Abstract: This paper establishes that transfer of knowledge across national borders within multinational enterprises depends both on a common language necessary for communication and on the shared social knowledge necessary to understand and predict the behavior of those engaged in the knowledge-transfer process. In a set of four case studies, it was found that knowledge transfer is more effective when technical and social knowledge are transferred together. Besides, ownership structure affects the understanding and transfer of social knowledge, while rich person-to-person contact in multinational teams provides an effective means of transferring social knowledge.

The importance of language in managing multinational enterprises (MNEs) has been well established (e.g., Bartlett and Ghoshal 1989; Welch, Welch, and Marschan-Piekkari 2001). However, using a common language within the same MNE does not necessarily lead to “meaningful communication” (Marschan, Welch, and Welch 1997), because a common language is not sufficient for successful communication, knowledge transfer, monitoring, control, and other functions. These depend...
on social knowledge (Sohn 1994; Grant 1996), which is a mutual understanding of behaviors. Social knowledge may also be important for the successful interpretation of language. Words might convey different meanings if the individuals have different cultural and social backgrounds. Companies may establish their own ways of speaking and expressing things, which can be denoted as “company speak” (see Welch et al., this issue). The concept of “language games,” which comes from Wittgenstein (1953), reflects the fact that the meaning of words comes not from the objects they denote but from the context in which they are used, so that people with different backgrounds will understand the same word differently.

Language is associated with knowledge, which, in the context of international business, has long been identified as a key part of the firm’s comparative advantages in doing business in foreign markets (Dunning 1993). It is well understood that foreign direct investment (FDI) involves the transfer of a package of resources (technology, management skills, entrepreneurship, and so on) and not merely financial capital. The composition of this package will differ according to industry and also according to the strategy of the firm (Buckley, Clegg, and Tan 2003). Knowledge transfer refers to knowledge communicated from one agent to another, such as from one individual to another, or from a group to an entire organization, in a process that may cross national borders. In understanding the knowledge that has been transferred, a lot of work has to be done. Knowledge transfer requires the use of language and communication to enable articulation in order to promote assimilation. Social knowledge in the form of understanding others’ behaviors is an important element in enabling the recipient to understand, learn, and implement transferred technologies and management skills (Sohn 1994). Kogut and Zander (1993) found that knowledge transfer is easier to accomplish within a single MNE because of a shared corporate understanding rather than between independent firms.

The key research objective of this paper is to address the following question: “How does language facilitate communication and knowledge transfer within MNEs?” We propose that the role of social knowledge in this process is crucial but is relatively unexplored. Without shared social knowledge, merely speaking the same language is insufficient to ensure successful knowledge transfer. Furthermore, shared language is essential to facilitate shared social knowledge.

**Social knowledge and language**

Polanyi suggested that all knowledge, including scientific knowledge, is grounded in personal understanding. He saw knowing as “an active comprehension of things known, an action that requires a skill” (Polanyi 1958, vii). Skillful knowing depends on internal cognitive elements on which articulation depends and which are, therefore, inherently difficult to articulate. For example, for words to convey meanings, there must be “prearticulated” associations (“denotations”) between the two sets of objects. These associations are inherently tacit. They cannot be expressed
in language, because they are prelinguistic. They can only be learned by experience. While Polanyi’s concern was with the philosophy of knowledge, a practical implication is that communicating knowledge between individuals depends not only on what language they speak but also on whether they share the internal cognitive capabilities that translate the articulated messages into the intended meanings. If this is not the case, then communication also requires the transfer of the skills of knowing needed to comprehend the information conveyed. These skills comprise the social components of tacit knowledge in the sense that they must be shared.

Social knowledge is a distinct category of knowledge that is essential to the effective functioning of an organization and that can be considered on its own merits in combination with other kinds of knowledge. Hence, it can be defined as knowledge held by individuals, or groups of individuals, that enables them to interpret, understand, and predict the behavior of other individuals and groups. Social knowledge can pertain to individuals or groups either within a single country or between different countries (or locations). Corporate social knowledge is, therefore, a special case of social knowledge in the context of a firm.

Our concept of corporate social knowledge has much in common with ideas that are already widely discussed in the literature on the knowledge-based approach to the firm, such as “common knowledge,” “routines,” “conventions,” “organizational capital,” and “social capital.” It is different from organizational culture in that corporate social knowledge is a tool to interpret, understand, and predict the behaviors of others, while organizational culture is a set of collective understandings and values within the firm (Hofstede 1984).

