNC*

In 1950, Japan had a negative net worth and was known for producing cheap or “shoddy consumer goods” (Deming, 1982, p. 5). But, as Deming (1982) notes, Japan’s need to become an exporter due to its lack of natural resources drove companies to study quality improvement. Deming accepted an invitation to work with the Union of Japanese Science and Engineering (JUSE) in 1950, and by 1954 Japanese products began to appear in global markets (Deming, 1982). The rest is history; in 2008, Japan ranked second behind the United States with 64 companies in the Fortune Global 500 (CNN Money, 2009).

Perlmutter (1969) put forth “three primary attitudes” (p. 11), or organizational styles, observable in an MNC. First, he describes the ethnocentric style that reflects high interest in organizational control and the larger organizational styles prevalent in the parent country. Second is a polycentric style, in which a concerted effort to adapt to the host country is the norm. Third is the geocentric style, including a global focus in which parents and subsidiaries collaborate. Perlmutter (1969) notes that no firm exhibits any one style exclusively, but tendencies and attitudes are observable and attributable to one of these styles or attitudes.

According to Perlmutter (1969), the geocentric style is a logical style for a global MNC. Collaboration between parent companies and subsidiaries along with adaptation to local country cultures are two indicators of the geocentric style. However, Kopp (1999) notes that this is not the case with Japanese MNCs, where the ethnocentric style generally prevails for several key reasons, primarily including:

1. The lack of Japanese-language proficiency by HCNs.
2. The lack of longtime HCN adaption to company cultures that *seishain* are exposed to in Japan throughout their careers.

3. The fact that human resource management policies are geared to career development of *seishain* employees, not HCNs.

These reasons contribute to what Kopp (1994) terms the “rice-paper ceiling” (p. 11), which she defines as “[. . .] the artificial barrier to advance for non-Japanese employees of Japanese companies” (p. 11).

Beechler and Bird (1999) note the success of the Japanese MNC; by 1993, 281 of Business Week’s Global 100 were Japanese firms (p. 3). But, unlike what Perlmutter (1969) might have expected, the Japanese MNC tendency to exhibit the ethnocentric style is still evident. Nonaka’s (1988) description of middle-up-down management exemplifies dense communication between middle managers in Japanese decision-making processes. Daily tasks requiring both knowledge of company culture and the Japanese language are necessary to participate, and very few HCNs can truly be part of this process (Westney, 1999). Thus, “a rice-paper ceiling” (Kopp, 1999, p. 108) exists for HCNs.

***Purpose and reported roles of the Japanese expatriate.*** The prevalent practice by Japanese MNCs of using expatriate managers to control subsidiaries is a result of the “strong ethnocentrism found in Japanese social organizations and business enterprises” (Keeley, 2001, p. 9). In other early Multinational Organization research, three reasons for expatriate transfers to foreign subsidiaries were put forth: to fill positions due to resource scarcity in host countries, to develop managers’ international experience, and to advance socialization via organization development (Edström & Galbraith, 1977). Harzing (2001) affirms the coordination and control role of the expatriate in the Japanese MNC.



Kopp (1999) puts forth several reasons for the continued ethnocentrism exhibited by Japanese MNCs to control subsidiaries in countries outside of Japan. In a survey with 34 responses from large Japanese MNCs, she noted 74% filled foreign subsidiary top executive posts (e.g., president, CFO, or general manager) with Japanese expatriates (p. 110). Kopp (1999) also notes the persistence of the ethnocentric style used by Japanese MNCs and four reasons behind this that help inform the roles of the expatriate in overseas (to Japan) subsidiaries of the Japanese MNC (pp. 112-114).

1. Culture-based control: Japanese MNCs rely on core lifetime employees (*seishain*) with many years of experience in company culture.
2. Japanese *seishain*: HRM practices involve rotation of *seishain* who are core managers through overseas posts to aid individual development. This HRM practice is not transferred to overseas subsidiaries for HCNs.
3. Language skills: Both the lack of Japanese-language skills in HCN employees and the lack of English skills in some parent company employees create a communication gap filled by the expatriate.
4. Lack of autonomy of overseas subsidiaries: With control structures centered in Japan, decision-making is centered on Japanese-language communication.

