

# Learning and knowledge acquisition through international strategic alliances

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## Executive Overview

*Global competition is forcing firms to rethink the question of how new organizational knowledge is acquired. New knowledge provides the foundation for new skills, which in turn can lead to competitive success. However, few firms systematically manage the process of knowledge acquisition. This paper explores international strategic alliances and their potential for learning and knowledge acquisition. In bringing together firms with different skills, knowledge bases, and organizational cultures, alliances create unique learning opportunities for the partner firms. Based on the assumption that organizational learning is both a function of access to new knowledge and the capabilities for using and building on such knowledge, the paper focuses on alliance knowledge accessibility and firm learning effectiveness.*

## Understanding Knowledge

The acquisition of new organizational knowledge is increasingly becoming a managerial priority. As the global competitive environment continues to intensify, this priority takes on new significance. New knowledge provides the basis for organizational renewal and sustainable competitive advantage. In various studies, knowledge acquisition has been linked with operational performance as well as with the performance of specific organization tasks.<sup>1</sup> Strategic management researchers have begun to identify knowledge as the key resource that managers need to appreciate and understand if they are to create sustainable competitive advantages.<sup>2</sup> Understanding knowledge means an appreciation for the complexities of acquiring, transferring, and integrating knowledge in a learning environment. In the global arena, the complexities increase in scope as multinational firms grapple with cross-border knowledge transfers and the challenge of renewing organizational skills in various diverse settings.

With a focus on the process of knowledge acquisition, this paper examines learning through strategic alliances, relatively enduring interfirm coop-

erative arrangements that utilizes resources and/or governance structures from autonomous organizations. Alliances are generally formed for the joint accomplishment of individual firm goals linked to the strategic mission of each partner firm.<sup>3</sup> Strategic alliances can have a variety of organizational arrangements, such as joint ventures (JVs), licensing agreements, distribution and supply agreements, research and development partnerships, and technical exchanges. Broadly, the governance structures of the various forms can be differentiated as either equity alliances or non-equity alliances. Equity alliances involve the transfer or creation of equity ownership either through direct investment or the creation of an equity JV. Non-equity alliances do not involve any transfer of equity nor do they usually entail the creation of a new organization.

In bringing together firms with different skills and knowledge bases, alliances create unique learning opportunities for the partner firms. By definition, alliances involve a sharing of resources. In some cases, the shared resources are strictly financial, limiting partner learning opportunities.<sup>4</sup> Of primary interest in this paper are alliances in

which firms gain access to the skills and knowledge of their partners. This access can be a powerful source of new knowledge that, in most cases, would not have been possible without the formal structure of an alliance. Partner firms that use this access as the basis for learning have the opportunity to acquire knowledge that can be used to enhance partner strategy and operations.

Despite the logical notion that alliances create learning opportunities, and although organizations often talk in glowing terms about their alliances' learning potential, my research suggests that learning through alliances is a difficult, frustrating, and often misunderstood process.<sup>5</sup> More significantly, I would argue that creating a successful alliance learning environment is the exception rather than the rule. Consider the following case of a 50-50 equity JV between Hito, a Japanese firm and Alpha, an American firm.<sup>6</sup>

For several reasons, this alliance created a high potential learning situation. Alpha had the opportunity to acquire knowledge directly associated with Hito's technological and strategic capabilities. The venture manufacturing plant was established in vacant space in an existing Alpha plant near Alpha headquarters. Alpha managers could easily visit and interact with alliance managers. The plant was designed as closely as possible to be a replica of a Japanese plant, largely to satisfy a major Japanese customer. This provided Alpha the opportunity to gain firsthand knowledge of Japanese manufacturing processes. Hito was willing to share its technology with Alpha. Because the JV products were functionally similar to Alpha products, Alpha managers were familiar with the technology used in the JV. The JV was achieving greater productivity and lower defect rates than Alpha. By its fourth year of operation the JV had become one of its primary Japanese customer's most reliable suppliers, indicating that the venture was producing very high quality products. Finally, Alpha worked closely with the JV as an intermediate processor, allowing for interaction between parent and JV manufacturing personnel.

Alpha management indicated that a primary objective was to learn from the JV in the areas of manufacturing and customer service. Despite this initial learning intent and the high learning potential, over three years of observation, I saw little in the way of learning systems being implemented and according to senior Alpha managers, the learning experience was less than satisfactory. In fact, Alpha's manufacturing vice president dismissed the learning opportunity and commented: "What the JV does would never work in our company." Alpha management saw the JV as an autonomous subsidiary

rather than a closely related division. There were few interactions between the JV and Alpha at the managerial level and top management at Alpha seemed unwilling to initiate learning efforts. For example, Hito offered to share some proprietary process technology with its American partner at no cost. The American firm was not interested, or at least made no effort to acquire the technology.

The Alpha-Hito example is not an isolated case. In many other alliances I have studied, firms have been unable to exploit alliance learning opportunities. There are various explanations for the failure to learn: the alliance knowledge was undervalued; the necessary knowledge "connections" were not put into place; the nature of the knowledge itself made learning difficult; the parent corporate culture did not support learning. The primary objective in this paper is to examine alliance learning in order to understand the conditions that support effective learning. I focus primarily on alliance forms that combine resources from more than one organization to create a new organizational entity (the "child") distinct from its parents. In the majority of cases, this form of alliance will be an equity JV. Focusing on this type of alliance allows for a clear delineation of the partner relationship and the nature of alliance knowledge. As well, research has shown that equity JVs are more effective for the acquisition of knowledge associated with partner capabilities than contract-based alliances such as licensing.<sup>7</sup> I also focus on international strategic alliances, defined as alliances with partners headquartered in two or more countries. Nevertheless, it should be emphasized that the findings apply to a broad range of interfirm relationships beyond equity JVs and in both a domestic and international context.