Hence, with a command of corporate social knowledge, outsiders can be perfectly capable of understanding a company without being culturally socialized. The essence of the difference between corporate social knowledge and organizational culture can best be expressed by example. A Western manager does not need to share the same organizational culture as his Chinese colleagues or subordinates in order to be well equipped to work with or manage them. What is important, however, is that he or she understands how his or her Chinese colleagues think, and what matters to them—be sensitive to them. At its most basic, being sensitive enables the foreign manager not to offend his or her colleagues and, at a higher level, to motivate and encourage them better. Such a facility is likely to be of greatest benefit in the context of joint-venture forms of organization, where the joint venture (JV) remains organizationally distinct from its parent enterprises. Therefore, corporate social knowledge is important in both wholly owned affiliates and in JVs.

The importance of common understanding or social knowledge for effective understanding was demonstrated by Astley and Zammuto (1992), who looked at the different understandings held by practicing managers speaking a common tongue rather than by people with different language backgrounds. Social knowledge is more important for MNEs, because their dispersed subsidiaries are ex-
expected to have different languages as well as different national cultural backgrounds. Some more abstract or “cultural” management ideas (e.g., “visions” and notions of “identity”) transfer less effectively than more concrete ideas of a technical or procedural kind due to the barriers of “mutual understanding” between knowledge holders (Postrel 2002). That is to say, the degree of social knowledge required in order to convey the meaning may be variable.

Social knowledge affects the success of teams working on knowledge-transfer projects at different sites within MNEs. They need fluency in language to communicate with each other. But, if the recipient team is to fully understand the transfer team in the headquarters, they need a good command of corporate social knowledge as well. This implies that social knowledge plays an important role in the context of discussions about language. Therefore, the transfer of social knowledge of the corporate variety is potentially invaluable. It can ensure better utilization of transferred knowledge and the incremental creation of new knowledge, enabling the affiliate to develop and maintain competitive advantage.

**Mechanisms of transferring social knowledge**

Existing literature has not addressed the concept of social knowledge in the sense defined here, and certainly not in relation to the process of knowledge transfer. Types of knowledge affect the organizational structure of the MNE and vice versa. The more tacit the knowledge that needs to be transferred internationally, the more appropriate is a wholly owned ownership structure (Kogut and Zander 1993). Highly tacit knowledge is likely to be found in firms that employ a knowledge-creation strategy rather than a knowledge-reuse strategy (Hansen, Nohria, and Tierney 1999). There are good reasons for believing that the facility with which corporate social knowledge can be introduced and developed in wholly owned subsidiaries (WOSs) versus JVs will differ. In WOSs, the level of staff exchange and investment in training that involves cultural interchange is likely to be much higher than it is in a JV (Buckley et al. 2003). This means that we would expect JVs to have much more difficulty in generating the level of corporate social knowledge appropriate for effective high-level knowledge transfer as compared to WOSs. An extension of this argument is that once a WOS has established a sound basis of corporate social knowledge, it is then in a strong position to introduce a common organizational culture. Hence, we might expect the growth of corporate social knowledge to precede the development of a shared organizational culture. However, it is not our intention to examine the development of organizational culture here. Instead, we will examine the role that corporate social knowledge plays in facilitating knowledge transfer.

Hedlund and Nonaka (1993) saw knowledge transfer executed through personal mobility and training within the firm, not just via affiliate licensing and franchising. Grosse (1996) put forward a more specific itemized list of the means of knowledge transfer within the MNE: hardware (machinery), software, people
transfer, people training, documentation, communication, and legal agreements (permission). When knowledge is explicit and able to be codified, documents and manuals can effectively achieve transfer (Kogut and Zander 1993). However, when knowledge is complex and difficult to codify, MNEs often send expatriates to perform key functions and to train local employees, or they send local employees to the MNE parent for training (Chang and Rosenzweig 1995). Transfer may fall short of objectives if the firm devotes insufficient resources—for example, not enough expatriates or staff exchange from the affiliate to the foreign headquarters or elsewhere in the group. It is recognized in the literature on the transfer of scientific knowledge that transfer occurs through the “grafting” of individuals with special expertise, and this is widely used in wholly owned affiliates and international joint ventures (IJVs) (Westney 1988; Huber 1991).

One way in which social knowledge can be transferred is through the creation of teams. Hedlund and Riddlerstråle (1994) studied the performance of multicultural teams within a single MNE. They found that individuals from the same national culture are more likely to share tacit knowledge. This finding reinforces theoretical work on the importance of the social context, including language, national culture, and religion, in learning and knowledge transfer (Postrel 2002; Roy, Walters, and Luk 2001).