## Conclusions

The Japanese MNC offers a suitable environment within which to explore knowledge-creation theory. As defined in the Definitions section of this study, Japanese MNCs are Japanese companies. Japanese MNCs exhibit what is described as an ethnocentric management style and use expatriates primarily for control and coordination of foreign (to Japan) subsidiaries. Japanese MNCs are comprised of many managers globally; Canon and Honda are just two examples (Nonaka, 1988; Nonaka & Takeuchi, 1995). By applying organizational knowledge creation in the Japanese MNC from the perspective of the U.S. manager, a new framework emerges, enabling the U.S. manager to gain insight and a better understanding of knowledge creation, and their role in it.

### *Nonaka and the Development of Organizational Knowledge-Creation Theory*

The depth of pursuit revealed in Nonaka's study of knowledge creation is evident in an English sampling of his work (see Appendix B). The core of his organizational knowledge-creation theory lies in its Japanese origin and is exemplified in the title of Nonaka and Takeuchi's (1995) work: "The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation." A key element of the theory is the concept of *ba*, or the notion of "a shared space for emerging relationships" (Nonaka & Konno, 1998, p. 40). Individual interaction and the sharing of tacit knowledge between individuals is a key concept for managers. The scenario presented in the Review of the Literature of this paper, about an expatriate president of a U.S. subsidiary, illustrates the power of originating *ba*.

Nonaka's research also focuses on the role of managers in the knowledge-creation process, which he considers to be crucial. Two examples spanning nearly 20 years validate this focus:

1. Nonaka, I. (1988). Toward middle-up-down management: Accelerating information creation. *Sloan Management Review*, 29(3), 9-18.
2. Ichijo, K., & Nonaka, I. (2007). Introduction: Knowledge as competitive advantage in the age of increasing globalization. In K. Ichijo & I. Nonaka (Eds.), *Knowledge creation and management: New challenges for managers* (pp. 32-43). New York: Oxford University Press.

Organizational knowledge creation and Nonaka's perspective deserve the attention of U.S. managers working in the Japanese MNC; the set of guidelines presented below, synthesized from the organizational-knowledge-creation and Japanese-MNC literature, offer a path for the U.S. manager to gain new knowledge and immediately and positively impact their organization.

In defining middle-up-down management and its role in knowledge creation, Nonaka (1988) emphasizes the role of middle managers. In today's fast-paced global markets, there is perhaps no more important role for managers than managing knowledge (Ichijo & Nonaka, 2007). Positioned between the visions of upper management and the reality of actual business processes experience of frontline employees, middle managers play a central role (Nonaka, 1988).

*The Expatriate Role and the Ethnocentric Style in the Knowledge-Creation Process*

Control and coordination are often cited as reasons for the use of parent-country expatriates in running a subsidiary in a foreign country (Boyacigiller, 1990; Kopp, 1994, 1999; Keeley, 2001). The Japanese, in particular, “have been criticized for their heavy reliance on expatriate middle-level managers to act as key cross-border integrators” (Westney, 1999). As Kopp (1994) states, the existence of the “rice-paper ceiling” (p. 11) often manifests itself in retention issues in foreign subsidiaries for Japanese MNCs, whereby HCNs leave a Japanese MNC due to perceived lack of advancement opportunity and the presence of expatriates in key positions. At the same time, a common theme in the literature pertaining to Japanese MNC emerges. While not all Japanese MNCs are the same, they tend to operate within a range of behaviors consistent with an ethnocentric style (Kopp, 1999; Westney, 1999). The ethnocentric style is defined by Perlmutter (1969) as an organization management style with focus on high reflection in control, organization, and structure, prevalent in the parent country (Perlmutter, 1969).

One indicator of the ethnocentric style still prevalent in Japanese MNCS is the use of expatriates to manage foreign (to Japan) subsidiaries. The Japanese expatriate role in organizational knowledge creation is informed by the *seishain* (core lifetime employee) status of the expatriate, due to their longtime indoctrination in company culture and large communication network among other *seishain* at the parent company (Kopp, 1999). Thus, tacit knowledge transfer and organizational learning can often be enhanced by movement of people (Méthé & Penner-Hahn, 1999).

***Guidelines for U.S. Managers Working in Japanese Multinational Corporations***

The intended outcome of this study is a set of guidelines targeted at a selected audience of U.S. managers working at Japanese MNCs. According to Kopp (1994), working for a Japanese MNC can be a rewarding experience (p. 13). This is especially true if one understands typical conditions that can be expected within Japanese firms operating in the U.S. As noted by Kopp (1999, p. 24-25), conditions include:

- Decision-making is dominated by Japanese expatriates.
- Non-Japanese employees are frequently excluded from information flow, which occurs primarily in the Japanese language among Japanese expatriates and head-office employees.
- The language barrier prevents effective communication between locally hired and Japanese staff.
- Japanese and non-Japanese employees seldom socialize together or develop friendly relationships.
- Small matters frequently escalate into major misunderstandings that pit Japanese and locally hired employees against each other.
- Frictions are more pronounced at the white-collar and managerial staff levels.