## CORE THEMES

### Organizations As Learning Systems

Managers are urged to improve their organizations' learning systems and to leverage new knowledge into core competencies. Some writers argue that knowledge is the primary organizational resource and that the creation and utilization of knowledge is the key to sustainable advantage.<sup>8</sup> All too often, however, the prescriptions are not grounded in the practical realities of management. While managers usually agree that learning in their organizations is a good thing, they are often baffled when asked to describe how their organization learns, acquires, and manages new knowledge. One of the problems is that organiza-

tional learning is a systems-level concept that can become useful only when its component parts are thoroughly understood and brought down to an operational level.

Toward that end, this paper focuses on organizational knowledge acquisition and creation as a valid foundation for understanding how knowledge travels and changes within organizations.<sup>9</sup> While organizations cannot create knowledge without individuals, unless individual knowledge is shared with other individuals and groups, the knowledge will have a limited impact on organizational effectiveness.<sup>10</sup>

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Thus, organizational knowledge creation should be viewed as a process whereby the knowledge held by individuals is amplified and internalized as part of an organization's knowledge base.<sup>11</sup> Clearly, knowledge creation and utilization are closely linked. As individual knowledge becomes accepted by other organizational members and is utilized in organizational processes, the knowledge creation process is occurring because knowledge is moving beyond one individual's perspective.

### **Strategic Alliances Create Learning Opportunities**

A primary objective in this paper is to move beyond abstract notions of learning to the reality faced by managers trying to build new skills and competencies. Over the past two decades there has been a substantial increase in the formation of international strategic alliances. For many firms, alliances are no longer a peripheral activity but a mainstay of competitive strategy. One of the strategic benefits of alliances is the opportunity to learn from a partner. By focusing on alliance knowledge management, this paper develops a framework of collaborative learning that should prove instructive for managers struggling to exploit alliance learning opportunities. If this is the age of "alliance capitalism,"<sup>12</sup> as some researchers have argued, alliances will undoubtedly become more important as a tool of competitive strategy. The framework should also be useful because it provides practical insights into knowledge cre-

ation that can be utilized beyond the alliance context. For example, managers in multinational firms seeking to combine skills and knowledge from different parts of the world must deal with knowledge management challenges similar to those faced by alliance managers.

### **Knowledge Acquisition and Learning Can be Managed**

Knowledge acquisition, although haphazard and non-linear, is not a random process. As other researchers have found, organizations can institute policies, structures, and processes to facilitate learning and knowledge acquisition.<sup>13</sup> At one level, the formation of an alliance represents a strategic initiative that has the potential to create experiences, actions, and strategic choices that provide the basis for learning. However, the formation of the alliance cannot ensure that its learning potential will be realized. Managers must take explicit steps to capitalize on the alliance knowledge potential. From my research, various collaborative activities and organizational actions emerged as the basis for accessing and exploiting alliance knowledge.

The following sections discuss the key issues surrounding learning through alliances and explore the conditions that stimulate and facilitate learning. The discussion is organized around a series of questions and issues, as shown in Figure 1. The first question deals with the valuation of alliance knowledge. If alliance knowledge is viewed as valuable, the partner firm is more likely to initiate learning efforts. The next question deals with the accessibility of alliance knowledge. Depending on the type of knowledge and the partner's degree of protectiveness, some alliances will have more accessible knowledge than others. A further issue is the firm's effectiveness at learning. I discuss three factors that influence learning effectiveness in the alliance context: knowledge connections between a partner firm and its alliance, the relatedness of alliance knowledge, and cultural alignment between the partner and its alliance.

### **The Value of Alliance Knowledge**

The formation of an alliance is an acknowledgment that an alliance partner has useful knowledge. If the knowledge were not useful, there would be no reason to form an alliance. Alliance knowledge can be viewed from three perspectives. First, there is knowledge about how to design and manage alliances.<sup>14</sup> Second, parent firms may seek collaborative access to other firms' knowledge but will not necessarily wish to internalize the