Having examined the concept of social knowledge, we go on to explore its importance in the specific context of China, paying particular attention to its role with language in the process of communication between the knowledge transfer partners. The scope for corporate social knowledge to fulfill this role is large and growing in the case of China.

Research method

Since the 1970s, foreign direct investment (FDI) has been a key element of China’s development strategy (Shi 2001), with the main purpose of the Chinese being to obtain foreign capital and technology. The practice of managing knowledge transfer through FDI into the Chinese market remains far from clear (Strange, Kamall, and Tan 1998)—in particular, the part played by corporate social knowledge is largely unaddressed. Given that Chinese firms are different from Western MNEs in management strategy, operation, decision making, and organizational culture (Child 1994), the study of corporate social knowledge is essential for understanding the process of knowledge transfer in the context of China. In this paper, we employ the case method to examine how social knowledge, along with language, promotes communication and the transfer of knowledge across borders. We study MNEs in two industries, using the experiences of four firms.

This article employs a multiple-case design of four firms (Yin 1994). According to Yin, “case studies are the preferred strategy when ‘how’ or ‘why’ questions are being posed” (1994, 1). We chose a case study approach consisting of four firms, because we wished to examine the “how” and “why” of corporate social
knowledge in affecting knowledge transfer. Findings from multiple-case research
can be generalizable to a wider context based on “analytical generalization” (Yin
1994, 10). China’s telecommunications manufacturing industry and automobile
industry are chosen for our case studies, because they are both technologically
intensive and are large-scale foreign-direct-invested industries in which extensive
knowledge transfers were reported (Buckley et al. 2003; De Bruijn and Jia 1993).

In identifying potential research sites, we chose MNEs that had been operating
in China for a period of at least five years. This was deemed necessary so that the
selected firms would have at least one key technology transferred and utilized, and
the overall success of the transfer could be assessed after a process of knowledge
transfer had taken place. Thirty-nine companies meeting the above criteria, evenly
distributed between the two industries, were contacted in order to seek permission
for interviews. Twelve firms responded positively, and nine of them were selected.
The other three were eliminated, because they were either too small to be compa-
rable or were only able to provide us access far different from the date of our
scheduled field work. Access to chosen case companies was achieved after per-
mission was obtained from corporate headquarters by contacting the foreign par-
ents (e.g., managers responsible for China or the China desk) and the management
teams (e.g., chief executive officers) of the respective firms in China. Based on the
results of the initial fieldwork, four firms from the two industries were identified
as suitable for further research, because, as final assemblers, these firms engaged
in greater knowledge transfer than component suppliers (Reuvid and Li 2003).

There were two phases of data collection. In phase 1, information about MNEs’
knowledge transfer and organizational learning in the Chinese telecommunications
manufacturing industry and automobile industry was accumulated through a
review of the relevant literature and the study of archival documents, with the
qualified firms identified and contacted. Information collected in this phase was
also important in the design of the questionnaires and in familiarizing the researchers
with the context of business development in the case companies.

In phase 2, two rounds of both open-ended and semistructured interviews were
conducted using multiple interviewees in each company. Open-ended interviews
sought to elicit in-depth views on the strategy and management of foreign knowl-
edge transfer to China, while semistructured interviews assembled data on the
process of knowledge transfer across the selected firms. It is a frequent criticism of
case studies in China that they rely on single respondents (Roy et al. 2001), but
this study uses multiple respondents in each foreign-invested enterprise (FIE) in
China. The range of respondents was six to eight in the four firms, with most of
them interviewed more than once to fill in gaps and check the validity of data from
different interviewees.

The interviewees were mostly senior executives at multiple organizational lev-
els, including those responsible for functional divisions, such as business plan-
ning, marketing, finance, production, and human resources, and those managing
affiliates of the selected firms. Some of the top managers experienced the whole
process of negotiation on establishing the FIE and attended numerous discussions on facilitating knowledge transfer and localization. The majority of the senior executives had at least ten years of employment in their respective firms and participated in the process of knowledge transfer.

Members of the knowledge-transfer team, such as the training manager, operational manager, project engineer, and other technical professionals, were also interviewed. As the interviewees consisted of both foreign expatriates and Chinese operatives, the English version of the questionnaire was carefully translated into Chinese. Back-translation, as suggested by Brislin (1970), was carried out to verify the content consistency between the two versions of the questionnaire. Pilot interviews were carried out at the beginning of phase 2 to test and refine the questionnaires. Both English and Chinese were used in interviews. Notes were always taken. When allowed, the interviews were tape recorded. Managers, regardless of their positions and nationalities, were treated equally in interviews. Care was also taken in handling probing (i.e., following up answers to questions) to avoid interview bias (Huber and Power 1985).