Nonaka's perspective on organizational knowledge creation is grounded in the study of Japanese companies. As a result, Nonaka's perspective on organizational knowledge creation offers unique insight for U.S. managers working in the Japanese MNC. Key among these insights is the idea that the Japanese expatriate plays a central role in all aspects of communication, not only for the parent company, but also for U.S managers in U.S. subsidiaries.

Additionally, gaining understanding and awareness of the SECI model and the concept of *ba* may provide tangible ways through which a U.S. manager can increase effectiveness and positively impact their organization.

U.S. subsidiaries of Japanese MNCs provide a unique combination of conditions worthy of further academic study as they relate to organizational knowledge creation. In a recent journal article, Nonaka and von Krogh (2009) point out that “[. . .] future research on the relationship between organizational knowledge creation and social practice should account for team formation and factors that impact on team performance” (p. 648). They also suggest the need for variety of research designs in the future, such as “participant observation, laboratory studies, surveys, biographical analysis, and interviews” (2009, p. 648).

The following set of guidelines is designed for the U.S manager working in the Japanese MNC. The guide reflects information about organizational knowledge creation in the context of the Japanese MNC, as framed by Nonaka’s unique perspective. The intent is to provide key concepts of knowledge creation, such as the SECI model and *ba*, to U.S. managers, so they may gain new knowledge with immediate practical applications in the Japanese MNC.

**Guideline No. 1: Embrace Nonaka's perspective.** The Japanese view of tacit knowledge conversion, exemplified in the SECI model and *ba*, lies at the heart of organizational knowledge-creation theory. The SECI model and the concept of *ba* provide helpful ways through which the U.S. manager can increase their understanding of how to maximize contribution to the Japanese MNC. Key concepts for managers include: (a) top management, middle managers, and frontline employees all play a role in knowledge creation (Nonaka & Takeuchi, 1995); (b) the middle manager's role is crucial in merging top-management vision with the grounded real experiences of frontline employees (Nonaka & Takeuchi, 1995); and (c) knowledge creation is a continuous process, and managing knowledge should be a core competency for managers (Ichijo & Nonaka, 2007).

**Guideline No. 2: Embrace the Japanese expatriate.** Look beyond the control and coordination role of the expatriate. View the Japanese expatriate as a valuable participant in the organizational knowledge-creation process. Discuss the SECI model and *ba* with the Japanese expatriate along with the potential for creating *ba*. Key concepts include: (a) the origin of organizational knowledge-creation theory is Japanese (Nonaka & Takeuchi, 1995); (b) the Japanese expatriate is likely a *seishain* (core lifetime employee), well indoctrinated in company culture and possesses company-specific tacit knowledge (Kopp, 1994; Nonaka & Takeuchi, 1995); and (c) the expatriate is a resource with a significant communications network at the parent company, with further potential communication network benefits if they rotate back to Japan (Kopp, 1994).

**Guideline No. 3: Use knowledge of SECI and *ba* to further both internal and external organizational knowledge creation.** Ask Japanese expatriates to assist with SECI and *ba* with the parent company. Look for opportunities to apply the principles of SECI and *ba* both inside and outside of the U.S organization. Key concepts include: (a) *socialization*, exemplified by individuals sharing tacit knowledge, can trigger the organizational knowledge-creation process (Nonaka & Takeuchi, 1995); (b) *externalization*, which “[. . .] aims at articulating tacit knowledge into explicit concepts” (Nonaka, von Krogh, & Voelpel, 2006, p. 1182), and metaphors or analogies are useful ways to transform the tacit into explicit (Nonaka & Takeuchi, 1995); and (c) originating *ba* corresponds to socialization, the primary *ba* where knowledge creation is triggered, while interacting *ba* corresponds to externalization, for example, choosing the right members for a project team (Nonaka & Konno, 1998).