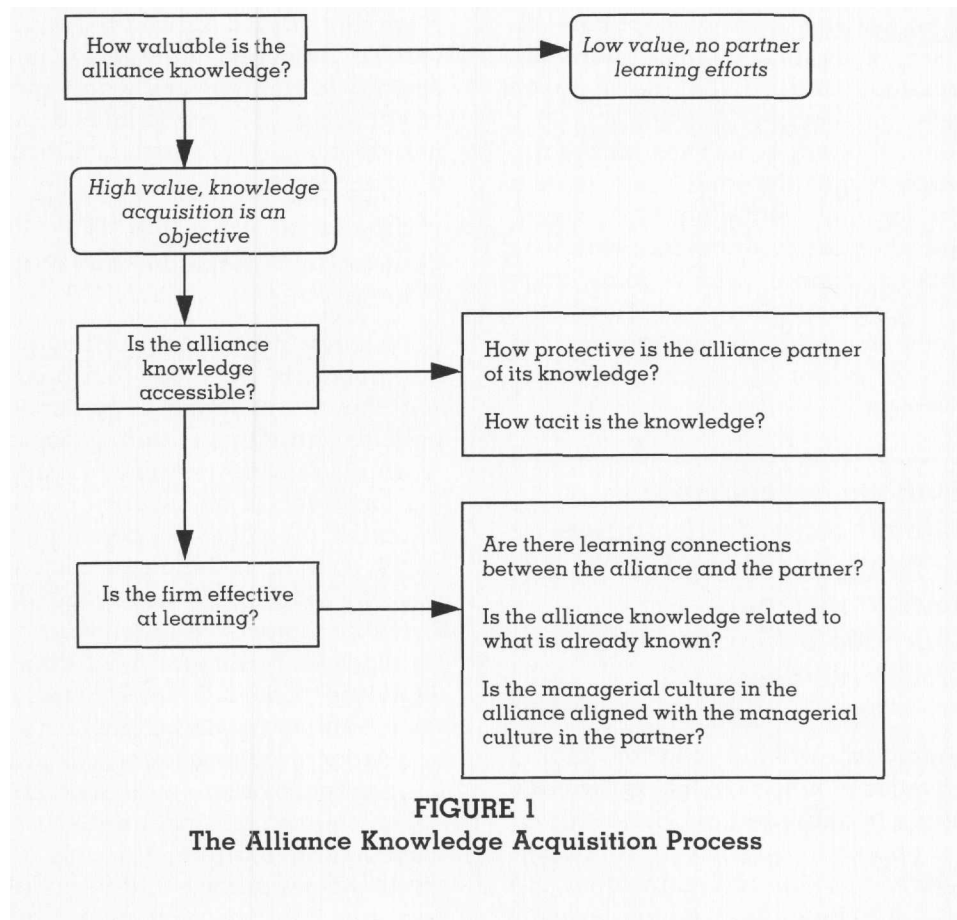


FIGURE 1  
The Alliance Knowledge Acquisition Process

knowledge in their own operations. For example, a firm primarily involved in distribution activities may form an alliance with a manufacturer to ensure a stable product supply. Through the alliance, the distributor firm gains access to manufacturing skills. If the distributor has no acquisition intent associated with its partner's manufacturing skills, the manufacturing knowledge embodied in the alliance outputs has limited value to the distributor beyond the terms of the collaborative agreement.

Third, knowledge from an alliance can be used by the parent company to enhance its own strategy and operations. This type of knowledge, referred to as alliance knowledge, differs from the second type of knowledge because it has value to the parent outside the alliance agreement. In the absence of an alliance this type of knowledge remains inaccessible. The acquisition of alliance knowledge has been suggested as one of General Motors' (GM) objectives in its New United Motor Manufacturing Inc. (NUMMI) JV with Toyota.<sup>15</sup> In NUMMI, formed in 1984 and still operating, the manufacturing and engineering processes are controlled by Toyota. Initially, GM hoped to learn about the efficient production of small cars and transfer its knowledge to GM plants.

#### **Alliance Knowledge: Access Versus Acquisition**

Even though alliance knowledge is deemed useful, a firm will not necessarily actively seek to acquire the knowledge. Firms involved in alliances have a choice as to the resources and efforts that can be devoted to alliance knowledge acquisition. In some alliances, partners aggressively seek to acquire alliance knowledge while in others, the partners take a more passive approach to knowledge acquisition. A firm using an alliance as a substitute for knowledge it cannot create on its own may be content to remain dependent on a partner and thus, may place a relatively low value on knowledge acquisition. In this scenario, if the alliance is terminated (and most are at some point), the dependent firm may find that its knowledge base has eroded.

An alliance partner's approach to knowledge acquisition will be a function of the perceived value of alliance knowledge. Going back to the earlier example of the Alpha-Hito JV, although the knowledge was judged to be of sufficient value to warrant forming a relationship, the American partner discounted the value of the Japanese partner's knowledge, partly because of ambiguity about why the Japanese partner was successful and how



Japanese partner skills could be utilized by the American firm. With ambiguity comes misunderstanding and reluctance to dig deeper into the value of the knowledge. Clearly, if a firm wishes to imitate the strategy of a rival (or a partner) and learn from this firm, it must first understand why the firm has a competitive advantage, and then it must determine what resources are required to replicate that advantage.<sup>16</sup> For alliance learning strategies to be viable, firms must overcome the ambiguity associated with their partner skills.

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Many American alliance parents are searching for the key to a Japanese mystique, rather than trying to develop a fundamental understanding of the link between the Japanese partner's skills and its competitive advantage.

In the Alpha-Hito JV, the key knowledge contribution to which the American partner sought access was the knowledge associated with developing and maintaining relationships with Japanese customers. As it turned out, Japanese partner knowledge about manufacturing processes and quality control became more important. Other firms are able to overcome initial skepticism about the value of their partner's knowledge and create a successful learning experience. For example, a manager described the following situation not long after forming an alliance with a Japanese partner:

When we first went to Japan we thought our partners wanted an alliance so they could learn from us. We were shocked at what we saw on that first visit. We were amazed that they were even close to us, let alone much better.

In this particular case, the American firm was able to build a successful alliance and initiate efforts to learn from its Japanese partner. To create a successful learning environment, American firm managers had to shift their view of partner capabilities and in particular, believe that what they were seeing was both different and potentially useful.

GM initially undervalued the learning potential of its JV. Its initial learning expectations were focused on manufacturing processes, primarily for small cars in the United States context. However, NUMMI has evolved to play a key role in manage-

rial development and training for GM, both in the United States and internationally. More importantly, the learning has gone far beyond manufacturing processes. For example, at GM Argentina's truck plant, more than 60 managers, supervisors, and team leaders have visited or will visit NUMMI. GM Argentina managers openly acknowledge NUMMI as the benchmark for lean production and continuous improvement, quality, and human resource systems. GM Argentina managers also have expectations of real change based on the NUMMI visits, as a manager explained: "all visits to NUMMI and Eisenach [Germany] will have ROI objectives; the visits must generate a positive return." When GM's Adam Opel Division decided to build a new plant in Eisenach several years ago, the objective was "to build a plant like NUMMI." The president of GM Brazil in the mid-1990s worked in NUMMI and instituted many NUMMI ideas in the Brazilian operation.