Interview data and field notes were recorded by using the “critical incident” approach (Erlandson et al. 1993), which involves recording significant and meaningful data and structuring them to focus on emerging themes. The interviews were analyzed to focus on the managerial dimensions with respect to knowledge transfer.

**Profile of the four foreign-invested enterprises in China**

Four FIEs were chosen as case firms for this study. They comprise one WOS, Motorola (China), and three international JVs: Alcatel Bell, Beijing Jeep, and Shanghai Volkswagen Automobile Company Ltd (SVW). (See Table 1.)

Motorola set up its representative office in Beijing in 1987. In 1986, the law on foreign investment had been changed, and complete foreign ownership was permitted in the telecommunications equipment industry. The firm established Motorola (China) Electronics Ltd in Tianjin in 1992 as a WOS, and by 2000, Motorola (China) had further established seven JVs with local partners. However, the primary affiliate remained a WOS, with total discretion over recruitment and the sourcing of inputs.

The IJVs were created as a result of the law in force at the time of entry into the Chinese market by the foreign parent. The law required MNEs to form IJVs with local partners in a process that resembled an “arranged marriage.” Among the three IJVs studied, Alcatel Bell entered the Chinese telecommunications equipment market at a time when foreign firms were under this obligation and was limited to forming an IJV with the national state monopoly supplier. This created the Shanghai Bell Telephone Equipment Manufacturing Company Ltd (Shanghai Bell) in 1983, as an IJV between Belgian Bell (32 percent of equity), the Belgian government (8 percent), and China’s Postal and Telecommunications Industries
Table 1
The four case companies

<table>
<thead>
<tr>
<th></th>
<th>Motorola (China)</th>
<th>Shanghai Bell</th>
<th>Shanghai Volkswagen (VW)</th>
<th>Beijing Jeep</th>
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<tr>
<td>Industry</td>
<td>Telecom</td>
<td>Telecom</td>
<td>Automobile</td>
<td>Automobile</td>
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<tr>
<td>Entry mode</td>
<td>Wholly owned</td>
<td>International joint venture</td>
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<tr>
<td>Knowledge transferor</td>
<td>Motorola</td>
<td>Alcatel Bell</td>
<td>VW</td>
<td>Chrysler</td>
</tr>
<tr>
<td>Categories of transferred knowledge</td>
<td>Technology, management skills, and social knowledge based on integrated global strategy</td>
<td>Technology and management skills transferred as per contract; Social knowledge transferred as a result of long-term engagement and by movement of people and training.</td>
<td>Technology and management skills transferred as per contract; Social knowledge transferred as a result of long-term engagement and by movement of people and training.</td>
<td>Technology transferred as per contract; management skills transferred later noncontractually; social knowledge transferred by movement of people and training, but poor results due to frequent changes of foreign parent</td>
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<td>Language used in knowledge transfer</td>
<td>English</td>
<td>English</td>
<td>German</td>
<td>English</td>
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Corporation (PTIC), the industrial arm of the former Ministry of Post and Telecommunications (MPT, now Ministry of Information Industry; holding 60 percent). In 1986, Alcatel acquired Belgian Bell, becoming Alcatel Bell. However, Shanghai Bell still reported to Alcatel Bell in Antwerp, Belgium. By 2000, Shanghai Bell had established twelve JV subsidiaries in China to produce components and selected line of its products.

In the automobile final-assembly industry, MNEs have been and still are required to enter the Chinese market by IJV with a local Chinese partner. At the time the two final assemblers entered China, not all locally owned producers were authorized, or wished, to form an IJV. Therefore, the amount of choice for MNEs was more limited in practice than it might have appeared, and the role of the government was to approve the choices once made. The local partners that were chosen by our two firms had decades of industrial experience. Beijing Jeep was established in 1983 between Beijing Automotive Works (68.85 percent) and American Motor Corporation (31.15 percent), which was acquired first by Renault Group and then by Chrysler Motor Corporation (now DaimlerChrysler Group). Shanghai Volkswagen Automobile Company Ltd (SVW) was established in 1984 between Volkswagen AG of Germany (50 percent), Shanghai Automobile Industry Corporation (25 percent), Bank of China Shanghai Trust and Consultancy Company (15 percent), and China National Automobile Industry Corporation (10 percent).

We now go on to examine the role of language in facilitating communications and knowledge transfer within MNEs, first by examining language in the process of knowledge articulation; then by examining the role of social knowledge in facilitating international knowledge transfer; and finally, by investigating the mechanisms used to transfer social knowledge.