**Guideline No. 4: Understand the important role middle managers play in translating the vision of top management.** Nonaka coined the term “middle-up-down management” (Nonaka, 1988, p. 9) to describe the important role of mid-level managers in Japanese companies. Middle managers, by working with specialists or frontline employees to drive formalization in organizational knowledge creation, enable the transformation of the goals and visions of top management into new knowledge (Nonaka, von Krogh, & Voelpel, 2006). Key concepts include: (a) middle managers facilitate the knowledge-creation process via translating the ideals of top management into reality (Nonaka, von Krogh, & Voelpel, 2006); (b) middle managers facilitate sharing of knowledge across business divisions or departments (Nonaka, von Krogh, & Voelpel, 2006); and (c) middle managers are situated to promote an environment upon which organizational knowledge creation can be built (Nonaka, von Krogh, & Voelpel, 2006).



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**Appendix A**

**Data Analysis – Coding Results**

Reference	Keywords ( ) parentheses indicate related terms	Relevancy to Themes
Beechler, S. L., & Bird, A. (1999). The end of innocence: Japanese multinationals abroad. In S. L. Beechler & A. Bird (Eds.), <i>Japanese multinationals abroad: Individual and organizational learning</i> , (pp. 3-10) New York: Oxford University Press.	Japanese MNC, Japanese expatriate	Japanese MNC behavior
Gourlay, S. (2006). Conceptualizing knowledge creation: A critique of Nonaka's theory. <i>Journal of Management Studies</i> , 43(7), 1415-1436.	knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI	Countering the SECI model and Nonaka's view of knowledge
Hedlund, G. (1994). A model of knowledge management and the n-form corporation. <i>Strategic Management Journal</i> , 15, 73-90.	knowledge creation, (tacit knowledge transfer)	Knowledge and the firm, Western and Japanese patterns of knowledge
Ichijo, K., & Nonaka, I. (2007). Introduction: Knowledge as competitive advantage in the age of increasing globalization. In K. Ichijo & I. Nonaka (Eds.), <i>Knowledge creation and management: New challenges for managers</i> (pp. 32-43). New York: Oxford University Press.	knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, <i>ba</i>	Compilation, role of managers in organizational knowledge creation

<p>Imai, K., Nonaka, I., &amp; Takeuchi H. (1985). Managing the new product development process: How Japanese companies learn and unlearn. In K. B. Clark, R. H. Hayes, &amp; C. Lorenz (Eds.), <i>The uneasy alliance: Managing the productivity-technology dilemma</i> (pp. 337-381). Boston: Harvard Business School Press.</p>	<p>(learning) (know-how)</p>	<p>How Japanese companies innovate in product development.</p>
<p>Keeley, T. D. (2001). <i>International human resource management in Japanese firms: Their greatest challenge</i>. Hampshire: Palgrave.</p>	<p>MNC, Japanese MNC, Japanese expatriate</p>	<p>Japanese MNC behavior and cultural insight into expatriate usage</p>
<p>Kogut, B., &amp; Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. <i>Organization Science</i>, 3(3), 383-397. Retrieved from <a href="http://search.ebscohost.com.libproxy.uoregon.edu/login.aspx?direct=true&amp;db=buh&amp;AN=4434732&amp;loginpage=Login.asp&amp;site=ehost-live&amp;scope=site">http://search.ebscohost.com.libproxy.uoregon.edu/login.aspx?direct=true&amp;db=buh&amp;AN=4434732&amp;loginpage=Login.asp&amp;site=ehost-live&amp;scope=site</a>.</p>	<p>tacit knowledge conversion</p>	<p>Knowledge and the firm, competitive advantage</p>
<p>Kopp, R. (1999). The rice-paper ceiling in Japanese companies: Why it exists and persists. In S. L. Beechler &amp; A. Bird (Eds.), <i>Japanese multinationals abroad: Individual and organizational learning</i>, (pp. 3-10) New York: Oxford University Press.</p>	<p>Japanese MNC, Japanese expatriate</p>	<p>Japanese MNC behavior and cultural insight into expatriate usage</p>
<p>Makela, K. (2007). Knowledge sharing through expatriate relationships: A social capital perspective. <i>International Studies of Management and Organization</i>, 37(3), 108-125.</p>	<p>Knowledge creation, MNC, (knowledge sharing), (expatriate)</p>	<p>The expatriate role in knowledge sharing</p>
<p>Nonaka, I. (1988). Toward middle-up-down management: Accelerating information creation. <i>Sloan Management Review</i>, 29(3), 9-18.</p>	<p>(information creation), (organizational information creation)</p>	<p>Middle manager role in information creation</p>