### **The Accessibility of Alliance Knowledge**

To acquire alliance knowledge it must be accessible. Two factors limit knowledge accessibility: partner protectiveness and knowledge tacitness.

### **How Protective are Alliance Partners?**

For competitive reasons, alliance partners may be highly protective of their knowledge resources. In a situation of high competitive overlap between the partners, one or all firms may be very reluctant to share knowledge because of the risk of knowledge spillover to a partner.<sup>17</sup> If alliance partner firms are competitors or potential competitors, it seems reasonable to suggest that a firm would have a limited incentive to share knowledge. In fact, a firm may have little incentive to form alliances, let alone share knowledge that could potentially lead to the creation of a competitor.

In cases of high competitive overlap, firms may work hard to prevent knowledge leakage to their alliance partners. For example, in a Japanese-American JV, the Japanese firm insisted that the JV head office be located in a separate building located a short distance from the plant. In addition, personnel working in the office, which included various American partner personnel assigned to the JV, were restricted in their access to the plant. As a final effort to prevent knowledge acquisition by the American partner, the Japanese firm insisted that the JV general manager could not be from the American partner and had to be hired from outside. The rationale for the Japanese firm's protective actions was that the Japanese partner was the plant operator and the technology in-

volved was highly proprietary. Not surprisingly, the American partner learned little about the Japanese partner skills and the alliance was terminated after only a few years when the Japanese partner acquired the JV business.<sup>18</sup>

Increasing trust between alliance partners may mitigate partner protectiveness. When a new alliance is formed, there will often be a sense of hesitancy by the partners in terms of sharing knowledge, particularly if the partners have no prior collaborations. In my research, I have observed that if an alliance survives the critical honeymoon period, deeper ties between the partners becomes the norm. In many cases, ties develop between the managers involved in the alliance. Thus, after a relationship is formed and a pattern of interactions develops, partner firms may decrease their efforts to protect knowledge spillover. Specifically, as trust increases and mutual partner understanding develops, alliance knowledge should become more accessible.

### *The Tacitness of Alliance Knowledge*

Organizational knowledge creation involves a continuous interplay between tacit and explicit knowledge. Tacit knowledge is hard to formalize and not easily visible, making it difficult to communicate or share with others. In organizations, tacit knowledge involves intangible factors embedded in personal beliefs, experiences, and values. When individuals in organizations are asked to describe how and why things are done in a certain way, they often say "I am not sure, its just the way things are done around here." An inability to articulate or describe an organizational process indicates that the knowledge supporting the process is highly tacit.

In contrast, explicit knowledge is systematic and easily communicated in the form of hard data or codified procedures. Often there will be a strong tacit dimension associated with how to use and implement explicit knowledge. For example, a manager from a European division of GM, describing an initial visit to NUMMI, said "We were amazed at what we saw." Because NUMMI's quality control was so high, there were few cars that had to be repaired after assembly was completed. The European managers did not believe the number of repair cars could be so low. Thinking that NUMMI management must have moved the repair cars to another location, the managers actually looked for additional repair cars. The number of repair cars, their location, and how they were accounted for represent explicit knowledge that can easily be communicated to an outsider. The underlying rationale for the small number of repair cars

is more difficult to communicate because it involves Toyota's production system and overall approach to manufacturing, quality control, and workforce management. This knowledge has a high degree of tacitness.

The more tacit the knowledge that an alliance partner seeks to acquire, the more difficult the acquisition. As well, the more tacit the knowledge, the greater the likelihood that the knowledge is valuable. American firms in alliances with Japanese firms focus their learning efforts on explicit knowledge.<sup>19</sup> When the American firms formed alliances with an objective of learning from their Japanese partners, the learning expectations revolved around what the Japanese knew, rather than how and why the Japanese firms knew what they knew. The American firms expected that there would be visible differences in the alliance that could be easily identified and incorporated in the parent. The absence of highly visible changes to systems and processes was often equated with low learning potential. This is consistent with the argument that in their approach to organizational learning, Western firms tend to focus on explicit knowledge that can be created through analytical skills and concrete forms of oral and visual presentation.<sup>20</sup>

Other research supports the argument that tacit knowledge is difficult to acquire through an alliance. In a study of Chinese JVs, the Chinese partners encountered significant difficulty in learning complex manufacturing skills from their U.S. partners.<sup>21</sup> In the case of NUMMI, the learning opportunities and experiences of the partners were very different. Although GM has turned NUMMI into a positive learning experience, much has been written about how GM initially struggled to learn from NUMMI.<sup>22</sup> For GM to learn from Toyota and upgrade its manufacturing capability, changes in fundamental operating philosophies were required. GM's learning has been described as "a slow and painful process" because the Toyota knowledge was deeply embedded with Toyota's history and culture.<sup>23</sup> In particular, GM needed to learn about the Toyota production system and its emphasis on cost efficiency, quality, flexibility and innovation. To reduce its dependency on GM and successfully implement a local assembly strategy in the United States, Toyota needed to learn only how to transfer an existing management process to North America. The local knowledge that Toyota needed was more explicit than the knowledge base that GM had to build to successfully learn from Toyota. Using NUMMI as a foothold in North America, Toyota has successfully built wholly-

owned assembly plants in Kentucky and Ontario and is building a new plant in Indiana.

### Learning Effectiveness

Knowledge must be accessible before it can be acquired. However, accessibility is not sufficient for effective learning. An alliance partner's effectiveness at learning and acquiring knowledge is also important. Some organizations, like individuals, may lack the capacity to learn. Effectiveness at learning is closely related to the concept of absorptive capacity. Absorptive capacity has been defined as a firm's ability to recognize the value of new knowledge and assimilate the knowledge for commercial purposes.<sup>24</sup> Three factors influence learning effectiveness in the alliance context: knowledge connections between a firm and its alliance, the relatedness of alliance knowledge, and the cultural alignment between parent executives and alliance managers.