Language in the process of knowledge articulation

Articulation is the process of transforming transferred knowledge, making it easily understood and accessible. It is the crucial stage in the whole organizational learning process for understanding, testing, and sharing the knowledge transferred (Hedlund and Nonaka 1993). Although knowledge transfer is managed by a special team in all the recipient companies, managers of all functional departments as well as production and R&D sections are involved in the transfer process, coordinating articulation and assimilation programs within their respective portfolios. Shop-floor workers also play a key role, because they implement the transferred knowledge in the production process. Technical competence and management skills are normally the key to success in transferring knowledge, but in doing it across borders, language competence is equally important. The success of knowledge transfer depends on the level of the language skills of both managers and shop-floor workers.

According to the interviewees, language differences between foreign managers and local staff in the three IJVs have evidently been a primary barrier in the as-
simulation of the transferred knowledge. It is generally the case that the level of understanding and command of the foreign language among shop-floor workers is never higher than the basic level. As a result, all documents relating to such workers needed to be translated into Chinese, which delayed the process of knowledge transfer and increased transfer costs. In contrast, the Chinese management team and engineers have a good command of the foreign language that the foreign partner uses. Generally, managers and engineers need to demonstrate their language capability in the recruitment process—that is, e.g., pass certain examinations in reading, speaking, and writing the designated foreign language in the JV, unless they are graduates of foreign language studies. In-house language training continues after they have taken up their posts. Language capability is taken into consideration in terms of promotion or opportunities of assignments in overseas countries, such as conducting joint research or receiving training at the headquarters of the foreign partner. However, foreign language knowledge difference between foreign managers and local staff, in one form or another, was a fact for all of the four firms, and clear contrasts emerged between them. The key difference between the four firms was that Motorola (China) had full authority to address language issues, while the firms in IJV partnerships had to go through rounds of discussion and coordination to achieve a compromise action plan on improving language ability in the face of budgetary pressure on other areas of operations.

All four firms were clearly aware of the effect of language on the organizational learning process, and each dealt with it from the recruitment stage on. In the case of Shanghai VW, German was the main working language, but very few institutions provided it as an option for those not majoring in a foreign language. Shanghai VW, therefore, had to recruit students from Tongji University of Shanghai, which is an engineering institution that also specializes in German-language training. Based on the fact that most German managers can speak English well, English has become a second working language between German expatriates and Chinese employees, though most of the documents are in German with the exception of some publicity materials. The other way of tackling the language problem is by providing workers with some language training as part of the general training program. Thus,

All the staff sent to Germany for training programs have all been examined in their German proficiency. Only once having passed language examinations can people be sent away. So, we set up a German training centre in SVW to deal with this issue. Secondly, we employed lots of graduates of Tongji University where, unlike other institutions, German is the first foreign language taught. This has saved us lots of time and money. In general most of our staff understand either German or English while most of the German experts can speak English. German and English are both our communication languages. (Senior manager, Shanghai VW)

The limited foreign language ability among Chinese workers prompted the provision of technical and management materials in Chinese in all four firms. The majority of the written transferred knowledge, therefore, was available in a Chi-
nese version so that production line workers could assimilate the knowledge from the foreign parent. Yet it is only the three IJVs that set up translation centers and documentation centers. For example, there is a translation group in Shanghai Bell which, after screening and selecting all transferred documents, translates those materials required or needed into Chinese and sends them to the relevant departments. This was the principal way in which Alcatel Bell ensured that the transferred knowledge was correctly categorized, analyzed, and distributed. Language recruitment requirements and continuous in-house training in English, and in German in the case of Shanghai VW, were adopted in all four firms. At Shanghai Bell, English was the main working language, although Flemish was the mother tongue of most of the Belgian expatriates. All the transferred materials are in English, and all the engineers and managers were able to work in English and to read and digest English documentation directly.

In contrast with the IJVs, there is no comparable documentation or translation center in the wholly owned Motorola (China) subsidiary. Instead, Motorola (China) chose to address language problems entirely through concerted recruitment and training programs. These staff must demonstrate a good command of English, i.e., must be able to use English fluently in the workplace, before an employment contract can be signed. A good standard of command of English has also been asked of applicants who applied for jobs in production. Second, Motorola’s training arm, Motorola University, played a central role in the training provision to employees of all ranks. Chinese shop-floor employees underwent technical training in both English and Chinese, given by U.S. and Chinese engineers and technicians, before starting their jobs, and then training continued to improve their production skills as well as language capabilities. Chinese managerial staff, engineers, and other employees in nonproduction departments were required to attend in-house training courses on a frequent basis, in which English was the only language used. With its corporate university at the core of Motorola’s training system, Motorola demonstrated a different capacity from that of IJVs at the institutional level. The finding that a single working language is important is consistent with case studies of MNEs in other parts of the world. Marschan identified the importance of addressing language skills by showing that a lack of language skills obstructed the effective interunit communication flows within the same MNE (1996, 152).