<p>Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. <i>Organization Science</i>, 5(1), 14-37. Retrieved from Business Source Premier database.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI</p>	<p>Explaining organizational knowledge creation theory</p>
<p>Nonaka, I., &amp; Konno, N. (1998) The concept of <i>ba</i>: Building a foundation for knowledge creation. <i>California Management Review</i>, 40(3), 40-54.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, <i>ba</i></p>	<p><i>Ba</i> as a shared space and foundation for organizational knowledge creation</p>
<p>Nonaka, I., &amp; Nishiguchi, T. (2001a). Introduction: Knowledge emergence. In I. Nonaka &amp; T. Nishiguchi (Eds.), <i>Knowledge emergence: Social, technical, and evolutionary dimensions of knowledge creation</i> (pp. 3-9). Oxford: Oxford University Press.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, <i>ba</i></p>	<p>Management and knowledge creation, applied examples</p>
<p>Nonaka, I., &amp; Nishiguchi, T. (2001b). Conclusion: Social, technical, and evolutionary dimensions of knowledge creation. In I. Nonaka &amp; T. Nishiguchi (Eds.), <i>Knowledge emergence: Social, technical, and evolutionary dimensions of knowledge creation</i> (pp. 286-289). Oxford: Oxford University Press.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, <i>ba</i></p>	<p>Knowledge creation as platform for competitive advantage. Discussion of future research paths.</p>
<p>Nonaka, I., &amp; Takeuchi, H. (1995). The knowledge-creating company: <i>How Japanese companies create the dynamics of innovation</i>. New York: Oxford University Press.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, <i>ba</i></p>	<p>Explaining organizational knowledge creation theory</p>
<p>Nonaka, I., &amp; Toyama, R. (2003). The knowledge-creating theory revisited: Knowledge creation as a synthesizing process. <i>Knowledge Management Research &amp; Practice</i>, 1, 2-10.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, <i>ba</i></p>	<p>Incorporating dialectic views into organizational knowledge creation</p>
<p>Nonaka, I., &amp; Toyama, R. (2007). Why do firms differ? The theory of the knowledge creating firm. In K. Ichijo &amp; I. Nonaka (Eds.), <i>Knowledge creation and management: New challenges for managers</i> (pp. 32-43). New York: Oxford University Press.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, <i>ba</i></p>	<p>Knowledge and the firm, role of managers</p>

<p>Nonaka, I., &amp; von Krogh, G. (2009). Tacit knowledge and knowledge conversion: Controversy and advancement in organizational knowledge creation theory. <i>Organization Science</i>, 20 (3), 635-652.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, <i>ba</i></p>	<p>Buttressing organizational knowledge creation theory</p>
<p>Nonaka, I., von Krogh, G., &amp; Voelpel, S. (2006). Organizational knowledge creation theory: Evolutionary paths and future advances. <i>Organization Studies</i>, 27(8), 1179-1208. Retrieved from <a href="http://oss.sagepub.com/cgi/content/abstract/27/8/1179">http://oss.sagepub.com/cgi/content/abstract/27/8/1179</a>.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, <i>ba</i></p>	<p>Overview of progress in knowledge creation and possible future directions for study</p>
<p>Prusak, L., &amp; Weiss, L. (2007). Knowledge in organizational settings: How organizations generate, disseminate and use knowledge for their competitive advantage. In K. Ichijo &amp; I. Nonaka (Eds.), <i>Knowledge creation and management: New challenges for managers</i> (pp. 32-43). New York: Oxford University Press.</p>	<p>knowledge creation</p>	<p>Framing knowledge management</p>
<p>Tsoukas, H. (1996). The firm as a distributed knowledge system: A constructionist approach. <i>Strategic Management Journal</i>, 17, 109-122.</p>	<p>knowledge creation, tacit knowledge conversion</p>	<p>A contrasting view of knowledge in the firm</p>
<p>von Krogh, G., Ichijo, K., &amp; Nonaka, I. (2000). <i>Enabling knowledge creation: How to unlock the mystery of tacit knowledge and release the power of innovation</i>. New York: Oxford University Press.</p>	<p>knowledge creation, organizational knowledge creation, tacit knowledge conversion, SECI, <i>ba</i></p>	<p>Application of knowledge creation</p>

## Appendix B

### Dr. Nonaka - A Sampling of Works

This appendix is a selected sampling of Dr. Ikujiro Nonaka's work in English. The appendix is included for reference and to illustrate the breadth of Dr. Nonaka's work on the theory of the firm and organizational knowledge creation. Dr. Nonaka's complete list of works is available at Hitotsubashi University, Tokyo, Japan.

(from: <http://www.ics.hit-u.ac.jp/faculty/profiles/nonaka2.pdf>).

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