### The Establishment of Knowledge Connections

The creation of organizational knowledge requires the sharing and dissemination of individual experiences. Unlike most assets, organizational knowledge can actually grow when shared.<sup>25</sup>

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As one organizational unit shares knowledge with other units, those units are now in a position to amplify, modify, and clarify the knowledge. For knowledge in an alliance to migrate to the parent, there must be knowledge connections between the alliance and the parent. These connections create the potential for individuals exposed to alliance knowledge to share their observations and experiences. Knowledge that connects with other knowledge can be discussed, debated, and possibly discarded. The knowledge may also be further developed and move upwards in the organization. Because individual knowledge is inherently fragile, new knowledge may be ignored or viewed as irrelevant without knowledge connections. With knowledge connections in place, new knowledge has a higher probability of survival and integration into an organization's knowledge base.

Knowledge connections that are consciously managed can alleviate the distance that often exists between parent organizations and their alli-

ances. One of the problems alliance managers encounter is that parent managers are often far removed from the realities of managing a complex international partnership. Because the parent managers are unfamiliar with the alliance and possibly inexperienced with alliance management, they often make demands that are viewed as unreasonable by the managers actually operating the alliance business.

Knowledge connections occur through both formal and informal relationships between individuals and groups. These internal managerial relationships facilitate the sharing and communicating of new knowledge and provide a basis for transforming individual knowledge to organizational knowledge. Four generic management processes create a knowledge connection between alliance and parent firms: personnel transfers between the alliance and parent; technology sharing; alliance-parent interactions, including visits and tours of alliance facilities; and linkages between parent and alliance strategies.<sup>26</sup>

Although personnel transfers may be associated with explicit knowledge, they will be most effective as a means of gaining access to tacit knowledge. In GM's JV agreement with Toyota, GM is allowed to assign 16 managers to NUMMI. These managers are assigned to NUMMI for two years and then rotated back to GM. Technology sharing is a mechanism that provides access primarily to explicit knowledge. Alliance-parent interactions and linkages between parent and alliance strategies create the potential for both explicit and tacit knowledge to be acquired. GM, for example, established a technical liaison office in NUMMI specifically to coordinate visits by GM personnel. This type of interaction provided GM with access to both explicit manufacturing knowledge and more tacit insights associated with human resource management and quality control. The linkage of parent and alliance strategies often occurs as an evolutionary process as initially autonomous alliances become more integrated with parent competitive strategy. Several JVs that when formed were quite independent of the American parent and relied extensively on a Japanese partner for product technology and marketing support, became less independent as ties between the JV and parents increased. In one case, plans were underway for the parent and JV to jointly explore several new international projects. Both parents realized that pooling their knowledge made sense given the ongoing consolidation in their industry.

The four processes create connections for individual managers to communicate their alliance experiences to others and form the foundation for



the integration of knowledge into the parent's collective knowledge base. As individuals interact through the various connections, the interactions become larger in scale and faster in speed as more and more actors in the organization become involved. This process has been described as a spiral of organizational knowledge creation.<sup>27</sup> In the spiral, knowledge starts at the individual level, moves up to the group level, and then to the firm level. As the knowledge spirals upward in the organization, it may be enriched and extended as individuals interact with each other and with their organizations.

### *Is Alliance Knowledge Related To What Is Already Known?*

Learning researchers have long recognized that what can be learned is directly related to what is already known. Prior knowledge permits the effective utilization of new knowledge. New knowledge in an area we are familiar with is generally easier to acquire than knowledge about an unfamiliar area. Unrelated knowledge will be difficult to acquire and may, in fact, have limited value because of a lack of common language for understanding the knowledge.

Two types of related knowledge are important: knowledge of the partner and knowledge about alliance management. If firms have worked together in the past, it is likely that they have developed basic understandings about each other's skills and capabilities, which should provide an impetus for further learning. Previous ties between alliance partners can generate an initial base of interpartner trust. As a result, experienced partners can forgo the relationship building processes that will be necessary for partners working together for the first time. On the other hand, inexperienced partners must go through a relationship building period that may interfere with learning.

Despite the logical notion that prior partner relationships is a factor in learning effectiveness, a counter argument must be acknowledged. When there are significant differences between the partners, the learning opportunity is enhanced because of the potential new knowledge that is outside the firm's knowledge base. Continuing this line of thinking, the greater the difference between the partner firms, the more difficult it is to create a learning relationship, and the greater the probable value of learning. The problem for the learning firm is that an enhanced learning opportunity that cannot be exploited ultimately has little value. If the knowl-

edge is so far removed from what is known, learning may not be possible.

The second type of related knowledge is concerned with alliance management. As firms gain alliance management experience, they should become more efficient at utilizing alliances as learning opportunities because of a learning curve associated with the diffusion of learning within the firm.<sup>28</sup> A diverse background of alliance experience can be a robust basis for learning because of the increased probability that incoming knowledge is in a form familiar to the parent. Firms that have a base of collaborative experience should have greater knowledge of how to manage, monitor, and acquire knowledge from their alliances. Once a firm begins collaborating, it develops experience in cooperation and a reputation as a partner. Alliance-experienced firms will be more likely to appreciate the learning opportunities created by their alliances. Furthermore, as a firm develops a broad range of collaborative experience and moves up the learning curve, the skills necessary for knowledge acquisition are refined.