Of the four firms, Motorola had the most integrated approach in tackling language issues based on its ownership structure as a WOS. In the cases of the three IJVs, there was evidence that the business and knowledge management strategies of the Chinese affiliates had to accommodate and adapt to problems generated by language differences. That is to say, language differences would clearly have been a bigger problem had the three IJVs been pursuing a more rapid and intense transfer of knowledge.

Our first finding is that shared language is a major facilitator of successful knowledge articulation, and the more intense is the intended knowledge transfer, the more important is a common working language.
Social knowledge in facilitating knowledge transfer

However important the language issue is to communication, it is not sufficient to consider it in isolation from corporate social knowledge. Language difference is only part of the picture relevant to the articulation of the transferred knowledge. As put by Nonaka and Takeuchi, the understanding and “externalization” of technical terminology, the difference in operation norms and practices, and the managerial requirements for carrying out manufacturing, are all elements to be transferred, and all depend on shared social knowledge (1995, 64).

The crucial role of social knowledge in facilitating knowledge transfer and organizational learning was recognized in each of the firms. However, the timing and level of investment and degree of success in realizing the potential of social knowledge differed widely. In the case of Motorola (China), the transfer of social knowledge was an intrinsic part of the plan to establish the affiliate—that is, social knowledge was designed in from the start. In the IJVs, the transfer of social knowledge was achieved by a more gradual process.

As a greenfield investment, Motorola’s factories in Tianjin all had to start from scratch. Everything on site, from production equipment to organizational structure, from architectural design to social knowledge, was brought in from Motorola. As a senior Chinese manager at Motorola (China) commented:

Don’t forget this is a wholly owned subsidiary of Motorola. Everything has been done at the highest level of Motorola. The technologies here are the most advanced in terms of international standards. All the management systems are the same to that in other parts of the Motorola family. And, more important, Motorola’s enterprise culture [qiye wenhua] is the core of our operation.

Although our interviewee used the term “enterprise culture” in Chinese, the meaning he was conveying was much closer to our notion of social knowledge than to what is conventionally called “organizational culture.” The interview data showed that social knowledge was considered as the key to implement the development strategy and was emphasized in the transfer package from the outset. Another senior manager at Motorola (China) commented: “All the things done here are following Motorola’s way. Technology, management skills and social knowledge and other things are transferred and utilized at the same time.”

It is notable that Motorola, unlike the three IJV cases, adopted a policy from the outset that the Chinese subsidiary would be staffed with 100 percent local personnel at the earliest opportunity. In contrast, all three JV agreements provided for Western managers to occupy certain key senior positions, and they have continued to do so. But the inculcation of Motorola’s methods, practices, and culture was so thorough and intensive that local (Chinese) staff became fully integrated into Motorola’s corporate world. The technologies transferred from Motorola’s headquarters to its Tianjin site were at the forefront of the semiconductor industry at the time. These advanced technologies, along with management skills and social
knowledge, formed the core of Motorola’s firm-specific advantage in the Chinese market and, furthermore, resulted in Motorola (China) being the only one of these four case firms that was also globally competitive. The two quotes above demonstrate that the successful transfer of knowledge by Motorola was underpinned by its corporate social knowledge.

In marked contrast to Motorola (China), management skills were omitted from the original IJV contract between Belgian Bell and the Chinese parent. These skills were only transferred in a rearguard action when their absence became a problem in the IJV. Similarly, there was no specific program intended to transfer social knowledge from Belgian Bell (later Alcatel Bell), as was confirmed by a manager at Shanghai Bell:

Yes, social knowledge was transferred, but not formally. The way of transferring tacit knowledge is by co-operating, through training programs, meetings, technical assistance and other ways of communications, as tacit knowledge itself is hard to be expressed.

The Belgian and the Chinese partners were clearly eventually both aware of the importance of social knowledge. Indeed, managers at Alcatel Bell came to regard it as the “secret weapon” of their business operation in China: “We regard tacit knowledge as our secret weapon in business operation. It’s important, very important, but difficult to say [articulate] it” (manager, Alcatel Bell).

After the establishment of Shanghai VW, a “Germanization” process was pursued from top management down to workshop practices, encompassing production, R&D, quality control, logistics, marketing, and, notably, corporate citizenship. This was supported by training programs each year. It is evident that the transfer of knowledge covered not only technology and management skills but also corporate social knowledge, most of which was in tacit form, and which relied on the two-way international movement of staff. A Shanghai VW manager commented on this, noting also the positive cultural influence of both the Western supplier and the host environment:

Certainly there are technology and management know-how transferred. Regarding social knowledge, there is not a single project specifically targeting this end. But social knowledge, such as work practices and the way of behaving in this company, has been transferred quietly. We can clearly notice that there are some aspects that are actually originating from our German partner. For example, quality consciousness, efficiency consciousness, time consciousness, environment protection awareness and so on. This has been the common sense of the employees of this firm now.

This leads to our second finding: Shared language is necessary, but it should be combined with social knowledge in enabling successful knowledge articulation across borders.

In comparison to the other cases in the study, Beijing Jeep was the slowest to realize the importance of transferring management skills and social knowledge.
The transfer of hard technology stood out as the clear priority, and only after several years did the management team in this firm realize how important it was to equip their employees with new concepts and management ideas. The interview data revealed that the Chinese “traditional mindset” was able to block the application of Western management ideas in Beijing Jeep. In part, the reason for this may lie in characteristics of the JV and of the partners. Beijing Jeep was American Motor Corporation’s (AMC’s) first international venture, unlike VW, which had a history of managing subsidiaries in several countries. AMC had a minority of the equity and was, therefore, able to exercise only limited control over strategic choices of the venture. AMC appeared least fortunate in its choice of a Chinese partner from a very limited field. This partner was disinterested in the transfer of social knowledge, and as a result, Beijing Jeep was least successful in assimilating the transferred knowledge and was the slowest in localizing production among the joint ventures.

To summarize, according to our analysis, Motorola (China) has been the most thorough and most successful in transferring social knowledge based on its integrated knowledge transfer strategy. Shanghai VW and Shanghai Bell did not emphasize the transfer of social knowledge in the way that Motorola (China) did. Nevertheless, they highly valued the role of social knowledge in facilitating the articulation of transferred technology and management skills. Both firms accumulated social knowledge due to their long engagement with their respective headquarters since the first half of the 1980s. Beijing Jeep’s performance, however, was hindered by the absence of a strategy to effectively transfer social knowledge. The changes in ownership of its foreign parent in the last two decades contributed to the disruption in the assimilation of social knowledge in Beijing Jeep.

Our investigation of the ownership dimension suggests the third finding: Ownership structure impacts understanding and transference of social knowledge. In particular, a WOS has advantages over an IJV in the transfer of social knowledge.

**Mechanisms used to transfer social knowledge**

A key indicator of the level of investment in corporate social knowledge is the use of international personnel placement and exchanges between the foreign parent and the Chinese affiliate. As we shall see from the analysis of the data below, the strategy and practice differed among the firms. Frequent personnel exchanges enabled the Chinese employees to be exposed to the foreign language and cultural environment more thoroughly, thereby promoting learning effectiveness. Motorola (China) pursued this to a greater extent than any of the other foreign-invested firms. Motorola’s knowledge-management strategy took the form of a learning network that was outside the formal organizational systems and structures of the firm and went beyond the formal boundaries of the firm. Such a network enabled the Chinese affiliate to embed both locally and within the global organization. Through its systematic training provision, Motorola University has been a focal point of personnel exchange between affiliates and the headquarters within this
firm. In line with this practice, since the foundation of the affiliate, Motorola (China) has used extensive short-term two-way staff movements internationally in order to transfer personalized knowledge. Foreign expatriates were used on short-term assignments, declining from over 30 percent of management positions in 1992 to less than 15 percent in 2000. Together with the investment in foreign language, the reduction in foreign managers helped to achieve organizational integration, both within the affiliate and between the affiliate and the group. In this way, Motorola created a multinational learning network based on human interaction independent of the formal structure of the firm, but rich in tacit-knowledge transfer.

The financial arrangements underpinning the international movement of personnel confirmed the difference in strategy between Motorola (China) and the three IJVs. In the WOS, the cost of staff movement was paid by the headquarters and the subsidiary together, while in the IJVs, the local affiliate had to pay the full cost of visits by foreign expatriates and of Chinese employees moving in the opposite direction. Headquarters bearing the cost overcomes the reluctance of individual subsidiaries to participate in the exchange of personnel.