An obvious concern for firms involved in alliances or considering alliance involvement is the potential loss or spillover of knowledge to an alliance partner. Substantial knowledge acquisition by one partner over time can erode the value of the knowledge contributed by the other partner, breaking down the bargaining relationship between the partners. Such spillovers should be considered an inevitable result of alliance involvement. Although a firm in an alliance risks knowledge spillover, there is also the opportunity to capitalize on spillovers of the partner's knowledge. As indicated, the ability to acquire partner knowledge is partially the result of prior experience in alliance management. Alliance involvement can be viewed as a broadening experience that adds to the firm's capacity to assimilate new experiences. Increases in learning capacity are an alliance by-product. The more alliances a firm is involved in, the greater its learning capacity and the more likely partner knowledge can be acquired.

The previous discussion also suggests a possible paradox in that the more a firm learns, the less it may need to remain in an alliance. Taken to an extreme, firms that are effective at learning and eliminating partner need may find it difficult to find alliance partners. Undoubtedly, some firms may actively pursue alliance learning strategies while seeking to prevent their partners from learning. The more likely scenario is an alliance in which both partners recognize that give-and-take must be the norm for a viable alliance strategy. In



the case of NUMMI, GM made no secret of its learning objectives. But since Toyota and GM are competitors, both firms will have proprietary knowledge that cannot be shared. That NUMMI has been in existence since 1984 is evidence that the partners have been able to develop a mutually beneficial learning relationship.

### **Cultural Alignment Between Alliance and Parent Management**

The American managers in the Alpha-Hito JV were convinced that Alpha manufacturing processes could be substantially improved if an effort was made to learn from the alliance. The Japanese partner, as well, was quite willing to share its technology. At the executive level in Alpha, several levels above the alliance manager level, there was a very different perspective. The executives questioned the learning potential, given the JV's modest financial results, and the applicability of what they referred to as "Japanese" management techniques in the American plants. This case illustrates what Edgar Schein referred to as a lack of alignment between different organizational cultures.<sup>29</sup> In this case, the two cultural communities are the managers with direct involvement in the alliance and the American parent executives. Relative to the assumptions of the parent executives, alliance managers had very different assumptions about the alliance relationship, objectives, and performance. Because the two communities had different assumptions, when the organization attempted to learn from its alliance, the cultures collided and learning was frustrated. My discussions with GM managers who have been assigned to NUMMI illustrate a similar situation. These managers have described their frustration in trying to convince colleagues and senior managers of the relevance of their learning experience.

### **Key Issues to Consider**

Managers must accomplish several key objectives to successfully implement an alliance learning strategy. These objectives, shown in Table 1, are incorporated with a series of questions designed to stimulate managerial thought and action.

The first objective is to evaluate partner knowledge inherent in the alliance. Partner firms must be realistic about the value of their partner's knowledge and its relevance for enhancing their firm's strategy. Firms must get beyond stereotyped views of partner capabilities and make a concerted effort to understand partner core competencies. In the knowledge evaluation stage, the struc-

ture of the alliance plays a key role. For example, if a firm insists on controlling all of the key operational tasks in the alliance, there will be few learning opportunities. If your partner does not play a major role in alliance management, learning opportunities will be limited because you cannot learn from a silent partner.

After determining the alliance knowledge value, firms are then in a position to assess knowledge accessibility and initiate learning efforts. Throughout this process it is critical that partner managers occasionally step back and ask: do we really understand what it is we are trying to learn? All too often, learning expectations are inconsistent with partner capabilities and alliance tasks.

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If learning efforts are initiated, firms must ensure that existing knowledge is brought to bear on the current learning opportunities. For example, research has shown that previous experience in domestic alliances can be a stepping stone to the successful launch of an international alliance.<sup>30</sup> If a firm has managers with experience in previous alliances or in previous relationships with the partner, these managers' experiences should be utilized. Given the complexity of alliance management in general, involving managers with relevant experiences can greatly facilitate the knowledge acquisition process.

The final objective is to ensure that the parent and alliance managerial cultures are in alignment. Parent and alliance managers must work jointly to remove the stigma of "us" versus "them." The alliance should not be viewed as a threat by parent managers, nor should it be viewed as an orphan by those managers working in the alliance. For alliance learning to occur, knowledge must move from the alliance to the parent. Knowledge transfer will only occur if there are interactions between the managers on both sides. If the managers don't trust each other or harbor suspicions of the other's motives, the spiral of organizational knowledge creation will not happen.

### **Successful Knowledge Management**

In an increasingly competitive global environment, successful firms must be able to expand their knowledge base and develop new skills. Firms that are unable to learn risk being left behind. History shows us that the leading firms in one generation are rarely the leading firms in the