The use of translation and documentation centers in the three IJVs as opposed to the standardized language training employed worldwide in Motorola, served to absolve much of the workforce from mastering technical material in a foreign language. In the IJVs, the use of a codification strategy that turned knowledge into documents mitigated against organizational integration both within the IJV (across the language barrier) and between the IJV and the foreign parent. The scope of creating a learning network was limited to the training and international placements that occurred for certain Chinese staff in the Belgian headquarters and to the personal contacts of the individual foreign expatriates who remained in the IJVs. This type of strategy attempts to avoid the transfer of social knowledge by reducing interpersonal contacts to a minimum, but it proved to be ineffective.

Teamworking was the other factor that proved crucial in knowledge transfer and organizational learning. It was rated as the single most important factor in facilitating the direct transfer of knowledge (Hedlund and Riddersträle 1994; Nonaka and Takeuchi 1995), although the approaches to teamwork differed between the WOS and the IJVs in crucial respects.

In the IJVs, expatriates from the parent firms were retained longer in the recipient transfer teams than in the WOS. For example, in 1998, Shanghai Bell still kept fifteen Belgian expatriates, Shanghai VW kept ten to fifteen Germans, and Beijing Jeep kept nine U.S. experts on an annual basis. In total, Shanghai VW has employed 107 long-term (approximately a three-year stay) German specialists and, on an annual basis, on average, about 200 short-term (less than six months) foreign specialists since its establishment. This practice of short-term international “grafting” of individuals (Huber 1991) in the recipient was considered to be very effective in improving the absorptive capacity and in facilitating knowledge transfer. The transfer teams in the recipient firms were composed of managers with good language capability, so that it is possible to infer that part of the value added
Conclusions

This paper examined the roles of language and corporate social knowledge in knowledge transfer to China. The evidence from the four cases indicates that a common language alone is unable to secure effective communication between knowledge transferor and recipient, so that the transference of corporate social knowledge is essential for foreign knowledge articulation and assimilation. The earlier that corporate social knowledge is transferred, the more easily the other types of transferred knowledge are assimilated. Our results suggest that the transfer of social knowledge should be actively planned rather than left to an evolutionary process.

While the presence of expatriates is part of the transfer of social as well as technical and professional knowledge, it is the circulation of staff internationally that generates the greatest degree of social knowledge transfer. Movement of staff maximizes the level of interaction with local employees, offering the greatest opportunity to pass on knowledge, including social knowledge, and thereby improving the efficiency in knowledge articulation. The mechanism of transferring social knowledge is fundamentally based on the exchange of people. The incorporation of individuals into teams, either short or long term, is a crucial component of the transfer of corporate social knowledge to the foreign affiliate.

Ownership strategy is a key variable that affects the transference of corporate social knowledge. Motorola was able to apply an entirely internalized method to handle language barriers and could facilitate the transfer of corporate social knowledge because of its complete ownership. The IJVs (Shanghai Bell, Shanghai VW, and Beijing Jeep), on the other hand, had to negotiate on issues relating to knowledge transfer and utilization. The volatile nature of partner relationships within IJVs and the associated costs of coordination and negotiation constrain the transfer of corporate social knowledge from the foreign parent, leaving their affiliates in China to resolve the mismatch between the transferred technology and the incomplete transfer of corporate social knowledge.

The effect of shared ownership is that the IJVs are limited to a knowledge reuse strategy (Buckley et al. 2003), whereas the WOS is empowered to pursue a knowledge-creation strategy. The implication is that a WOS is better than an IJV in facilitating the transference of corporate social knowledge, and that this promotes communication between the foreign headquarters and the affiliates. To improve knowledge assimilation, the transference of corporate social knowledge needs to be a key element in the business strategies of foreign investors, regardless of their ownership strategies, in the Chinese market.

The limitations of our analysis arise from the fact that it is based on only four
case studies, and that it has not been possible for the time dimension or country of ownership to be controlled.

The research agenda suggested by this paper needs to be advanced by the extension of the key concepts and the further testing of our findings in a larger sample. The concept of social knowledge needs further refinement, and its relationship to specific language differences, cognitive issues of communication, and national cultural differences needs to be more completely delineated. It is our contention that further investigation of the concept of social knowledge and its relation to language will constitute an important step forward in international management.

Notes

1. The five-year criterion is consistent with that established in previous research on knowledge transfer and organizational learning (e.g., Inkpen [1995, 129] and Lyles and Salk [1996, 887]).

2. It remains the case that after China’s entry to the World Trade Organization (WTO), foreign firms cannot hold more than 50 percent of equity in any final car-assembly operation. However, there are no ownership restrictions in other automobile manufacturing sectors, for example, in components.

3. Beijing Jeep’s foreign parent was initially American Motor Corporation (AMC), which was acquired by Renault and then sold to Chrysler in the 1980s. Chrysler became part of DaimlerChrysler in 1998.

References