**Table 1**  
**Key Issues in Alliance Learning**

Objective	Major Questions
1. Assess and value partner knowledge	<ul style="list-style-type: none"> <li>• what were the strategic objectives in forming the alliance?</li> <li>• what are the core competencies of our alliance partner?</li> <li>• which partner contributes key alliance inputs?</li> <li>• what specific knowledge does the partner have that could enhance our competitive strategy? Is that knowledge or some of the knowledge embodied in the alliance?</li> <li>• what are the core partner skills relevant for our product/markets?</li> <li>• are we realistic about partner skills and capabilities relevant to our strategy and capabilities?</li> </ul>
2. Determine knowledge accessibility	<ul style="list-style-type: none"> <li>• have learning issues been discussed in the alliance negotiations?</li> <li>• how have key alliance responsibilities been allocated to the partners? which partner controls key managerial responsibilities?</li> <li>• do we have easy geographic access to the alliance operations?</li> <li>• does the alliance agreement specify restrictions on our access to the alliance operations?</li> <li>• has our partner taken explicit steps to restrict our access? If yes, can we eliminate these restrictions through negotiation or assignment of managers to the alliance?</li> </ul>
3. Evaluate knowledge tacitness and ease of transfer	<ul style="list-style-type: none"> <li>• is our learning objective focused on explicit operational knowledge?</li> <li>• where in the alliance does the knowledge reside?</li> <li>• is the knowledge strategic or operational?</li> <li>• reality check: do we understand what we are trying to learn and how we can use the knowledge?</li> </ul>
4. Establish knowledge connections between the alliance and the partner	<ul style="list-style-type: none"> <li>• do parent managers visit the alliance on a regular basis?</li> <li>• has a systematic plan been established for managers to rotate between the alliance and the parent?</li> <li>• are parent managers in regular contact with senior alliance managers?</li> <li>• has the alliance been incorporated into parent strategic plans and do alliance managers participate in parent strategic planning discussions?</li> <li>• what is the level of trust between parent and alliance managers?</li> <li>• do alliance financial issues dominate meetings between alliance and parent managers?</li> </ul>
5. Draw on existing knowledge to facilitate learning	<ul style="list-style-type: none"> <li>• have the partner firms worked together in the past?</li> <li>• in the learning process, have efforts been made to involve managers with prior experience in either/both alliance management and partner ties?</li> <li>• are experiences with other alliances being used as the basis for managing the current alliance?</li> <li>• are we realistic about our partner's learning objectives?</li> <li>• are we open-minded about knowledge without immediate short-term applicability?</li> </ul>
6. Ensure that partner and alliance managerial cultures are in alignment	<ul style="list-style-type: none"> <li>• is the alliance viewed as a threat or an asset by parent managers?</li> <li>• in the parent, is there agreement on the strategic rationale for the alliance?</li> <li>• in the alliance, do managers understand the importance of the parent's learning objective?</li> </ul>

next. In many industries, firms with global reach and strengths are challenging the dominance of incumbents. Witness the decline in market share for the Big Three automotive firms in North America. Initially, a failure to recognize the differences in Japanese competitors' skills was a key element in the Big Three's inability to counter the competitive thrust of the Japanese firms. In GM's case, its JV with Toyota has been a key factor in increasing management's focus

towards manufacturing quality. The JV has been a source of new knowledge that could not have been acquired without a cooperative relationship.

There can be a significant learning payoff through collaborating. As alliances increasingly become a fact of life in the business environment, exploiting the learning potential of alliances will become more important. By bringing together different firms with unique skills and capabilities,

alliances can create powerful learning opportunities. However, without active management of the learning process and an understanding of the nature of alliance knowledge, many of these opportunities will remain unexploited. To successfully exploit the learning opportunities, firms must overcome several hurdles. First, before knowledge can be acquired, firms must attach a value to alliance knowledge. Clearly, a decision to initiate knowledge acquisition efforts must be balanced with the cost of doing so. Second, the knowledge must be accessible. A partner firm may take steps to explicitly prevent knowledge spillovers to other firms. Or, as tacit knowledge, alliance knowledge may not be easily acquired and transferred. Third, the firm must have the capacity to learn and have the necessary systems and processes for knowledge to be acquired. Capacity to learn is an organizational skill that can be enhanced by building a base of related knowledge, by establishing knowledge connections, and by breaking down cultural misalignments between the alliance and parent managers.

In summary, few managers would dispute that knowledge is a critical corporate asset and its creation is essential for corporate survival. However, because knowledge is invisible, its management—creation and use—is a major managerial challenge. Alliances can be a vehicle for gaining access to new knowledge outside traditional organizational boundaries. Properly managed, alliances can yield new and valuable insights that can lead to tangible performance improvements. Without active parent firm involvement in the alliance learning process, learning will not occur.

## Endnotes

<sup>1</sup> For example, D. Eppe, L. Argote, and R. Devadas, "Organizational Learning Curves: A Method for Investigating Intra-Plant Transfer of Knowledge Acquired Through Learning by Doing," *Organization Science*, 2 (1991) pp. 58–70 showed how knowledge transfer improved manufacturing productivity. Y. L. Doz, "The Evolution of Cooperation in Strategic Alliances: Initial Conditions or Learning Processes?" *Strategic Management Journal*, 17 (Special Issue, Summer, 1996) pp. 55–85 found that learning cycles over time contributed to alliance efficiency and adaptability. H. Barkema, J. Bell, and J. Pennings, "Foreign Entry, Cultural, Barriers, and Learning," *Strategic Management Journal*, 17 (1996) pp. 151–166 found that learning and experience supported international expansion strategies.

<sup>2</sup> For example, the Winter 1996 Special Issue of the *Strategic Management Journal* is devoted to knowledge-based theories of the firm.

<sup>3</sup> A. Parkhe, "Interfirm Diversity, Organizational Learning, and Longevity in Global Strategic Alliances," *Journal of International Business Studies*, 22 (1991) pp. 579–601.

<sup>4</sup> For example, because of the enormous risks, alliances are usually formed for oil and gas exploration. In these alliances, one partner is usually the designated operator and the other partners have financial interests. The learning opportunities are limited for the non-operator partners.

<sup>5</sup> A. C. Inkpen, "Creating Knowledge Through Collaboration," *California Management Review*, 39 (1996), no. 1, pp. 123–140; A. C. Inkpen and M. M. Crossan, "Believing is Seeing: Joint Ventures and Organization Learning," *Journal of Management Studies*, 32 (1995) pp. 595–618.

<sup>6</sup> Company names are disguised.

<sup>7</sup> D. C. Mowery, J. E. Oxley, and B. S. Silverman, "Strategic Alliances and Interfirm Knowledge Transfer," *Strategic Management Journal*, 17 (Special issue, Winter 1996), pp. 77–92.

<sup>8</sup> For example, see R. M. Grant, "Toward a Knowledge-based theory of the firm," *Strategic Management Journal*, 17 (Special issue, Winter 1996), pp. 109–122.

<sup>9</sup> G. Hedlund and I. Nonaka, "Models of Knowledge Management in the West and Japan," In P. Lorange, B. Chakravarthy, J. Roos, and A. Van de Ven, eds., *Implementing Strategic Processes: Change, Learning and Co-operation* (Oxford: Basil Blackwell, 1993) pp. 117–144.

<sup>10</sup> D. H. Kim, "The Link Between Individual and Organizational Learning," *Sloan Management Review* 35 (Fall 1993), pp. 37–50.

<sup>11</sup> I. Nonaka has written extensively in the area of knowledge creation. See: I. Nonaka, "A Dynamic Theory of Organizational Knowledge," *Organization Science* 5, (February 1994) pp. 14–37; I. Nonaka, "The Knowledge-creating Company," *Harvard Business Review*, 69 (November/December 1991) pp. 90–104. Nonaka and H. Takeuchi have argued that one of the limitations of organizational learning theory is its failure to develop the concept of knowledge creation. See I. Nonaka and H. Takeuchi, *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation* (New York: Oxford University Press, 1995).

<sup>12</sup> J. Dunning, Reappraising the Eclectic Paradigm in An Age of Alliance Capitalism," *Journal of International Business Studies* 26 (Third Quarter 1995) pp. 461–492.

<sup>13</sup> E. C. Nevis, A. DiBella, and J. M. Gould, "Understanding Organizations as Learning Systems," *Sloan Management Review* 36 (Winter 1995) pp. 73–85.

<sup>14</sup> M. A. Lyles, "Learning Among JV-Sophisticated Firms," In F. Contractor and P. Lorange, eds., *Cooperative Strategies in International Business* (Lexington, MA: Lexington Books, 1988) pp. 301–316.

<sup>15</sup> M. Keller, *Rude Awakening: The Rise, Fall, and Struggle for Recovery of General Motors* (New York: William Morrow, 1989).

<sup>16</sup> R. Grant, "The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation," *California Management Review*, 34 (Spring 1991) pp. 119–135.

<sup>17</sup> An interesting question is why Toyota is not more protective of its technology in the NUMMI JV. Based on my interviews with NUMMI and GM managers, there are three reasons: 1) Toyota needs an amicable relationship with GM for political reasons; 2) Toyota recognizes that a deep understanding of the Toyota Production System is not possible without years of study and involvement and 3) NUMMI does not have Toyota's most advanced manufacturing technology.

<sup>18</sup> The JV was originally formed because the Japanese partner wanted local market support in the United States and the American partner sought access to the Japanese partner's technology.

<sup>19</sup> A. C. Inkpen and P. W. Beamish, "Knowledge, Bargaining Power and International Joint Venture Stability," *Academy of Management Review*, 22 (1997) pp. 177–202.

<sup>20</sup> Nonaka and Takeuchi, *op. cit.*, 1995.

<sup>21</sup> A. Yan and B. Gray, "Bargaining Power, Management Control, and Performance in United States-China Joint Ventures: A Comparative Case Study," *Academy of Management Journal* 37 (1994) pp. 1478–1517.

<sup>22</sup> For example, see: J. L. Badaracco, *The Knowledge Link*



(Boston: Harvard Business School Press, 1991); T. A. Mahoney and J. R. Deckop, J. R., "Y'Gotta Believe: Lessons From American-vs. Japanese-run U.S. Factories," *Organizational Dynamics*, 21 (4, 1993) pp. 27-38; and T. Sasaki, "What the Japanese Have Learned From Strategic Alliances," *Long Range Planning*, 26 (6, 1993) pp. 41-53.

<sup>23</sup> R. M. Grant, "Prospering in Dynamically-Competitive Environments: Organizational Capability as Knowledge Integration," *Organization Science*, 7 (1996) pp. 375-388.

<sup>24</sup> The term absorptive capacity was first used by W. M. Cohen and D. A. Levinthal, "Absorptive Capacity: A New Perspective on Learning and Innovation," *Administrative Science Quarterly*, 35 (1990) pp. 128-152. For a study that explores organizational determinants of absorptive capacity, see J. M. Penning and F. Harianto, "The diffusion of technological innovation in the commercial banking sector," *Strategic Management Journal*, 13 (1992) pp. 29-46. P. J. Lane and M. Lubatkin, "Relative Absorptive Capacity and Interorganizational Learning," *Strategic Management Journal*, forthcoming, found that a firm's ability to learn from another is a function of existing knowledge bases, organization structures and compensation policies, and dominant firm logics.

<sup>25</sup> J. B. Quinn, P. Anderson, and S. Finkelstein, "Leveraging intellect," *Academy of Management Executive* (10, 1996, no. 3) pp. 7-27.

<sup>26</sup> Inkpen, *op. cit.*, 1996.

<sup>27</sup> Nonaka, *op. cit.*, 1994.

<sup>28</sup> D. E. Westney, "Domestic and Foreign Learning Curves in Managing International Cooperative Strategies," In F. Contractor and P. Lorange, eds., *Cooperative Strategies in International Business* (Lexington, MA: Lexington Books, 1988) pp. 339-346.

<sup>29</sup> E. H. Schein, "Three Cultures of Management: The Key to Organizational Learning," *Sloan Management Review*, 38 (Fall 1996), pp. 9-20.

<sup>30</sup> H. G. Barkema, O. Shenkar, F. Vermeulen, J. H. Bell, "Working Abroad, Working With Others: How Firms Learn to Operate International Joint Ventures," *Academy of Management Journal*, 40 (1997) pp. 426-442.

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